Cities, Regions, & Growth: Smart, Inclusive, Equitable?

College of Architecture and Planning
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Conference Theme:

*Cities, Regions, & Growth: Smart, Inclusive, Equitable?*

With its explosive amenity-driven growth, the Denver metropolitan region is emblematic of much of the American West. While growth brings tremendous economic opportunities, it is often accompanied by significant challenges, such as: housing supply shortages and increasing housing costs; land consumption and loss of open space; increasing exposure to natural hazards; traffic congestion and delay; inability to scale transit to meet demand; lack of coordination between jurisdictions; inequitable public education; sectoral imbalance in the economy; gentrification; and congestion of amenities. But amidst these challenges, regional growth also offers valuable opportunities for cities to redefine, re-invent, and revitalize themselves. In Denver, for instance, we see a renaissance in infill development and an overall increase in density, walkability, mixed use, and traditional design elements in the urban core—accompanied by a reverse migration of many back from the suburbs to the city. This reinvestment in central places has brought with it a vibrant mix of uses and allowed transit to become feasible in places where previously it was not, opening up a less automobile-intensive lifestyle to large numbers of people. Yet, such development must be carefully managed to avoid uneven development, gentrification-induced displacement, out-migration of poor and minority resident from urban cores to under-invested suburbs, and loss of public goods.

How do we create a more inclusive strategy to leverage opportunities from growth to promote a sustainable, equitable, and healthy metropolis? Our theme welcomes discussion of all these tangled threads that form the complex tapestry of growing and changing metropolitan regions.

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Notes About this Book

This book includes only the abstracts accepted for presentation at the 2017 Annual Conference in Denver. This book was completed and posted to www.acsp.org on August 1, 2017; reposted August 21.

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Quick Reference
Track 1 - Analytical Methods and Computer Applications ............................................................ page 5
Track 2 - Economic Development ................................................................................................. page 62
Track 3 - Environmental Planning & Resource Management ..................................................... page 138
Track 4 - Gender and Diversity in Planning .................................................................................. page 239
Track 5 - Housing & Community Development ............................................................................ page 285
Track 6 - International Development Planning ............................................................................ page 502
Track 7 - Land Use Policy And Governance ................................................................................. page 610
Track 8 - Food Systems, Community Health, Safety ................................................................... page 682
Track 9 - Planning Education and Pedagogy ................................................................................ page 743
Track 10 - Planning History ......................................................................................................... page 767
Track 11 - Planning Process, Administration, Law And Dispute Resolution ............................ page 792
Track 12 - Planning Theory ......................................................................................................... page 821
Track 13 - Regional Planning ...................................................................................................... page 877
Track 14 - Transportation & Infrastructure Planning ................................................................. page 908
Track 15 - Urban Design ............................................................................................................. page 1126
Author Index ................................................................................................................................. page 1192
Keyword Index ............................................................................................................................ page 1207
PRE-ORGANIZED SESSION: EMERGING COMPUTATIONAL METHODS IN URBAN DESIGN
Proposal ID 4: Abstracts 54, 56, 57, 58 and 265

BOEING, Geoff [University of California, Berkeley] gboeing@berkeley.edu, organizer
AMOS, Dave [University of California Berkeley] daveamos@berkeley.edu, proposed discussant

This session examines the ongoing shift toward computational methods in urban design research and practice. The study of urban design has for years been a largely analog field focused on surveys, observation, and sketches. In the past half-century, the public life studies of William H. Whyte, Jan Gehl, Jane Jacobs, and similar scholars have dominated its theory and discourse. GIS has changed this somewhat over the past two decades, but today new methods of data scraping, computational data science, visualization, network analysis, and other "big data" methods are further broadening the scope of the urban design toolbox. While such methods may yield new insights and rigor in urban design research, critical voices warn they may promulgate the weaknesses of reductionism and scientism, ignoring the complexity and qualitative nuance of human experience crucial to urban design. This session presents new research methods, applications to practice, and critical perspectives on the emerging use of computational methods in urban design - and how such methods might stake out a nuanced place in research and practice.

Objectives:
- Discover new computational research methods for urban design, including pedestrian environment, network, and urban form analysis
- How new computational methods can support the goals and processes of urban design practice
- Critiques of computational methods, and how we might reconcile them with humanistic urban design and collaborative practice

GOOGLE STREET VIEW FOR NEIGHBORHOOD AUDITS: OPPORTUNITIES AND CAUTIONS
Abstract ID: 5
Individual Paper Submission

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Researchers in many disciplines have turned to Google Street View to replace pedestrian- or car-based in-person observation of streetscapes. It is most prevalent within the research literature on the relationship between neighborhood environments and public health but has also been used in studies of street-level environments as diverse as street ecology and wildlife habitat. It has also been used to study disaster recovery, housing value assessments and building code violations. Evaluations of the tool have found that the results are fairly similar to the results from in-person observation although the similarity depends on the type of characteristic being observed. Larger, permanent and discrete features showed
more consistency between the two methods and smaller, transient and judgmental features were less consistent. There are some difficulties in using GSV for research purposes including, 1) the fixed point of view, 2) the processing of the images, 3) the quality of the images, and 4) the fixed point in time of the images. All of these issues need to be addressed in a research design that includes the use of GSV.

References

Key Words:
Google Street View, neighborhood audit, environmental effects, broken windows, active transportation

A TRANSPORTATION NETWORK VULNERABILITY ASSESSMENT MODEL
Abstract ID: 24
Individual Paper Submission

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This study presents a vulnerability assessment model of transportation networks. Transportation-combined National Interstate Economic Model (TransNIEMO) is a transportation and economic impact assessment model that combines highway transportation networks and a multiregional economic model. This study fills two major gaps existing in TransNIEMO's transportation model, and develops the model into a transportation and economic planning model. The proposed three vulnerability indices capacitate to search, simulate and assess vulnerable elements of networks against various threats. These indices enable decision-makers to provide systematic resource investment policies and effective risk management and reduction policies in transportation and the related-economic sectors. In addition, the proposed efficient network equilibrium algorithm simplifies the computational complexity of TransNIEMO and improves the efficiency to the analysis of transnational networks, such as North American transportation networks. The studies for more sophisticated link performance function that improves the reliability of network equilibrium will be triggered through this study.
Global sea level has increased since tide-gauging records were available in the 19th century. Rising sea water is accompanied by the accelerative frequency of hurricanes, storm surge, and other coastal catastrophes. These trends urge research communities to investigate ways to mitigate and adapt to the consequences of climate change. Plenty of research efforts has investigated the mechanism of sea level variations, coastal vulnerability, and adaptation strategies to sea level rise. However, fewer endeavors have been given to identify how sea level rise may affect land use changes and population displacement simultaneously. Hence, this study attempts to understand sea level rise impacts on coastal residents and land use by answering the following questions.

1. What are land change patterns in coastal regions?
2. What are potential consequences of flooding induced by sea level rise?
3. How do adaptation strategies alleviate regional vulnerability, from the modeling perspective?

In response to overall research questions, this study includes three major tasks: 1) the investigation of past land change patterns, 2) estimated inundation due to flooding induced by sea level rise, and 3) land use predictions with and without the population relocation strategy. It employed Bay County coastal areas in Florida as a case study region due to its high susceptibility to coastal hazards. Specifically, the work first established a framework that integrates land change analysis, coastal flooding, and adaptation measures. Multilayer perceptron neural network, SimWeight, and binary logistic regression were applied to analyze spatiotemporal changes of residential, commercial, and other built-up areas. Next, this study
used an advanced hurricane model to identify inundated areas due to 500-year flooding under different sea level rise scenarios. It finally generated the prediction maps of 2030 by using the above-mentioned models under different policy scenarios. These policies integrated the population relocation strategy and increased urbanization rates that account for economic and population growth.

Validation results reveal that three land change models return overall acceptable accuracies but generate distinct landscape patterns. The findings also indicate interesting coastal urban dynamics in 2030. Under the policy promoting coastal developments, new residential areas likely extend from, or infill within, current built-up regions. Additionally, many inland housing units may disappear in two decades. Conversely, the population relocation strategy will relocate the majority of residents that are potentially inundated by the flooding, thereby reducing urban vulnerability substantially.

This work sheds lights on how the planned retreat of vulnerable populations influences the pattern of land use changes under sea level rise impacts. Additionally, its outcomes can help governmental agencies optimize the deployment of financial and human resources. And hazard mitigation teams, urban planners, and coastal city managers may utilize the developed procedures to orient future land development away from those regions with high vulnerability to sea level rise.

References

Key Words:
rising sea level, population displacement, hurricane, flooding, managed retreat

NEW METHODS FOR ACQUIRING AND ANALYZING WORLDWIDE STREET NETWORK DATA: A MULTISCALE ANALYSIS OF 27,000 URBAN STREET NETWORKS
Abstract ID: 54
Pre-Organized Session: Emerging computational methods in urban design

BOEING, Geoff [University of California, Berkeley] gboeing@berkeley.edu, presenting author

Urban planners and designers have studied street networks in numerous ways. Some studies focus on the human experience of urban form, others on transportation flows and access, and others on the topology, complexity, and resilience of street networks. This talk argues that current limitations of data availability, consistency, and technology have made researchers’ work gratuitously difficult. In turn, the empirical literature often suffers from four shortcomings: small sample sizes, excessive network simplification, difficult reproducibility, and the lack of consistent, easy-to-use research tools. These
shortcomings limit the scalability, generalizability, and interpretability of empirical street network research.

OpenStreetMap – a collaborative worldwide mapping project – has emerged in recent years as a major player both for mapping and acquiring urban spatial data. Its data are of high quality and compare favorably to CIA World Factbook estimates and US Census TIGER/Line data. OpenStreetMap imported the TIGER/Line roads in 2007 and since then its community has made numerous spatial corrections and attribute additions, including for example passageways between buildings, footpaths through parks, bike routes, and detailed feature attributes such as finer-grained street classifiers, speed limits, etc. Further, it contains worldwide data that may otherwise be difficult to acquire.

This talk presents OSMnx, a new tool that easily downloads and analyzes OpenStreetMap data anywhere in the world. OSMnx contributes five significant new methodological capabilities for planners and designers: first, the automated downloading of administrative place boundaries and building footprints; second, the tailored and automated downloading and construction of street network data from OpenStreetMap; third, the algorithmic correction of network topology; fourth, the ability to save street networks to disk as shapefiles, GraphML, or SVG files; and fifth, the ability to analyze street networks, including calculating routes, projecting and visualizing networks, and calculating metric and topological measures. These measures include those common in urban design and transportation studies, as well as advanced measures of the structure and topology of the network.

OSMnx instantly downloads street network data for any study site in the world, queried by place name(s), bounding box, address or coordinates (plus distance), or polygon. It can download drivable, walkable, bikeable, or all-of-the-above circulation networks. After downloading, the street network is converted into a graph-theoretic object so we can calculate/plot routes and various metric and topological characteristics of the street network relevant to the human experience, spatial justice, and active travel. We can visualize the network according to its various properties, such as connectivity, intersection density, betweenness centrality, closeness centrality, clustering, and the spatial distribution of intersection types. We can also automatically produce figure-ground diagrams for comparative urban form analysis and urban design communication.

This talk first briefly introduces the background of street network analysis in urban design. Then it discusses current shortcomings and challenges, situated in the empirical literature. Next it introduces OSMnx and its methodological contributions. Finally, it presents an empirical study of 27,000 US street networks – that is, every US city, town, urbanized area, and Zillow neighborhood. These methods make the acquisition, construction, and analysis of urban street networks easy, consistent, and reproducible while opening up a new world of public data to urban planners and designers.

References

Key Words: urban design, computational methods, urban form, street networks, GIS

VOIDS WITH IN THE MACHINE: USING SOCIAL MEDIA DATA TO IDENTIFY GHOST CITIES IN CHINA
Abstract ID: 56
Pre-Organized Session: Emerging computational methods in urban design

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The exponential growth of the Chinese housing market has begun to slow-down and with it many second and third-tier Chinese cities are experiencing high vacancy rates in their housing market. These vacant areas are often referred to as “Ghost Cities”, and when identified and mapped can expose underlying weaknesses in the Chinese real estate market, yet the government does not provide data about where these sites exist. Therefore, this research project set out to test whether a model could be developed, using data scrapped from social media and websites in China, to identify where these vacant development exist and provide it to developers and citizens to understand risk in the Chinese real estate market. Data was scrapped from Dianping (Chinese Yelp), Amap (Chinese Map Quest), Fang (Chinese Zillow), and Baidu (Chinese Google Maps) open access API’s. A data model was developed to identify vacancy by measuring the accessibility of residential point of interest’s to basic amenities, such as grocery stores, restaurants, schools, malls, and banks among others. The model gives each residential location an amenity accessibility score based on distance and clustering of amenities nearby. Those residential areas with low scores are more likely to be vacant or underutilized. The model was ground-truthed in Chengdu and Shenyang and the results showed several types of underutilized housing. Two overarching categories were buildings recently developed or developing areas and those areas abandoned because of old-age or stalled construction. The results show that openly accessible data available through social media can help locate and estimate risk in the Chinese real estate market, but perhaps more importantly, identifying where these areas are concentrated can help city planners, developers and local citizens make better investment and planning decisions and address the risk created by under-utilized developments.

References
EMERGING COMPUTATIONAL METHODS IN URBAN DESIGN: NOW WHAT DO WE DO?
Abstract ID: 57
Pre-Organized Session: Emerging computational methods in urban design

MARSHALL, Wes [University of Colorado Denver] wesley.marshall@ucdenver.edu, presenting author

Leaps forward in computing power and open data sources have made quantifying the structure and morphology of mass quantities of streets and street networks easier than ever. Benefiting from these technological innovations, however, first requires a fundamental understanding of what we are actually measuring and the misconceptions surrounding some of our basic measures. Second, we need to continue expanding our knowledge surrounding why these metrics matter. This entails connecting our new understanding of street network structure with outcomes such as road safety, travel behavior, public health, livability, and resiliency. Third, this also means reconsidering our recent history emphasizing a hands-off approach to street network design because achieving our goals related to the above outcomes may require active planning engagement. This presentation will conclude with a brief overview regarding how we already have the legal ability to implement network structures in practice but neglect to do so.

References

Key Words:
networks, connectivity, morphology, safety, behavior
INTEGRATING URBAN DESIGN AND ANALYTICS

Abstract ID: 58
Pre-Organized Session: Emerging computational methods in urban design

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Urban design and urban analytics have emerged as equally important, but separate fields of scholarship. Those concerned with design work with a forward looking epistemology, where ideas are assessed based on their normative merits in an uncertain future. Those who work in urban analytics, use social, natural and computer science methods to explain urban phenomena as they are now or as they were in the past. The differences between the forward versus backward looking orientation has kept the disciplines apart and created a methodological as well as ideological divide, whereby good urban analytics do not necessarily lead to good urban design, nor does good urban design require good urban analytics. Investigating this divide, I explore how the domains of design and analysis can be better integrated in an exploratory design process, using three projects as examples. The projects include a re-integration of a former rail corridor as a public park into a city’s urban fabric; a placement of community retail and service clusters into a newly planned large-scale housing environment; and a determination of urban block sizes that would maximize pedestrian accessibility in new urban developments. In each case, an iterative design-analysis process requires a) that normative goals are determined for assessing design outcomes, b) that well-defined measurement techniques are adopted to evaluate how closely the goals are achieved in each design scenario and c) that numerous design scenarios are generated and tested via computerized simulations. In an attempt to generalize the process, its pros and cons, I also discuss which types of urban design problems an integrated design-analysis approach is suitable for and which ones it is not.

References


Key Words:
urban design, analytics, computation, design theory

REVISITING MUNICIPAL FISCAL SUSTAINABILITY: A COMPARATIVE STUDY OF DETROIT AND NEW YORK CITY

Abstract ID: 73
Individual Paper Submission

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Fiscal sustainability analysis aims to predict the potential growing imbalance between revenues and expenditures over the long term. However, scholars have failed to agree upon the determinants of fiscal sustainability, and found that the classic sustainability test suffers from omitted variable bias. This casts doubt on the reliability of any inferences drawn from such tests. This paper discusses and addresses two major questions: 1) what are the determinants of sub-national fiscal sustainability?; and 2) does the co-integration test for fiscal sustainability suffer from omitted variable bias for the municipal data? In this paper, an alternative modeling perspective, the probabilistic reduction (PR) approach, is used to model
fiscal sustainability, using NYC and Detroit as two comparative case studies. The results indicate that the residual-based co-integration test also suffers from omitted variable bias for the municipal data. Using graphic techniques, we found that the increasing variance of total revenue since the mid 1990s is attributed to the volatility of the retirement trust fund. This finding suggests that market risk should be taken into account in conceptualizing sub-national fiscal sustainability. On one hand, policy intervention should be directed towards market stabilization in addition to promoting economic growth. On the other hand, planning education needs to help voters understand the concept of intertemporal budget constraint and the future cost of taxation. Intergenerational inequality results when current generations favor any fiscal policy that increases their lifetime utility at the expense of future generations.

References

Key Words:
Fiscal Sustainability, Intergenerational Equity, Fiscal volatility, Public Pensions and Other Post-Retirement Benefits, Cointegration and Unit Root Test

INFORMING PLANNING PRACTICE THROUGH OUTLIER ANALYSIS: THE CASE STUDY OF HIPPIETOWNS
Abstract ID: 76
Individual Paper Submission

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One way improvements are made in planning practice is through "evidence-based best practice research." The central point to evidence-based research is that the planning researcher can make contributions to planning practice by analyzing “what works” in other cities, communities, and planned projects and then providing a series of standardized guidelines and procedures on how practicing planners can achieve desired generic planning outcomes based on their research conclusions (Hammersley, 2013, p.16). Case in point: New Urbanism as a series of design guidelines to solve the multitude of problems created by sprawl (Campoli and MacLean, 2007). The ontology to planning evidence-based research is equivalent to the ontology of medical practice: the body is a passive object that is to be manipulated to achieve desired outcomes (Mol, 2002). But what if practicing planners want to think differently from what other planners are commonly doing in their communities? How do planning researchers look for evidence that is not generic to what planners execute on a regular basis and discover new ways of practicing planning that are outside of the mainstream of thinking?

One way planning researchers can think differently is to change the way we look at cities, communities, and planning practice. I propose a different ontological point of departure that changes how planning researchers see “the object of manipulation” (city, community, etc.) from that of a passive generic entity in the background, and “we foreground them” were they are unique onto themselves and that planning
practice in each community “differs from one practice to another” (Mol, 2002, p. 5). It is at this new ontological approach that creates what Mol (2002) calls a “multiplicity of reality” where the planning reality in one planning practice is different from the planning reality in a different practice. It is at the point of multiple realities that planners are able to look at outlier case studies as another way to inform planning practice. In short, the ontological assumption of “multiplicity of reality” provides a methodological path that the planning researcher can access outlier data slices as evidence to inform individualized planning practice.

This paper provides the methodological roadmap on how planners can look at and analyze outlier data slices to inform planning practice. The paper begins with an introduction to outlier analysis that includes a review of outlier detection models and types of outlier data analysis (Aggarwal, 2017). To illustrate how an outlier evidence-based methodology can work, I access a longitudinal multi-data investigation of Hippietowns in the United States (Gaber, 2015). The paper concludes with a series of methodological guide posts to help the planning researcher conduct their own outlier analysis investigations and how to steer clear of possible problems of internal and external validity problems.

References

- Gaber, J. (2015). “Hippietowns,” delivered at the Association of Collegiate Schools of Planning (ACSP), Houston, TX.

Key Words:
evidence-based research, outlier analysis, Hippietowns

CROWDSOURCED AUDITING OF STREETSCAPE IMAGES FOR WALKABILITY RESEARCH

Abstract ID: 85
Poster

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Understanding which built environment characteristics contribute to walkability is important for promoting active transportation, but measuring these characteristics poses serious challenges in terms of efficiency and reliability. While some characteristics may be captured from GIS datasets or through machine interpretation of images, many are still best evaluated by human auditors. This study examines the feasibility of crowdsourcing built environment measurements from streetscape images by comparing crowdsourced judgements to those made by planners and using machine learning algorithms. It also explores strategies for identifying and filtering spurious judgements from crowdsourced datasets to improve overall reliability.
Crowdsourcing allows researchers to collect larger samples of measurements across more numerous locations compared with traditional audits. It also, however, provides little opportunity for the extensive training or oversight often used to promote consistency (Clifton et al., 2007; Purciel et al., 2009). Crowdsourcing interfaces must entice participation and reduce fatigue through streamlined and ideally game-like interfaces, offering participants a degree of entertainment and the affirmation of contributing to “citizen science.” Nonetheless, studies using crowdsourcing to capture visual preferences have found consistent judgements among large samples of observers (Dubey et al., 2016; Evans-Cowley and Akar, 2014), and OpenStreetMap has proved to be one of the most effective approaches for worldwide mapping. These successes provide useful models for developing similar platforms to measure the built environment.

Our study draws on data from a pilot survey developed to capture features related to walkability within 160 Google Street View images across diverse built environments in Columbus, Ohio. More than 50 participants from diverse backgrounds provided more than 20,000 unique responses. Fifteen binary and likert scale measurements were collected for each image on topics ranging from “Are there parked cars?”, to more subjective observations, such as “What is the sidewalk quality?” Preliminary findings show that while inter-rater reliability was higher for more discrete measurements, crowdsourced judgements made by non-planners were generally comparable to those made by planners. Moreover, reliability between crowdsourced respondents was similar to that reported by prior studies using extensively trained auditors. These results point to a promising role for crowdsourcing in future research demanding widespread measurements of urban spaces.

References


Key Words:
crowdsourcing, walkability, streetscape auditing, inter-rater reliability

COMMUTING SPACE DISTRIBUTION PATTERNS IN TYPICAL RESIDENTIAL AREAS OF SHANGHAI: BASED ON MOBILE PHONE SIGNALING DATA

Abstract ID: 109
Individual Paper Submission

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The residential areas of Shanghai are widely distributed and differ in residential types as well as allocated resource. Studies have shown that there are obvious differences in commuting space of several typical residential areas in Chinese cities, such as indemnificatory housing area, ordinary commercial housing area and high price villa area. The spatial differences reflect the impact of related policy factors of housing, transportation and industry. There is a lack of commuting studies based on large samples of residential areas due to the limited amount of traditional questionnaire data. With high coverage and holding rate, mobile phone signaling data can make up for the lack by providing rich spatiotemporal information of resident activities. In this study, two-week mobile phone signaling data of China Mobile's 2G users in Shanghai during 2014 is used. The research questions are mainly focused on: (1) spatial distribution patterns and regularities of commuting activity space at residential area level; (2) impact of housing policy, employment center distribution, urban transportation construction and other related factors on commuting space; (3) evaluation of commuting space distribution patterns and guidance to urban planning and urban development.

At first, corresponding rules are made to recognize workplace and residence. Workplace is the high frequency distribution during the day while residence is the high frequency distribution at night. 121 residential area samples are selected under the principles of wide geographic distribution, diverse residential area types, homogeneous residential properties and large resident record to insure data reliability and representativeness. Based on the sampling, commuting impact factors and commuting characteristic factors are counted. Commuting impact factors include distance to metro station and distance to city center, and commuting characteristic factors include average work distance, employment ratio in 5km and employment ratio in inner ring. The factor data combining with kernel density map of workplace and frequency distribution of commuting distance are mainly references for classification of commuting space distribution patterns.

Results show that there are several typical commuting patterns in Shanghai, including single core, band shaped, core + dispersion, double core, multi core and dispersion pattern. Single-core pattern has the shortest average commuting distance, while double-core pattern and dispersion pattern have the longest one. Compared with double-core pattern and dispersion pattern, multi-core pattern is relatively more efficient because of higher employment ratio in 5km and shorter average commuting distance. The impact of employment center on commuting patterns is obvious. Residents' employment become more concentrated if the residential area is closer to employment center. The core city center has great attraction and affects employment of residential areas nearly within 25km, while the new town employment centers have much smaller attraction. Commuting patterns of residential areas more than 25km to the city center are almost single core. Distribution of several higher level employment centers around the residential area is the main reason for multi-core pattern. As for metro station distance, the shorter it is, the more spread residents' employment is, and the influence distance is about 3km. Change of residential area attribute can result in change of pattern in specific areas, mainly near the outer ring and the suburbs, and it is the main cause of double-core pattern and dispersion pattern.

The imbalance of urban internal function is an important cause of excessive population concentration in big cities. Results show that the radial metro lines of Shanghai and social indemnificatory housing construction increase tolerance of long distance commuting, and attract relocation of more downtown residents. However, there are not enough suitable jobs near the suburbs and the dependence on employment of central area is still high, thus producing inefficient patterns like double core pattern and dispersion pattern. Therefore, employment center distribution need to be considered together with metro construction and social indemnificatory housing construction to evacuate central population and realize intensive development of the city.
LA NOISE ARRAY - A SENSOR NETWORK APPROACH TO EVALUATING URBAN NOISE POLICIES
Abstract ID: 145
Individual Paper Submission

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Ambient noise is an almost universally accepted concern for public health. Epidemiological studies have shown that populations exposed to night-time traffic noise tend to suffer from elevated blood pressure (Katsouyanni, Cadum, and Dudley 2008; van Kempen et al. 2002; Halonen et al. 2015). Beyond these general effects, parts of the population, including children and the elderly are particularly susceptible to environmental noise (Baguley and McFerran 2011).

Current noise regulations across the US do not address this concern sufficiently, which is partly due to a lack of robust measurement methods. First, most cities and regulatory frameworks specify noise thresholds based on A-weighted loudness measurements (dB(A)), which systematically underestimates low frequencies, which are both harmful and pervasive in traffic noise (Leventhall 2004). A single aggregate and average noise value is an inadequate descriptor of the many different ways ambient sound levels affect humans and animals. A second issue is the unavailability of consistent, spatially and temporally fine-grained noise measurements across urban spaces. Currently, most information about the urban soundscape is based on simulated models extrapolated from sparse point measurements. As a result of these methodological issues, the impact of architectural and urban design on the soundscape is poorly understood by planners and architects.

We present the preliminary results of an urban sensing study that used urban street lights as a scaffolding for a distributed sensor network of ambient noise sensors. From August to December 2016, around 30 sensors were deployed covering an area of approximately a square mile in East Hollywood, Los Angeles. The sensors recorded continuous measurements of aggregate loudness levels as well as
frequency components; audio data was recorded. The sensor readings were contextualized with a 1-week on-site qualitative observational study to allow for a better interpretation of the recorded measurements concerning the interactions between sound sources, the morphology of the physical environment including architecture and plants, and human activities. We also compared the recorded data to manual traffic counts conducted by the city of Los Angeles and historical weather data.

The exploratory study has revealed findings that are relevant for urban design and noise policy. By calculating individual noise profiles for each street in our site, we were able to show that busy streets with truck traffic are not only louder but also exhibit a qualitatively different frequency profile that shows a strong emphasis on low frequencies during rush hours. The noise envelopes closely matched the manual traffic counts at the respective intersection conducted by the city.

Beyond these aggregated views, we were also able to show the impact of individual events and activities on the soundscape, for example, the noise peaks resulting from the weekly garbage collection and the elevated noise floor caused by idling trucks.

We were also able to show the effect of urban morphology and ecology for urban noise: dense trees and plants dampen the measured noise, while flat and tall facades parallel to the street magnified the measured noise, which has wide-ranging implications for urban design.

Our contribution is primarily a methodological one. Until now, such fine-grained measurements of ambient noise were not available. Point measurements conducted by cities and agencies are too sparse to allow an investigation of how the built environment and human activity influence the soundscape. Attempts to address the lack of data through crowd-sourced measurements conducted by citizens using their smartphones are hampered by unsystematic data collection and inaccurate measurements. Using streetlights for noise sensing, on the other hand, allows for multiple simultaneous measurements at a high spatial and temporal resolution, allowing for an in-depth analysis of the urban soundscape and supply evidence for policy measures.

References


Key Words: soundscape, noise policy, sensor networks, urban design, visualization

WALKABILITY AND SINGLE-FAMILY PROPERTY VALUES IN SHRINKING CITIES: A SPATIAL HEDONIC STUDY IN BUFFALO, NY, CLEVELAND, OH, PITTSBURGH, PA, AND DETROIT, MI.
Building walkable neighborhoods with well-connected streets and sidewalks, mixed land use, and good access to a variety of destinations, which have been found to be associated with higher levels of physical activity, is a target of many communities. However, the economic benefits of walkability have been largely overlooked in the literature until recently. There have been few studies that looked at the links between walkability and economic outcomes, such as housing values, especially for shrinking cities. This study will examine the impact of neighborhood walkability, measured by Walk Score and a walkability index developed for shrinking cities on property values by analyzing the single-family home sale transactions in the past few years in four rust belt shrinking cities.

Past research has suggested that development in shrinking cities occurs in a different context than in cities and regions experiencing growth (Silverman et al. 2013). The development of sustainable and walkable neighborhoods presents challenges that are distinct from other cities experiencing growth. In shrinking cities, it is important to have a neighborhood transformation approach that can combine investments in urban revitalization and physical redevelopment with enhanced walkability, services, and transit. Some studies have shown that there is a growing market demand for pedestrian oriented development and homes in the pedestrian and transit-oriented communities, which can be capitalized into higher sale prices and can generate much-needed revenue for governments in shrinking cities. A study on the impact of walkability on residential property values can help shrinking cities and governments with severe fiscal constraints to reap the maximum benefit from walkability premiums.

Buffalo, NY, Pittsburgh, PA, Cleveland, OH, and Detroit, MI are on the list of the top 10 metropolitan areas in the U.S. with the fastest declining population between 1980 and 2010. The first three are also among Walk Score’s top 10 picks for affordable and walkable American cities. They are selected as the study areas because they represent an important case study of the walkability and housing prices.

Walk Scores, developed by a private company called Walk Score™, have been used by researchers as a proxy of neighborhood walkability in recent years (Duncan et al., 2011). Walk Score provides publicly accessible numerical walkability scores for every street in the U.S. We downloaded Walk Scores from Walk Score’s website using an Application Program Interface (API) for every census block in the study areas. We also constructed an accessibility-walkability index (AWI) to incorporate walkability and accessibility to anchor institutions and transit for shrinking cities. This index is based on the variables and destinations that reflect the 5Ds – density, design, diversity, destination accessibility, and access to transit, in addition to access to anchor institutions, as suggested by the literature (Yin, 2013).

Determinants of urban land values or housing values have been studied for over 100 years using hedonic price models, with considerations of the roles of accessibility and transportation systems. However, there have been few studies that incorporated the impact of walkability into hedonic housing price models until recently. Using Walk Score and AWI as walkability measurements, this study will employ a spatial hedonic price modeling framework to assess economic benefits of walkability, building on
Rauterkus et al. (2011) and Li et al. (2015). This framework will help to control for spatial autocorrelation effects. To identify the existence of spatial autocorrelation in our data, we performed Moran’s I tests. We further utilized the Lagrange Multiplier Testing Suite and detected that spatial autocorrelation existed in the dependent variable and in the error term. Therefore, instead of OLS, we employed the GWR spatial hedonic model. The spatial hedonic modeling approach can help to effectively explain the impact of the built environment, especially walkability and neighborhood safety, on the housing market.

References

Key Words:
walkability, housing values

A DATA COMMONS FOR URBAN BIG DATA: A NEW PLATFORM FOR RESEARCH
Abstract ID: 170
Individual Paper Submission

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As we enter the first urban century, complex interdependent infrastructure systems have become critical to support large urban agglomerations. These infrastructure systems and smart buildings are rapidly joining the Internet of Things (IoT) and evolving into advanced cyber-physical systems. As a result, massive amounts of data are currently being produced that characterize the structure and function of urban areas. The data produced by infrastructure and building sensors can be augmented by massive amounts of drone and surveillance videos, cell phone location data, social media postings, transit access swipes and credit card transaction records. These data can be combined with the extensive base data that cities and counties have developed over the past three decades in the form of relational databases and geographic information systems (GIS). Together this rich confluence of data provides a dynamic, comprehensive view of the function of the city and the activity patterns of urban residents. Urban Big Data provides a truly unique opportunity to investigate and understand the dynamic interactions between urban residents and built environment systems. However, much of this new data is currently fragmented and much of it is privately held. Therefore, it is not widely available to support a broad-based research program.
To exploit these new opportunities, the urban research community needs to develop a strategy to enable it to tap into these rich new sources of information. Many of the most important discoveries are likely to come from connecting previously separate streams of data. For example, understanding the complex interactions among previously separate infrastructure systems (e.g., water and energy) can support the design of more sustainable solutions. To address the need for researchers to access a broad collection of urban infrastructure performance data, the National Science Foundation (NSF) sponsored a workshop to develop a strategy for capturing and sharing large volumes of Urban Big Data. The authors organized and coordinated this workshop that included a cross section of urban planners, civil engineers, and data scientists. This interdisciplinary group reviewed the experience of several successful data repositories in the physical sciences (e.g., EarthCube) and identified the data needs and opportunities facing the urban research community. The workshop developed a strategy for using, storing, and sharing urban infrastructure data and began to define specific research projects that can lay the groundwork for a data commons platform. It produced a set of recommendations on the methods and techniques for collecting and curating large volumes of urban data, including software platforms to make data discoverable and useful to the urban research community. This data commons is intended to become a central part of NSF’s Cyber-infrastructure. The workshop developed several alternatives for collecting and sharing this type of data. This paper will build upon the results of this workshop to discuss how to create a data commons for collecting and sharing Urban Big Data to support the next generation of urban infrastructure research.

References


Key Words:
Big Data, Urban Infrastructure, Urban Activity Patterns

EXPLORING THE DETERMINANTS OF VARIATION IN LAND USE POLICY OUTCOMES: WHAT CONSTITUTES THE SO-CALLED CONTEXT?

Abstract ID: 188

Individual Paper Submission

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While land use planners have long sought good policies, it is no secret that land use policy outcomes are context-sensitive. Few policies, if any, have been found to work as expected in attaining their primary or secondary goals consistently across cities and over time. For a majority of land use policy
instruments, the evaluation outcomes are quite equivocal, suggesting that a certain policy tends to be
effective in some settings, while it is not in other circumstances.

The great extent of the variation in land use policy outcomes pose two important questions for both
researchers and practitioners: (i) why such variation exists and (ii) under what circumstances a policy of
interest is more likely to be effective. From a pragmatic point of view, it would be more beneficial to
address these questions rather than to seek a panacea that can guarantee success in all or most
settings. However, there has been little effort to advance our knowledge on this front. While many
empirical studies have detected varying policy effects, what exactly made the variation has remained
largely unanswered.

This study attempts to examine the mechanisms behind the varying land use policy outcomes and to
identify key contextual factors that can account for the variation, focusing on urban growth boundaries,
as an example. Specifically, using the data for 85 single-county metropolitan areas in the United States,
it analyzes how various factors (that represent the size, history/culture, geography, governance, and
market conditions/forces) interacted with the policy and generated diverging outcomes between 2001
and 2011. This is accomplished by employing a kernel-based regularized least squares method which
provides a flexible way to estimate the pointwise partial derivatives and capture (potentially) complex
interactions between the variables.

Results show that the impact of urban growth boundaries on development patterns is largely dependent
on the tested contextual variables. In particular, the policy is found to create a more substantial
difference in areas with a relatively smaller size of population or more fragmented governance
structure. The presence of urban growth boundaries also appears to alter the way regional governance
and economic variables affect physical development patterns, suggesting that the policy can sometimes
act as a complement of other factors needed for more compact and contiguous development.

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Key Words:
Land Use, Urban Growth Boundaries, Policy Outcomes

MEASURING EVOLVING STREET PATTERNS USING COMPUTATIONAL GIS METHODS
Abstract ID: 265
Pre-Organized Session: Emerging computational methods in urban design

AMOS, Dave [University of California Berkeley] daveamos@berkeley.edu, presenting author
Suburban, residential subdivisions once built with the gridded street patterns of the streetcar suburb era now feature the cul-de-sacs and loops found in post-war suburbs. Have subdivision developers begun to prefer new street patterns over the last 30 years, perhaps more connected, walkable patterns, or are loops and cul-de-sacs as prominent as ever? This research answers that question using computational GIS methods to analyze the street patterns in hundreds of suburban subdivisions in cities across the United States. The answer to this question is a critical datapoint that can help planning scholars understand how much the notion of walkability and connectivity have permeated the designs of traditional subdivision development. Subdivisions explicitly designed to be well-connected and walkable, such as New Urbanist or smart growth communities, make up a very small number of subdivisions in any community, but the principles of connectivity and walkability may have influenced the design of subdivisions not explicitly designed according to the New Urbanist or smart growth paradigms.

This research builds on the work of Michael Southworth and Peter Owens, authors of the 1993 article, “The Evolving Metropolis: Studies of Community, Neighborhood, and Street Form at the Urban Edge.” They created a typology for classifying subdivision street patterns by observing changes in street pattern through time, from 1900 to 1980 using maps from the San Francisco Bay Area. This research established that street patterns have changed over time, from the gridiron plan of 1900 to the “lollipops on a stick” cul-de-sac pattern of 1980. But what about the period between the 1980s and 2017? One study of the Portland metro region found that internal neighborhood connectivity has increased, but connectivity between neighborhoods declined (Song and Knaap, 2004). Beyond this study, there have not been others that extend and enhance the findings of “The Evolving Metropolis.” This research fills the gap.

Southworth and Owens reviewed subdivisions and developed their typology without the aid of computers; this fact does not make their work less accurate, but it means it cannot be easily scaled up to conduct the analysis rapidly on an entire metropolitan region, or even several metropolitan regions. Technological advances and improvements in data access since the publication of “The Evolving Metropolis” make it possible to conduct their analysis using geographic information systems, python scripting, and publicly available subdivision boundary and street centerline data. This research replicates the measurements of Southworth and Owens from 1950 through 2010, using these techniques and data sources, for hundreds of subdivisions in cities across the United States. This broad, nationwide approach will allow for inter-urban comparison to better understand the evolution of the standardization of suburban street patterns.

Results of this project from 1950 through 1980 show that their non-technological results closely match the computational GIS results in the trend toward cul-de-sacs and away from the grid. Results from 1980 to the present show some shifts in street patterns, but most subdivisions more closely resemble “lollipops on a stick” than the grids of the streetcar suburbs. These findings indicate that there is still work to be done to encourage the design of more walkable, connected suburban subdivisions.

References

MODELING FOR REPRESENTATION, PREDICTION, AND PLANNING SUPPORT
Abstract ID: 271
Individual Paper Submission

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Computers were introduced to planning roughly fifty years on the assumption that computer-based models could provide a scientific basis for planning and public action. Like architects’ scale models and engineers’ prototypes these models were assumed to “capture the city in a computer,” allowing planners to test alternative policies before implementing them in practice. These models were assumed to perform three closely linked task. They were first assumed to allow planners to represent how cities and regions operate, spatially, economically and socially. This understanding was then assumed to allow planners to predict what the future will be. This, in turn, was assumed to allow planners to clearly identify what should be done, on the assumption that public officials would accept and act on planners’ recommendations. This conception of computer-based modeling stimulated the development of a host of sophisticated models of regional science and urban science (e.g., Harris (1985) and Batty (2013)), that were rarely implemented in practice and hundreds of planning models that have had little impact on planning practice and public policy.

This paper suggests that representing, understanding, predicting, and planning support are three fundamentally different tasks, requiring three entirely different kinds of models. Models that draw on the insights of economics and spatial sciences to understand the complex reality of urban and rural areas are inevitably extremely difficult to implement in practice due to the limitations of available data and support funds. Prediction models do little more than continue past trends without considering planners’ attempts to modify these trends. Both models are based on images of “planning for the public” which assumes that planning models should enhance the understanding and expertise of planners, to the exclusion of the public.

The paper goes on to argue that models that truly support planning should be simple, easy to use, and clearly identify the implications of alternative policy choices. More importantly, to effectively influence public action, planning models should encourage planners to plan with the public by helping them understand the past and present, consider alternative courses of action, and deal with an uncertain future (Klosterman 2013).

The paper concludes by suggesting that models that do this will be fundamentally different from the models that continue to dominate planners’ conceptions of what computer models can and should be.

References
DEVELOPMENT AND APPLICATIONS OF MEGAREGION TRUCK FLOW ESTIMATION MODEL
Abstract ID: 275
Individual Paper Submission

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Freight transportation has played a critical role in the development of megaregion economies. However, most of the existing freight studies have focused on goods movement at the national, state, or metropolitan levels. Megaregion freight transportation has not received much attention. One of the objectives of this research is to develop an analytical model for estimating megaregion truck flows, which will help to evaluate and improve freight mobility in megaregions. This research will review previous studies on this issue, identify available and ready-to-use freight datasets, and examine the state-of-practice methods for truck flow estimation. It intends to develop a replicable method to explore the spatial and temporal patterns of commodities moved by truck in megaregions. It will also develop an analytical framework to load the commodities carried by truck onto a road network, which is a spatial integration of the Federal Highway Administration (FHWA)’s Freight Analysis Framework (FAF) and the megaregion freight transportation facilities. It selects Texas Triangle as an empirical case to demonstrate the implementation of the megaregion truck flow model. The commodity data will be obtained from the FAF, state transportation agencies, MPOs, and other related sources. Since FAF data ignores truck movement details within a large metropolitan area, the centroids in the FAF’s zonal system will be redesigned by adding internal zones and multiple freight external points such as seaports, airports, rail yards and highway entry-exit points in the large metropolitan area represented by this FAF centroid. Further, the FAF and the road networks of the large metropolitan area will be integrated by matching their links and incorporating their attributes; a user equilibrium (UE) freight model will be developed to estimate the freight value by link of the freight network. The link truck values calculated in this research will support the evaluation of freight mobility and facilitate the decision making process of policy makers for megaregion freight transportation.

References
**ARE WE THERE YET? PROGRESS IN MAKING SMARTER CITIES**

Abstract ID: 345
Individual Paper Submission

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From the watermill to the Internet, cities are generated and shaped by technological advancements. Of late, many companies and academic institutions have sought to capitalize on this relationship and on the growing digitalization of urban-related information to promote what has come to be known as "Smart Cities." Smart cities technologies couple real-time data acquisition with database updating and pattern-finding algorithms and advanced visualization techniques to improve the management and productivity of urban systems. For planners, smart cities is the next milestone on the road that started with the creation of vector-based GIS in the early 1970s, continued through spreadsheet modeling in the 1980s, and resulted in planning decision support systems in the 1990s.

The ambitions of companies like IBM and Siemens aside, smart cities remains easier to talk about in concept, than to execute in practice.

This paper will report on two sets of activities. It will begin in Part I with a historical review of smart cities technologies uses and practices, starting with the implementation of CompStat by the New York City Police Department in the early 1990s, and continuing through today. Based on a comprehensive and critical literature search, this first part will seek to find and summarize singular and cutting-edge examples of the use of smart cities technologies in the fields of urban planning and management.

Second, in Part II, it will report on the results of a survey of current smart cities technology use and implementation in a representative sample of 50 urban municipalities from across the U.S. (The survey instrument will be developed from the best practices research in Part I.)

Lastly, in Part III, it will identify those urban planning and management functions in which smart cities technologies offer the greatest potential to improve productivity and responsiveness over the next ten years.

**References**


**Key Words:**
MACHINE LEARNING VS STATISTICAL MODELING: WHO, WHAT, WHY, WHERE, WHEN, AND HOW
Abstract ID: 405
Individual Paper Submission

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Progress in machine learning and artificial intelligence has in recent years generated enormous fad in and outside the computer science field, which helps revive an old questions quantitative social scientists have been asking for decades: is it worth the effort to apply machine learning techniques? Who is using them? Statisticians and computer scientists have long argued that algorithm-driven approach has its place in statistics and social science (Breiman, 2001). Varian more recently identifies opportunities for machine learning and econometrics to learn from each other - in particular, how machine learning techniques can be applied to do causal inference (Varian, 2014, 2016). Some economists and political scientists have renewed their enthusiasm in applying machine learning algorithms in their field; some examples of recent applications include Bajari et al. (2015) and Monroe et al. (2015).

Previous applications in the urban planning field heavily lean toward the artificial intelligence approach for developing decision support system (for example, Tanic (1986) and Silva (2004)). In this paper, I first define and introduce the two approaches to data analysis (what), and explain why/where both approaches have their appeal. I then demonstrate when and how each approach has its strength and weakness through two case studies with real data. In the first case study, I show that imputing missing data for the National Household Travel Survey with machine learning techniques enables more robust regression analysis while capturing the uncertainties introduced in the imputation process. In the second case study, again with the NHTS data, I show how machine learning algorithms facilitate variable selection and consideration of non-linear and interaction effects, which can help inform estimations of regression models, and when machine learning techniques can replace or complement statistical models.

Through a review of the development of machine learning methods and their applications in social science and two case studies with actual data commonly used in transportation research, I hope to show the value of machine learning to planning researchers by answering the questions of who, what, why, where, when, and how.

References
Introduction
Active travel is an essential encouragement for physical activities, which brings a positive influence on health outcomes. Generally, the physiological functions of old adults decline during the ageing process, leading to their social network shrinking and physical activities (PA) diminishing. However, PA has a great effect on many health outcomes for old adults in especial. Since the current built environment only provides limited access for aged residents, the spatial encouragement that led senior citizens into PA is supposed to be considered as a relevant cutting-in point for studying in dense city area.

In this study, the site Tongji Xincun is one of the common ageing communities in dense urban setting. Most residents have lived here for more than fifteen years and once worked for the same institution, thus having stable relational ties with the neighborhoods. Accordingly, taking respondent driven sampling, (RDS) (Heckthorn D., 2001) avoid sampling error here compared with snow-ball sampling or convenience sampling approach.

Methods
This study proposes a passive collection method and the classification of modes at the trajectory level using random forests. Methods: The GPS module collected real-time trajectory data from 76 participants (mean age=70.1, SD=7.7) over 102 days. The accelerometers and GPS Module measured activities and locations every 3 seconds. By means of the smartphone GPS tracking, the study explores the spatial decision and spatio-temporal distribution of movement. The PostgreSQL database includes GPS points with latitude and longitude, personal attributes and time-series ambient atmosphere data. A classification model of spatial selection references was constructed using the random forests method. Random decision forests model is a machine learning method for classification that operates by constructing a multitude of decision trees (Ho, Tin Kam, 1995, de Ona, J., de Ona, R., Lopez, G., 2016). Finally, the study investigated the performance of models on the basis of a limited number of participants and trajectories to predict the transportation modes for a large number of databases. Moreover, the basic personal information and atmospheric conditions parameters added in the model make great improvement in increasing the practicality and accuracy of classification.

Findings
Based on more than 38 million GPS records, the concentration of trajectories demonstrated the undetected points of interesting (POI) of the senior citizens inside and outside the neighborhood. 1) The paper measures the actual scope of the elderly with GIS spatial analysis methods, in which the travel
range and physical activities along with the growth of the age offers upgrade moment by moment rather than descending latter tendency. The results show that the female group presents obviously higher frequency. 2) Immediate destination travel, active travel and multipurpose travel can be recognized distinctly by random decision forests model. Zero entropy stands for absolute certainty, while higher value for more mobility and possibility. 3) The random forests model can map the complex traits of the spatial behaviors pattern.

Relevance
Random Forest was able to distinguish the root and leaf nodes of the major hierarchical structure influencing the PA, such as weather condition and gender. However, it is difficult to separate the key connection nodes in fuzzy sets. The analysis results verify the relations between transportation and health built residential areas, indicating the importance of close proximity from neighborhoods to medical facilities on their level of physical activity. Thus, the outcome reveals the consensus of spatial relation evidently and significant geographic cluster of the elderly.

References

Key Words:
Physical Activity, Ageing Community, GPS Trajectory, Machine Learning, Random Forests Model

DOES URBAN SPATIAL STRUCTURE AFFECT URBAN SEISMIC RISKS? CASE STUDY OF TAICHUNG, TAIWAN
Abstract ID: 623
Individual Paper Submission

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Land-use planning has been recognized as an important tool to reduce potential losses of lives and property during a severe earthquake (Burby et al., 2000). In the past decades, seismically resistant construction standards were often considered to help mitigate seismic impacts to property. However, this approach could easily cause a false sense of security, which encourages new developments to be allocated in hazardous areas (Nelson and French, 2007). Therefore, another approach, land-use planning, has been increasingly used to guide future growth while considering seismic-safety elements in the planning process (Wang and Guldmann, 2015; 2016). In addition, it is commonly asserted that compact development is the best spatial configuration of land use for cities to grow sustainably because this urban form physically reduces travel distances and therefore conserves land (Echenique et al., 2012). However, it has not been examined whether such planning policy strategies for land use have impact on seismic resilience.
Seismic hazard (i.e. ground shaking and displacement) and urban vulnerability (i.e. land uses) are the two major components of seismic risks (Wang and Guldmann, 2015; 2016). Planners should be able to assess the impact of planned land uses and the resulting seismic risks due to disproportionally allocating future growth in seismic hazardous locations. Therefore, it is extremely important to understand whether compact or dispersal development is helpful to mitigate seismic risks subject to the local seismic characteristics of a city. This study is to examine the effects of urban form on seismic risks. Several urban-form scenarios will be designed and conducted for assessing the resulting seismic damage to property, using a statistically estimated seismic-damage model.

This study will take the following three-step approach, applied to the case-study city. First, a statistical seismic-damage model will be estimated to provide an explicit relationship between potential seismic damage and seismic hazard and land uses, using a set of pseudo-data simulated from a seismic-engineering model. Second, several scenarios of urban form will be considered: (1) the existing form; (2) compact development; (3) planned expansion; and (4) dispersal development. Third, the seismic-damage model will be used to assess the resulting seismic risks under these four land-use policies.

Seismic-engineering simulation models have been widely used in assessing potential seismic impacts and resulting monetary damage, such as HAZUS in the US and TELES in Taiwan (Wang and Guldmann, 2015; 2016). With a seismic simulation model, most studies focused on the impacts on seismic risks resulting from future land-use increments. The mapping of seismic hazards is another focus of interest of using these seismic simulation models. In addition, Wang and Guldamnn (2015) prioritized the most seismic-resistant location for future growth, using an optimization approach with a statistical seismic-damage model. In California, seismic mitigation elements need to be considered in comprehensive land-use plans (general plans), required by the State Planning Act amended in 1971. In a general plan, compact development with well-designed public transit is usually selected to help achieve sustainability. However, it has not been discussed in past literature whether a compact city would be also beneficial for seismic mitigation.

The simulation outcomes under the designed scenarios will reveal whether a more sustainable urban form (i.e. compact development) happens to result in a more seismic-resilient city. This study will add to the existing literature by defining a seismic-resistant urban model for guiding future growth that mostly mitigates potential seismic damages. This application would also provide technical and policy insights on seismic-resilient planning for a city and also throughout the world.

References


Key Words:
FROM SMART CITIES TO FULL STACKS: THE ROLE OF PARTICIPATORY PLANNING TECHNOLOGIES FOR ASSESSING SOCIAL RENTAL MARKETS IN THE CONTEXT OF INFORMAL SETTLEMENT UPGRAADING

Abstract ID: 651
Poster

STIPHANY, Kristine [The University of Texas at Austin] kstiphany@utexas.edu, presenting author

This poster session presents the Chapa Project, a comparative research initiative at the intersection of housing and technology in Brazilian informal settlements, where citizen-sourced data visualization is changing the interface between communities and their governments. Publicizing data resources has been important for grounding Brazil’s progressive policies in realities that can be measured, visualized, and therefore for which politicians can be held accountable. The embrace by municipalities of urban data portals such as HABISP and GeoSampa, for example, is a commendable effort to improve planning transparency in cities that feature persistent inequality. Yet many areas still remain trapped within what are effectively data shadows (Leonelli et. al. 2017) – communities that are mapped but lack finer grains of data, and where mobile technologies are ubiquitous yet not stacked (integrated) to meaningfully address wicked problems (Goodspeed 2015). This limits the extent to which ICTs can calibrate to on-the-ground issues, and (some) responses can ultimately be automated – a key aspiration of smart city thinking. The nature and extent of informality is a major area to be so thoroughly documented remotely, but about which so little is known from the perspective of everyday use and, in the area of housing, system breakdown. Satellite imagery and GIS maps show where informal settlements are located on city maps. Yet closer up, less is understood about the formal and informal housing processes implemented – many times successively – within informal settlements, and how their interaction and mutual reinforcement have changed the landscape of communities over time. Indeed, it was Janice Perlman (2010) who called attention to the lack of data about successively upgraded neighborhoods, where housing issues differ significantly from both the formal and informal city, and where existing, well-established contexts offer opportunities for “Smart City” technologies to expand public participation and improve urban livability. As others have argued, it is within these “actually existing” contexts that the true test of Smart City thinking stands to be legitimized (Glasmeier and Christopherson 2015) (Shelton et. al. 2016). Since September of 2015, the Chapa project has undertaken a two-year Participatory Action Research that considers the question of how historical patterns of urbanization in existing informally constructed environments impact future development alternatives. Drawing upon mixed methods that include geospatial analysis and a random sample of 1,032 households, the study has resulted in the first comprehensive analysis of the only two neighborhoods that have been upgraded by the same five approaches generally found across most settlements in São Paulo. In addition to descriptive text, this poster session will offer visual representations related to the finding of elevated rental markets, and future scenarios that assess the feasibility of social rental housing for consolidated settlement upgrading. From these perspectives, this research is most relevant for completing connections between participation and planning support technologies for enhanced equity in urban development.

References

Current approaches to quantifying vulnerability and resilience most commonly focus on physical, economic, social and political factors that can enhance (or diminish) the capacities of communities to withstand, cope with, and recover from disruptions caused by natural disasters or intentional attacks (Cutter 2016). Related research in characterizing and modeling infrastructure interdependencies has underscored the risks and societal impacts of critical assets disruption (Zimmerman and Farris 2010). More recently, criticality has been added to the compendium of measures to assist utility companies, local governments, state and federal agencies with pre- and post-disaster planning for the protection, restoration, and recovery of critical infrastructure systems and key community assets (Fisher and Norman 2010). Criticality assessment methodologies offer insights as to what makes certain community assets “critical” with respect to cascading effects on other infrastructures and impacts on emergency operations, access, service delivery, and evacuation (Theoharidou et al. 2009).

This paper offers an integrative interdisciplinary framework for criticality assessment of two interdependent infrastructure systems: (i) transportation networks and (ii) power/electricity transmission and distribution. The framework is applied to the Lehigh Valley Region impacted by Hurricane Sandy and other extreme events such as floods and nor’easters. The framework links spatial analysis with expert opinion and simulation and optimization modeling to improve the understanding of the interactions and interdependencies of key critical infrastructure assets in disasters. We use the aforementioned information to develop a criticality measure to use for evaluation of community readiness and resilience.

In implementing the proposed framework, we first identify critical links in the transportation system by developing a scaling constant (weight) indicating the relative importance of each combination of links and nodes based on demographic and socio-economic factors (for example, populations served within 5, 10 and a 15-minute drive from each component of the network). Accessibility to transit stations, hospitals, shelters, emergency operations centers, gas stations and evacuation routes under a set of risk scenarios is evaluated using weighting factors derived from an expert opinion survey. Additionally, two
different optimization models to evaluate sheltering capacity and emergency response are developed based on enhancements of the Location Set Covering Problem (LSCP) and Maximal Covering Location Problem (MCLP). We pinpoint potential vulnerabilities in the electrical system and collate them with the identified critical links in the transportation network. A microgrid formation algorithm (Chen 2016) after an interruption in the electrical system and its links to other interdependent systems is used to assess the functionality of the system via simulation. These algorithms provide decision guidance with regard to optimizing emergency services based on population served, evacuation options, travel time, and risks associated with candidate paths during an extreme event.

Risk scenarios include assumptions associated with compromised links and nodes of the transportation network and loss of power. Big data from location records created by mobile devices (StreetLightData) are used to examine travel behavior before and after a disruptive event and validate the assumptions of the proposed modeling framework. The criticality measure is intended to provide decision guidance and help improve planning and adaptive capacity management to enhance community resilience by accounting for key interdependencies between critical infrastructure assets.

References


Key Words:
infrastructure interdependencies, criticality, big data, simulation, optimization

ARE AFFORDABLE HOUSING LOCATIONS MORE ACCESSIBLE TO SERVICES AND EMPLOYMENT BY TRANSIT THAN OTHER RESIDENTIAL LAND PARCELS? INTRODUCING A GIS TOOL TO MAP PARCEL LEVEL TRANSIT ACCESSIBILITY

Abstract ID: 773
Individual Paper Submission

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Increased congestion and personal transportation costs are encouraging the use of public transit by a wide range of socioeconomic groups in urban areas. And it just so happens that these shifts in perception also influence how public transit is planned for by city officials. Interpreting how these spatial results impact design changes is a necessary step for progressing the study of transportation. However, it is still difficult to understand how disaggregated spatial and temporal scales influence passengers’ accessibility.
to certain destinations. A new technique planners are used for analyzing and mapping out the commute sheds of multimodal networks is through the use of General Transit Feed Specification (GTFS) and the ArcGIS Network Analyst tool. This method integrate and take into account, actual transit schedules, and street networks. Detailed modeling can be used to measure changes in accessibility after transit systems have undergone some sort of modification or upgrade.

This study will introduce a new GIS-based public transit network tool with a high-resolution time shed of a multimodal that accurately reflected the accessibility of the network. The public transit network model consisted of both transit and walking networks which were integrated into a multimodal network. This allowed for the accurate measure of an individual’s total travel time which includes time needed to walk to a bus stop, wait for the bus to appear and the bus’s travel time at any time of the day or during the on-peak and off peak hours. The study then aimed to use the tool to compare the transit accessibility by transit to jobs and service for different types of residential locations including affordable housing in Orange County, Florida. The comparison will include multi- and single-family parcels as well as developments and locations that receive government funding assistance. Accessibility is estimated by counting the number of services or jobs accessible within 15, 30, 45 and 60 minute transit sheds. The paper will also compare statistically the accessibility at affordable housing locations to other residential land parcels.

Accurate time sheds of multimodal, disaggregated transit models are valuable tools for measuring the performance of public transportation and for evaluation of residential locations. The study area is assessed for their accessibility to employment and other services. The preliminary analysis shows that affordable housing locations has better transit accessibility than multi- and single-family properties. GTFS data can provide numerous opportunities for expanding and using the transit information for planning analysis purposes. The policy implication underscored by this paper is that more precise measures of accessibility should be incorporated into decisions concerning the location of affordable housing and employment opportunities if we hope to plan sustainable communities.

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Key Words:
Transit Accessibility, GTFS, Housing, Time Sheds
DEVELOPING A TWO-DIMENSIONAL PROPENSITY SCORE MATCHING METHOD FOR LONGITUDINAL QUASI-EXPERIMENTAL STUDIES: A FOCUS ON TRAVEL BEHAVIOR AND THE BUILT ENVIRONMENT

Abstract ID: 862
Individual Paper Submission

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The lack of longitudinal studies of the relationship between the built environment and travel behavior has been widely discussed in the literature. It is mainly due to the lack of longitudinal datasets, in which travel behavior is measured for the same individuals before and after the change in the built environment.

This paper aims to address such a limitation by extending the standard propensity score matching estimators to support longitudinal quasi-experimental studies. The standard propensity score matching method has typically been used in cases of true panel data, where the propensity score method pairs treated and control observations (hence the match is in a single cross section). Typically, census and travel survey datasets are gathered for a same region once every several years; but they are not true panels, because the same participant is not observed longitudinally.

Our method, named Two-Dimensional Propensity Score Matching (2DPSM), is developed to cope with such an issue by pairing observations across two dimensions: longitudinal and cross-sectional. This method allows researchers to mimic randomized controlled trials and find synthetic control groups that are similar to the treatment group and to match subjects synthetically across before-treatment and after-treatment time periods. In this paper, we introduce the technical details of 2DPSM and test its performance based on a series of synthetically datasets. A near-term opportunity to implement 2DPSM is to identify the impact of transportation infrastructure on travel behavior.

References


Key Words:
Propensity Score Matching, Built Environment, Travel Behavior, Causal Relationship

SMART CITIES THROUGH THE LENS OF AICP PLANNERS: THE RESULTS OF A NATIONAL SURVEY

Abstract ID: 938
Individual Paper Submission
Smart cities strategies and technologies can greatly enhance planning and decision making practices (Allwinkle & Cruickshank, 2011). These strategies include collecting or using new data sources, using new technologies, or sharing information and collaborating across units and jurisdictions in new ways (Albino, Berardi, & Dangelico, 2015). However, our understanding of planners’ perception and organizations’ readiness for using these strategies is still limited (Afzalan, 2015; Townsend, 2013). In this research, we build on the results of a national survey to explore the perception, intention, and readiness of planners and planning organizations in adopting smart cities strategies in their planning practice. We review literature around plan making, organizational management, planning support systems, and smart cities to explore the following two inter-related questions:

1) How do planners perceive the value of smart cities technologies and strategies in their planning practice?
2) What are the requirements for more effective adoption and deployment of smart cities technologies and strategies, based on planners’ perspective?

To explore the questions, a web-based survey was sent out to all the AICP members (N= 16,249) in November 2016. The survey was designed by the authors and administered by the American Planning Association. The study focused on the AICP members in order to gather ideas from certified professional planners who work at public or private organizations. The survey focused on various aspects of adopting technologies and data use. These aspects include stakeholder engagement, capacity building and networking, organizational and departmental collaborations, budgeting, data collection and analysis, and plan making. The majority of the survey questions were closed-ended. The respondents were also allowed to add their ideas through several open-ended questions. The results of the close-ended questions were analyzed through statistical analysis, mainly descriptive analysis and t-tests, and the close-ended results were analyzed using qualitative content analysis methods.

More than 1,400 planners participated in the survey. Based on the analysis results, using social media for public engagement and GIS tools for information sharing are considered as the main smart cities strategies used by more than 80% of the planning organizations. On the other hand, some other smart cities strategies such as data analysis and application development are less commonly used by planning organizations. In public organizations, most of the planners are mainly engaged in smart cities activities as interdepartmental liaisons (42%) and less as data analysts or technical managers. The three main needs for more effective adoption of smart cities strategies are funding, access to technical staff, and education. Planners in both public and private organizations consider optimizing day-to-day public facility and service operations as the most valuable potential for using smart cities technologies. Planners are more concerned about the digital divide issues of using smart cities technologies than they are about potential ethical or privacy issues. The results of this research provide insights for planning scholars to understand practitioners’ perceptions of using and adopting smart cities technologies in their everyday practice. The results also help planning academics to better prepare their students to thrive in their future demanding jobs.

References
Emerging technologies are fundamentally changing how we plan, develop, and manage our cities, as cities around the globe continue to urbanize and become more smart and connected. Local planning and development is the most basic form of government, impacting cities that live and work in communities, and planning departments provide one of the most visible conduits where citizens. Given trends of increasing mobile use, local governments and public bodies officials (and particularly city planners) are being require to adopt and use new technologies to plan, communicate and engage with citizens.

In this context, this study benchmarks the use of technology in cities across the United States as of fall 2016, evaluating changes since 2015, suggesting standards for using technology in planning, and hypothesizing how technology trends will continue to impact planning and local government. Highlights of this research includes the finding that many cities publish government documents such as zoning code and comprehensive plans online, however a much smaller (but slowly increasing) number provide sophisticated online geographic information systems (GIS). Most local planning departments now have a website but a minority are responsive. While a large number have embraced responsive (mobile friendly) technology over recent years, far fewer are integrating the use of social media, online permitting, and other technologies.

The study also refines a methods of benchmarking which have become validated through peer-reviewed publication over recent years and discusses follow-on opportunities--including an applied civic hacking project called Streetplan (http://streetplan.org/) which resulted as a project outcome. This provides an example of how methods of digital representation and new technology can enrich community participation and the planning process, helping to reshape cities methods to gather data enriching the planning process.

References

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Key Words:
urban technology, public participation, responsive design, responsive design, civic hacking

PARTICIPATORY CAPACITY BUILDING: CREATING A REGIONAL LAND COVER MONITORING SYSTEM USING FREE DATA AND CLOUD BASED COMPUTING INFRASTRUCTURE IN THE LOWER MEKONG COUNTRIES IN SOUTHEAST ASIA
Abstract ID: 962
Individual Paper Submission

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Land cover and land use maps are essential for effective regional planning efforts. Currently available national land cover maps in the Lower Mekong region do not meet the needs of policymakers due to infrequent updates, classification systems that do not accommodate multiple users, lack accuracy assessments, inaccessibility or data being confined within political boundaries. In this project, we apply a participatory capacity building approach to co-create a complete and consistent regional land cover monitoring system with stakeholders. The system is built entirely in Google Earth Engine, a freely available cloud-based geospatial processing platform that combines a petabyte-scale archive of satellite imagery and other datasets, cloud-computing infrastructure for processing, an advanced API for creating complex workflows, an online IDE for development and visualization, and sharing and collaboration tools. Google Earth Engine provides a centralized location in which to integrate biophysical primitives (continuous raster layers such as percent tree cover), stakeholder developed training and validation data (primarily vector points with biophysical attribute data), and rule-sets for assembling the primitives to locally meaningful land cover categories. The data and code are available to all stakeholders, and do not require powerful computers, large hard disks, or high-bandwidth internet connections to access. The system was designed in a series of regional capacity building workshops with representatives from Thailand, Cambodia, Myanmar, Lao PDR, and Vietnam. Stakeholders defined a shared land cover
typology (Ahlqvist 2008) and specified the design criteria of the RLCMS (Clark et al 2010, Wulder and Coops 2014). Their criteria includes a flexible design, a common set of input data sources, map consistency, uncertainty estimates, and facilitates the exchange of information and technology. The system architecture was developed in two workshops. During the first workshop stakeholders collected reference in open source software (e.g. Bey et al 2016) and used this data to developed primitive maps, thematic biophysical predictions such as percent tree cover. In the follow up workshop, participants used a customizable assembly logic to combine biophysical primitive layers to create final thematic land cover maps to meet their management objectives. Uncertainty from the biophysical primitive layers was propagated into the final land cover map product using Monte-Carlo simulation methods to provide pixel-based estimates of uncertainty.

The accessibility and transparency of the system results in dramatically increased information and technology exchange within and between member organizations. An additional benefit of building a system based on biophysical input data layers is that map inputs can be easily updated to make use of better reference data, improvements in classification methods and remote sensing technologies. Because the system is built using freely available data and technology and is customizable to national needs it can easily be adopted by other regional land management efforts around the world.

References


Key Words:
land cover mapping, cloud computing, Google Earth Engine, participatory, free and open source

INTEGRATING HETEROGENEOUS SOURCES OF DATA TO ESTIMATE COMPOSITE SOCIAL HAZARDS

Abstract ID: 1021
Individual Paper Submission

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Crime, traffic crash hotspots and other types of hazard to citizens often spatio-temporally overlap in cities and are responsible for decreased accessibility and quality of life in cities (Tilahun, et al 2016). There is a need to integrate these disparate sources of information for improved community development and law enforcement. The Data-Driven Approaches to Crime and Traffic Safety (DDACTS), a joint a law enforcement operational model is an approach based on local data collection and analysis to identify crime, crashes, and traffic-related hot spots (NHTSA, 2014). Yet some of these databases have problems of underreporting particularly in deprived Environmental Justice (EJ) areas, in addition to latency and other forms of inaccuracy (Cottrill and Thakuriah, 2010).

This paper will examine the ability to derive composite indices of social vulnerability to crime and crash hazards using emerging sources of sensor, social media and administrative data. Because sensor data tends to be heterogeneously distributed over space-time, geographic coverage of such sources of information is variable and sparse in many areas. We use incident data from road sensor systems as well as GPS and twitter data from public transportation agencies to derive a comprehensive picture of hazards and delays within a city. Additionally, we make use of citizens’ Twitter posts. However, the number of geo-tagged tweets pinpointing the location of the user at the time of tweeting tends to be sparse for event detection, and not representative of overall populations (Mislove, et al, 2011; Sloan, et al, 2015). Hence there is a need to consider expanding and geo-localizing the sample of non-geo-tagged tweets that can be associated with locations, a process called “geo-localization”. Our geolocalization approaches utilize Points of Interest databases, information retrieval-based approach that trains on geo-tagged tweets, and machine learning techniques using majority voting, and substantially increases the overall sample sizes and coverage over a city (David Paule, et al, submitted). Our results show that using geo-localized tweets allow discovery of a larger number of incidents and socioeconomic patterns that are not evident from using geo-tagged data alone, leading to detection of activity throughout the metropolitan area, including deprived EJ areas where the degree of social media activity detected is usually low.

Integrating such diverse sources of data induces substantial uncertainty in model estimates of hazards. Using data from the Chicago metro area, we combine multiple models using Bayesian Model Averaging, which allow us to identify the most important parameters in understanding the overall hazard space and to fuse together multiple sources of information towards deriving composite spatio-temporal measures of social hazards. Implications are derived for urban operations management and policy.

References

GTFS AND CENSUS TOOL
Abstract ID: 1034
Poster

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In 2016 the USDOT released the National Transit Map (NTM) and associated data (Bureau of Transportation Statistics, 2016). This map centralizes transit network data in a specific format. General Transit Feed Specification (GTFS) standardizes transit network configuration and operations in such a way that it is easy to process. Developers use these feeds to develop various applications (Antrim & Barbeau, 2013). While this data does not contain all necessary factors, it does provide information about the underlying network connectivity and attributes. Census data enables further social, environmental, and spatial inquiry. Transportation researchers have been able to utilize GTFS and Census data to study transit accessibility (Bertolaccini & Lownes, 2015; Owen & Levinson, 2016).

One of the time consuming processes of working with GTFS is relating it to Census data. Projects involving these datasets require preparatory data clean up and GIS processing which increase the costs of running multiple case studies. While these steps are common practice, it represents an area of research that can be streamlined. The objective of this research is to automate the data retrieval, geo-cross-referencing, and tabulating of publicly available national datasets. An open source tool is developed that enables researchers and practitioners to accelerate the initial data processes and allows them to focus on analysis and innovation.

The program will allow the user to select a transit system. Stops and buffers will be downloaded from the NTM dataset. The program will then select a corresponding census block/tract shapefile using the extent of the transit data (TIGERweb, 2017). QGIS libraries and functions are used to find (a) in which census designation is each transit stop located, and (b) which blocks are within the catchment area of an external transit stop point. The outputs are the downloaded shapefiles and tables in CSV format for future relate/join operations. The tables also contain information on geometric overlap of polygons and lines, which are useful for the end user’s interpolation between incongruent geographic units. When the researcher or planner wants to test the transferability of their project, they can return to the tool to obtain prepared data for a new case study. Only census designations within the extents of the GTFS request will be outputted thus reducing file sizes. Frequently there are updates to GTFS data as agencies adjust their routes and schedules. This tool facilitates the retrieval of the most up-to-date data. The current version is only enabled for GTFS and certain census designations. Further development will tie in other existing and future public datasets and implement a web-interface.

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What kind of place would make people feel lively, beautiful and safe? Understanding the relationship between the built environment and its human perception is a central concern to the field of urban planning since the revolutionary work of Kevin Lynch (1960). However, due to the limitation of traditional data collection method, there are few the quantitative studies in the recent decades. In the last couple of years, the rise of computer vision techniques that quantify the perception of the urban environment is increasingly being used to study the city's physical appearance (De Nadai et al., 2016; Dubey, Naik, Parikh, Raskar, & Hidalgo, 2016; Liu, Zhou, Zhao, & Ryan, 2016; Naik et al., 2016; Zhou, Liu, Oliva, & Torralba, 2014). Combined with the big data It offers researchers a huge amount of new information to understand the built environment as well as how human perceive it.

In this study, we examine the relationship three type of built environment perception (lively, beauty, safe feeling) and the built environment features at 112,386 street locations in 23 top cities of United States. The perception data is shared from place Pulse project (Salesses et al., 2013) and built environment data is collected form google street view API, EPA smart location data base, and U.S Census.

We first employed an elo-score algorithm to calculate the perception score for each street location as the dependent variable. Then the computer vision techniques of image segmentation would be applied to the streetview pictures to extract the proportion of building, road, sky, grass and tree in each graph. After combing it with other built environment information, we then utilized the multi-level regression model at street/census block group/city level to test the significance and magnitude of the association between built environment features and human perceptions. We then standardized the coefficients to compare the impact that various variables exhibit in the human perception on the site.

The result will offer us more understandings on how built environment factor is related to people’s impression of the places today, therefore, provides an empirical and statistical evidence to guide urban planners in decision-making.


References

Key Words:
built environment, human perception, computer vision, google streetview

CONNECTIONS BETWEEN SOCIAL THEORY AND REGIONAL PLANNING AND THEIR IMPORTANCE FOR A THEORETICAL FRAMEWORK FOR AGENT-BASED SIMULATIONS IN PLANNING.
Abstract ID: 1076
Individual Paper Submission

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Planning as a field has contributed and exchanged knowledge with social theory for over a century; not only because the object of its study is the spatial scenario of social expressions, that have considered the “nature of man” (Lefebvre, 2003 [1970]), but because the study of social issues such as residential segregation, gentrification, unemployment, social justice, race, and gender have reflected upon the
professional and academic practice of planning as well. During the 20th century, the links between regional planning, social geography, and demography consolidated, regardless of the natural progression of each discipline.

This paper will aim to explore the key connections between the theory and practice of planning and the theory and practice of geographic and demographic socio-spatial analysis as they have evolved over time. It conceptualizes the major turning points, as well as the points of convergence/divergence, influence/reaction against one another, as well as complemented or conflicted with one another. Finally, considers the critical and intellectual basis for a theoretical framework for Agent-Based Simulations in Planning, and how it has been used over the past 20 years in key articles.

From the beginning of a theory of regional planning has been “concerned with the ordering of human activities in supra-urban space” (Friedmann, 1963). But these human activities are carefully related with their distinctions of scale and different institutional settings. The emphasis is not only in one aspect, it concerns the complexities of all the problems related to physical aspects of land use, economic problems related to allocation, geographical issues concerning the ideas of place, transportation, and environmental issues related to risk, pollution, and resource management (water, waste, energy).

Regional planning implies a more comprehensive understanding of social objectives settled in place, and by using agent-based simulations as a Planning Support System (PSS), it blends the two fields reciprocally informing each other.

By exploring in detail the long-term relationship between the regional planning field and the fields of social geography and demography, and how the leading views and approaches have developed over time with regional planning field as a guideline of the evolution of the complementary disciplines. Some of the basic characteristics that differentiate the planning field are the vision of totality as a fortitude of the discipline of planning field in comparison with social geography and demography. The focus of a planner it is the study of space, land, and the interactions with humans and their applications what gives essential credibility to the field. Although, contested, “planning with and for people to enhance the quality of life for all in the built environment.” (Carmon & Fainstein, 2013); the heterodoxy approaches scholarship (Goldstein, 2012), allows the usage of sociological theory into PSS; the applicability of the planning practice that by keeping ‘one foot on reality,’ gives the field unlike other disciplines a “pragmatism” that makes it less abstract and more grounded in reality; and the socio-spatial dialectic (Knox, 1995) in which “urban spaces are created by people, and they draw their character from the people that inhabit them. As people live and work in urban spaces, they gradually impose themselves on their environment, modifying and adjusting it, as best they can, to suit their needs and express their values. Yet there is thus a continuous two-way process, a “socio-spatial dialectic” (Soja, 1980), which blends the emergence of social phenomena in a symbiotic relationship in between all the fields increasing the idea of complexity, a multidimensional, multi-scalar, and multi-level process; that can be addressed in computer-based simulations over the past decade.

This paper reflects upon the need of finding the connections between social theory and planning, and how it has been addressed in the latest 20 years of computer-based simulations so it will lead to a comprehensive approach toward their importance for a theoretical framework for agent-based simulations in planning.

References

The study focused on the analysis of health equity of urban development based on GIS data analysis. Health equity represents the “attainment of the highest level of health for all people” (U.S. Department of Health and Human Services, 2010). Besides other factors, such as individual’s economic condition, residential location was a major factor that can influence individual’s accessibility to health facility. Groups with certain characteristics, including low income, minority, and senior citizens, were more likely to suffer from health inequity. This study conducted regional accessibility analysis on health facilities for the 10-county Atlanta Regional Commission area, including Cherokee, Clayton, Cobb, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry, and Rockdale counties. The goal was to evaluate spatial disparities in accessibility to health service at block group level. Data from databases, including ESRI Health Data, ESRI North America Detailed Streets, block group feature class with relevant demographics from the American Community Survey (ACS) pre-joined, and Emergency Medical Service Facilities from ARC open data, as well as tools from the Geographic Information System (GIS), were used for the evaluation.

This project examined accessibility to hospital community facilities, including general hospitals and community health center for all populations by race (white, black), age, income, and education background. Further, reachability of ambulance service providers (emergency room and fire stations) to their service blocks was examined. The results of this study showed that health service accessibility differed for various social groups. The comparison among those groups demonstrated such health disparity in transportation for big Atlanta region. Moreover, certain social groups, such as vulnerable people (which was defined as people younger than 10 or older than 65) was extracted and compared their accessibility to overall number. In addition to accessibility analysis, the study also conducted spatial analysis, including Hotspot Analysis and Moran’s I, in order to discover the spatial autocorrelation among different census blocks in terms of their travel time to health service.

Since accessibility meant how easily one can reach a destination, travel time can serve as a quantitative measure for accessibility. In this study, travel time based on different transportation systems was an indicator of how easily an individual can obtain access to nearby health services.

Health equity cannot be achieved without a thorough understanding of demands at all socioeconomic levels across geographical regions. This study aimed to gain such understanding through analyzing
travel times to health services and determining potential causes for disparities between accessibility to health services of various social groups. The results indicated that disadvantaged groups, including females and vulnerable people, had lower accessibility than their counterparts and the overall population. Surprisingly, white people and people with higher income had lower accessibility while people in poverty had higher accessibility. Hence, one perspective alone cannot explain accessibility differences. Instead, it is the intersection of geographical location, social status, economic levels that can provide insight into the current situation and solutions to achieve health equity.

References


Key Words:
Accessibility, Equity, Transportation, GIS

A REVIEW OF METHODOLOGICAL APPROACHES FOR EVALUATING ROAD FLOOD RISK USING SECONDARY DATA AND GIS

Abstract ID: 1183
Individual Paper Submission

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This paper identifies ways to spatially assess road flood risk at a micro scale using actual flood impact records and Geographic Information System (GIS) methods. Floods are the most frequent type of natural hazard globally (Centre for Research on the Epidemiology of Disasters [CRED], 2016). While the fatality rate per disaster event in the United States has declined for most states over the past few decades (Ashley & Ashley, 2008; Sharif, Jackson, Hossain, & Zane, 2015), the cumulative impacts of more frequent disaster events pose a new challenge for public safety. Furthermore, as cities grow and expand over floodplain areas and coastal regions, development will unavoidably increase the exposure and susceptibility of more people, roadways and other infrastructures to flood hazards.

A better understanding of local conditions that make roads susceptible to different types of floods (coastal flooding, river flooding and flash flooding) could help improve people’s awareness of this type of hazard, save lives and facilitate disaster response and recovery efforts. This is believed to be the first study to document alternative approaches for evaluating road flood risk using actual flood impact records and GIS. Most other flood risk assessment studies rely on models that assume landscape hydraulic characteristics under specific what-if traffic flow and hydrological scenarios to determine the potential impacts that floods may have on travel behavior, transportation safety, road closures or the movement of goods and services. The value of using actual records is that the impact of floods at a given location is real, not probable. The challenge, however, is to validate, re-classify and geocode incident
records in a way that is relevant and useful for transportation safety analyses. This study reviewed six (6) different data sources produced or recorded by federal agencies, state agencies, and local organizations that could be used to describe flood impacts on transportation safety. A series of online searches, email requests and telephone inquiries supported this effort. For each data source found, this paper provides a general description of relevant content and a brief review of its potential value and limitations for road flood risk assessments. Also, when feasible, examples of the data are mapped or plotted in graphs. This paper concludes by outlining the methodological steps needed to assess road flood risk using available secondary data and GIS methods.

References


Key Words:
flood risk, transportation safety, GIS, disaster fatalities

THE DISPARITIES IN SPATIAL ACCESSIBILITY TO QUALITY SCHOOLS IN THE CITY OF BUFFALO: A GIS-BASED ACCESSIBILITY ANALYSIS

Abstract ID: 1198
Individual Paper Submission

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This study investigates the spatial accessibility to elementary schools in the context of a segregated city. The hypothesis is that the low-performing schools are disproportionately located in disadvantaged neighborhoods with predominately Black and low-income populations. This study argues that the spatial accessibility of students from distressed neighborhoods to access quality schools are low. The research questions are: 1) What are the spatial distributions of high-performing and low-performing schools in the city? 2) What are the pattern of spatial accessibility to high-performing schools in the city? Is the accessibility to access quality public schools related to socio-demographic characteristics of the neighborhood?

The city of Buffalo is particularly unique as a study area, where residential segregation, distressed neighborhoods, and low-performing public schools are prevalent issues. In 2015, 77% of all public schools in the Buffalo School District (BSD) were categorized as “failing schools”. This situation leaves racial minorities and low-income students to be admitted in low-quality neighborhood schools. Within the context of School Choice education reform, BSD has implemented intra-district open enrollment to open admission to public schools beyond the neighborhood school catchment. This enrollment policy
aims at providing more choices for parents to send their children to a better-performing school in lieu of their failing zoned neighborhood school in BSD. This also opens access to the population in the disadvantaged neighborhoods to access better-performing schools.

Prior studies examined accessibility to schools by focusing on spatial distribution and accessibility. Scholars highlighted disparities of access to schools for various sociodemographic groups (Talen, 2001; Williams & Wang, 2014). However, prior research did not incorporate the quality of schools into the calculation of school spatial accessibility. This study contributes to the on-going conversation in accessibility to public schools by incorporating school quality and the utilization of Geographic Information System (GIS) approach in the analysis of schools and neighborhoods (Hogrebe, 2012). This also contribute to the current theory and planning practice discussion about spatial equity to urban services (Talen, 2011; Tiebout, 1956).

In this study, GIS-based accessibility analysis was utilized to assess the spatial distribution of elementary schools and to measure the spatial accessibility to quality schools. This study utilized secondary data that were collected from multiple sources for the year of 2015. The spatial accessibility to schools was further analyzed in relation to neighborhood demographic characteristics using regression analysis. As hypothesized, the findings show that low-performing schools are located in the disadvantaged neighborhoods and students from these neighborhoods have to travel farther to reach quality schools. This is due to a limited number of quality schools and their disproportionate distribution in the city. The spatial accessibilities to quality schools are related to the sociodemographic characteristics of the neighborhood. As a conclusion, the schools are distributed across the city but the spatial distribution of quality schools are unequal. Low-performing schools are disproportionately located in disadvantaged neighborhoods, creating inequity of access to quality schools.

The results of this study inform the public policy in neighborhood improvement programs as well as education reform programs. Improving distressed neighborhood should be conducted as a concerted effort with improving the quality of respective neighborhood public schools. Good spatial accessibility to urban services, including schools, are important to achieve spatial equity in the city. While this study emphasizes the measure of spatial accessibility, the non-spatial accessibility to quality schools also seems to be an important factor to be considered in further research.

References


Key Words:
school accessibility, spatial accessibility, disparities in access, spatial inequity, GIS-based accessibility analysis

CROWD-SOURCING UNDERUTILIZED SPACES: RE-USING DUBLIN – PROTOTYPING AND EVALUATION
Abstract ID: 1221
Individual Paper Submission

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The research objective is to examine if Reusing Dublin can support the identification of economic reuse and redevelopment opportunities that are operationalized in terms of diversity as one of the key resilience principles (Wardekker et al. 2010). The application facilitates an inclusive and interactive crowd sourcing process that gathers information on underutilized spaces and raises awareness and knowledge of this issue while engaging citizens with their locality and with one another.

Methodologically, this research is based on prototype application development, implementation and evaluation. Dublin was chosen as a case study for its pronounced problem of building and site vacancy and dereliction in some of the central city areas, especially following the most recent economic crisis. The application design was based on interviews with focus groups consisting of the council planners. These were used to identify the system requirements in terms of functions, interface and relevant information that the tool will help collect.

Reusing Dublin has six main functions: Discover information, Add information, Connect with others, Data layers, Search and Links to social media. Reusing Dublin was developed by Future Analytics Consulting based on a tool design concept involving a web mapping server, application and interface which allowed both data viewing and data input by the users. The software included: MySQL - Database management system; php - Web scripting language connecting the application to database; HTML - Hypertext markup language, used to develop web pages; CSS - cascading style sheet, formats design of web pages; and Javascript - web scripting language. Reusing Dublin has been operational for the past 6 months and sufficient data is collected from the local communities to enter the evaluation phase, which is currently under way, with final results expected by the end of 2015 / early 2016.

The evaluation is administered as a controlled pre-test post-test experiment, with the pre-test carried out in the design phase via semi-structured interviews and a questionnaire with local planners. The post test is carried out in a second round of focus group interviews and questionnaires following the implementation of Reusing Dublin. The data are analysed by coding and statistical analyses in order to determine if there is a significant difference in the ability to identify opportunities for resilience before and after the introduction of Reusing Dublin. The technique used to assess the change in the type and nature of opportunities identified is based on the concept of ideation suggested by Muller and Ulrich (2013). The authors discuss how using information systems can support ideation by creating virtual environments or by implementing other forms of computerized creativity support, such as brainstorming for the purpose of allowing employees and groups to explore new ideas together. Muller and Ulrich use Cougar’s (1996) creativity model to define creativity (ideation) within the IS literature. From the IS perspective creativity (ideation) can be facilitated by IS through four media: environment, person, process or product. The results of evaluation phase will show if Reusing Dublin as a product has the capacity to facilitate creative planning for underutilized urban spaces.
Reusing Dublin is an output from the EU FP7 TURAS project, which seeks new adaptive and flexible approaches to urban planning that can build social-ecological resilience in response to the convergence of crises. TURAS stands for Transitioning Towards Urban Resilience and Sustainability (http://www.turas-cities.org).

References


Keywords
crowd-sourcing, underutilization, web mapping, evaluation, prototype

DEMOGRAPHICS OF LOCATION-BASED SOCIAL MEDIA USERS
Abstract ID: 1244
Individual Paper Submission

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Millions of people now use social media platforms to chronicle their visits to physical places. Examples range from Instagram photos or Facebook check-ins to specialized apps like Strava or Swarm. This paper investigates the demographic characteristics of people who use location-based social media in the state of California. We use 12 months of public posts to infer users’ home census tracts, and compare the demographics of heavily-represented tracts to the state at large. Preliminary findings show little difference in race or ethnicity, but moderate differences in age and income.

Social media data can be valuable to city planners in a number of ways, from augmenting pedestrian counts or travel surveys to illustrating how people use public spaces. Social media posts often correspond to types of activity that are under-counted in household travel surveys (e.g., casual trips, recreation, tourism). But to avoid marginalizing disadvantaged groups, it’s important to know who is represented in these data streams and who may be missing. Large-scale surveys give us a general sense of who uses which platforms, but it’s also useful to be able to infer the biases of individual datasets.
This paper focuses on a sample of 20 million geolocated Twitter posts from the western United States, including large numbers of cross-posts from Instagram and Foursquare/Swarm. Frequent users are matched to California census tracts based on weeknight posting activity. We estimate OLS regression models to explain a census tract’s prevalence based on its demographic characteristics. Robustness checks include comparing the inferred home locations to users’ profile information and controlling for likely sources of error such as nightlife spots or hotels. Finally, we compare the social media data to home locations and travel destinations from the 2010 California Household Travel Survey.

This paper is a component of broader research into using location-based social media posts as a way of studying travel destination choice. The Python code will be available as an open-source software library to allow others to easily assess demographic bias in similar datasets.

References

Key Words:
social media, big data, travel behavior

**DOES COMPACT GROWTH RESIDENTIAL DEVELOPMENT REDUCE WATER USE? (STRATEGIES FOR MORE SUSTAINABLE URBAN WATER USE AND RESIDENTIAL DEVELOPMENT PATTERN)**

Abstract ID: 1275
Individual Paper Submission

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Sustainable water use management is an imperative task for local and regional planning authorities. Although residential per capita water withdrawal trends in the US has been stabilized for last decades, the largest growth of water demand still occurs in urbanized areas due to greater population and economic activities (Fitzhugh and Richter 2004). In general, the level of urban water use consumption in a certain city is closely related to the land use types and the physical characteristics of the built environment in the city; therefore, it is important for local planning authorities to examine the relationship between such chief determinants of water consumption related to urban growth policies and sustainable water use.

This study discusses sustainable water use framework in regards to urban form variables and urban growth policies at geographic scale of both county level and parcel level. In specific, we aim to answer the following questions. (1) What are the relationships between urban form variables and urban water use? (2) What are the implications of incorporating land-use and development configuration variables into water-use planning? (3) How can planners formulate sustainable urban water use projections by adding knowledge about local water use and land development patterns? This study is composed of three linked research analyses to answer these questions: a cross-sectional regression analysis to
examine the relationship between key water measures with county water withdrawal data in the U.S metropolitan areas.; an empirical analysis adopting a spatial error model using single family residential water billing data, GIS database, and CIR (Color-infrared) photo geometry imagery in the metro Atlanta area; and the development of sustainable water use scenarios based on local water use profiles and rainwater harvesting (RWH) potential.

The analyses find that a series of urban form variables associated with sprawl and low-density development configurations (population density, percent of single family housing, lot size) are correlated to water use rates. These results support the proposition that a compact growth policy that promotes high density and a mixture of residential types would reduce per capita urban water use in the long run. The study also shows how GIS data, remote sensing imagery, and Python scripting can be used to automate extract the size of outdoor lawn, pools, and roofing areas for spatial error regression modeling and RWH potential calculations. The major contribution of this research is to connect land use to water resource planning and to demonstrate that changes in urban form can result in more sustainable water use.

References

Key Words:
Sustainable Urban Water Use, Urban form, Lot size, GIS, Rain Water Harvesting

DEVELOPING CLIMATE-RESILIENT NETWORKS OF INNER-CITY TRANSPORTATION: CLOSING THE LOOP BETWEEN MITIGATION AND ADAPTATION
Abstract ID: 1294
Individual Paper Submission

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The dynamics between built-environment and climate change is bidirectional: i) the global industrialization and metropolitan activity change the climate, and ii) the potential extreme events as well as the gradual increased temperature impact the built-environment. While these two are studied distinctly, simultaneous consideration of them provides the metropolitan areas with an integrated, climate-resilient planning response to mitigate climate change and control or otherwise neutralize its induced hazards proactively and efficiently.
One of the main critical urban systems subject to both mitigation and adaptation planning is the inner-city network of transportation. In New York City (NYC), for example, transportation sector, the second-largest contributor of GHG emissions, accounts for 24 percent of the city-wide emissions. Mitigating the impact of transportation on climate change, the NYC has pursued the use of electric vehicles (EVs). However, decision makers face a causality dilemma when developing the charging infrastructure utilized by EVs. On one hand, EV market penetration depends on the charging supply chain’s maturity. On the other hand, the capital required to put install charging facilities and further develop the supply-side of the chain will not emerge until a promising market for the EV exists.

The NYC transportation energy infrastructure is also one of the most critical yet disaster-susceptible networks, in need of a resilient platform to better withstand anticipated climatic extremes. In response, especially after 2012 super-storm Sandy, a broad range of climate resiliency commissions, policies, and acts have been established; followed by billions of dollars in investment in resilience-enhanced motor fueling infrastructure. Despite the proven effectiveness of resilience-enhancing strategies (aka climate-adaptation strategies), significant funding and complex finance models have kept many of the developed models far from practicality.

The separation of mitigation and adaptation planning in practice, however, ignores co-benefits by designing and implementing both in mutually supportive ways. The question of interest for planners is how, where, and by what factor a sustainable, climate-resilient transportation fueling infrastructure should be developed. In fact, a tradeoff must be made between the cost of transition to less polluting mode of traveling on one side (i.e. mitigation planning), and dollar value associating to resilience-enhancing strategies (i.e. adaptation planning), on the other.

Solving for an equilibrium point, we developed a bi-level model. The top-down component of the proposed model, climate-adaptation model, comprises a tri-stage nonlinear stochastic optimization. The third stage (i.e. the 4th step of traffic demand management model and truck routing problem) is conditioned on the second stage (i.e. network retrofit and facility location problems). The second stage variables are also conditioned on the first stage decisions (i.e. stochastic resource management and asset allocation optimization) which themselves are conditioned on network topology when stressed or under attack.

In the bottom-up platform, mitigation model, we analyzed the trade-off between adaptation and mitigation in a cost-effective, game theoretic setting. The bottom-up model features a Stackelberg duopoly structure solved in non-cooperative setting yielding a Nash equilibrium as well as in cooperative setting maximizing a global welfare function.

The model components are solved iteratively in General Algebraic Modeling System (GAMS) as mixed-integer quadratic complementarity problems. The integrated modeling framework supports both network and institutional design and allows assessment of the effects of technological and infrastructural changes, population and land use changes, pricing and tax incentives from the government, and assumptions about industry production and consumer adoption of EVs on the spatial economy. We demonstrate the use of the modeling framework in providing planning support in a range of scenarios.

References

Key Words:
mitigation-adaptation nexus, disaster preparedness planning, alternative fuel vehicles, decentralized renewable energy

DETECTING DEVELOPMENT OPPORTUNITIES USING QUALITY OF LIFE RESEARCH AND LAND USE SUITABILITY MODELING: A CASE STUDY OF THE CITY OF TAMPA
Abstract ID: 1295
Individual Paper Submission

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Problem: While population and employment projections inform planners about the future growth of the city, planners still need to make decisions on where and to what extent to allocate the future growth. A more comprehensive yet flexible method is needed to provide evidence for planning decision making, and to provide flexibility of controllable variables as well.

Existing Research: The existing work in this area is mainly focused in examining the development opportunity based on either qualitative or quantitative data. While there are efforts to perform land use analysis to indicate future allocation, there is barely research to examine whether the land use analysis results fit people’s anticipation of a high-quality life.

Research Objective: This research aims to develop a methodology to detect the potential development opportunities based on two criteria. First criteria is the environmental aspects analysis of quality of life reflection, and the second criteria is the land use suitability analysis results. The two results will then be combined to detect area where a certain type of land use is needed as the quality of life results suggested, and the area is suitable for that certain type of land use, as suggested from the land use analysis results.

Methodology: Variables to define the environmental part of quality of life research were identified. Multi-level regression was used to examine the relationship and significance of each variable, given the data from BRFSS as dependent variable. Land-Use Conflict Identification Strategy (LUCIS) was used to perform land use suitability analysis. City of Tampa, Florida is used as the case study for this research.

Results & Contributions: Area that satisfied both criteria were identified. This study establishes a comprehensive methodology of identifying future development sites using both qualitative and quantitative data. This research also can inform future resource allocation process, which is the second part of this study.

References

Key Words:
development opportunities, multi-level modeling, LUCIS, land use analysis, resource allocation

IMPROVED AUTOMATED PROCEDURE TO IDENTIFY HORIZONTAL CURVES ON GIS STREET CENTERLINES
Abstract ID: 1306
Poster

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Background:
While horizontal curve alignments are important elements of any transportation roadway network, they are at the same time one of the major safety hazards in the United States with more than one-quarter of highway fatalities occurring on them (USDOT, n.d.). In addition, run-off-the-road and head-on traffic crashes account for 87 percent of all fatal crashes on horizontal curves. There has been significant research conducted in quantifying the factors that affect safety performance related to curve elements such as curve radius, curve length, degree of curvature, tangent length, to name a few. However, the issue with curves is at even a more basic level: the curve locations and the curve attribute databases are often unavailable. That’s because most GIS street networks do not include clear demarcation of curve geometries and curve attributes. Some agencies obtain the roadway curve information based on on-board software recorded when driving along the roadway networks. This is mostly either manual work or semi-automated process which is very time consuming when considering the large size of the road databases.

Existing research:
There are already some existing tools for curve identification. Many of them can determine the attributes of the curves, but they need to manually identify the curves on the network. “Curve Finder” (Li et al., 2012) is a tool that can identify curves automatically and generate related attributes. However, this tool operates on single centerline roadway database, which makes it unsuitable for other more complex cases of GIS street networks.

Research Objective:
This research develops an automated procedure to identify horizontal curves on GIS street centerlines, identifies the curve attributes that are significant to road safety performance, and validate the results by applying various validation methods.
Methodology:
This study develops an automated procedure that creates a database of roadway horizontal curves based on Florida’s All Roads Basemap (HERE) and it includes the required attributes by Federal Highway Administration (FHWA): Identifiers and Linkage Elements, Type, Radius, Length, Transition Type, Intersection Angle, and Direction. It includes identification of all curve types including simple curves, compound curves, reversed curves, and horizontal angle points. This research improves existing curve identification methods as follows: first, the method introduces the concept of “curve component” to differentiate the geometric curvature from the roadway database segmentation; second, this method improve the curve identification accuracy by using a variable bearing angle based on roadway speed; third, the method applies to both single and dual centerline roadway databases; fourth, the method determines the curve transition type such as spiral transition.

Results:
The results are validated by comparing the curves with the aerial imagery as well as with some existing GIS curves that have been previously validated on the ground. The validation sample set is determined by selecting a representative sample of the resulting curves using a spatially distributed random sample selection method. The result shows that the improved method can accurately identify network curves on the Florida statewide street network, which has over 100,000 miles of streets, and it can execute the automated procedure in a short amount of time.

Contribution:
The automated curve identification procedure can develop the much-needed curve databases which are essential for transportation safety analysis. The method developed here adds several improvements to existing methods, especially the ability to handle dual street centerlines, variable bearing angle and the handling of the complexity and large size street networks.

References

Key Words:
transportation networks, road safety performance, horizontal curves, GIS, programming tool
USING MARKOV CHAIN MODELS TO SIMULATE THE SPATIO-TEMPORAL PATTERN OF PUBLIC HOUSING DWELLERS
Abstract ID: 1371
Individual Paper Submission

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Urban simulation models are commonly used to translate behavioral models about household decisions, regarding residential location and vehicle ownership, into long-term spatial-temporal patterns of homeownership and traveling (e.g. mode share, vehicle miles travelled). However, the formulation and estimation of appropriate behavioral models for household residential relocation decisions is tricky. Studies show that moving rates are notably different for households depending upon demographics, such as age of household head, income, and lifecycle stages (Clark and Huang, 2012; Dieleman, 2000). At the same time, moving rates differ markedly by tenure (Raya and Garcia, 2012). Even though residential location choice is based on household-level decision-making processes, government intervention on housing can also have an impact on the tradeoff that households make on residential relocation. Government housing regulations often target low- and middle-income households at particular lifecycle stages (e.g. newly married, family with children) and provide subsidies for these households to purchase their own units, which are often spatially targeted to new towns. The complexity of the interactions between households’ housing needs and government housing policies make it difficult to translate “recent-mover” surveys into behavioral models that can simulate the spatio-temporal effects of government intervention on long term household location patterns.

Despite the popularity of recent-mover types of surveys, little attention has been given to understand how to use the “recent-mover” data to generate measures of residential mobility (Bell et al. 2014). The key questions to interpreting the data lie in the variety of instruments to collect the data and type of data collected (United Nation, 2013). The goal of this study is to highlight the existence of this problem, to show how it can influence the construction of land-use-and transportation simulations, and to assist researchers in translating “recent-mover” surveys into reasonable annual moving and tenure transition rates.

“Recent mover” surveys are hard to translate into moving rates because they generally ask detailed questions of sampled households who have moved within the past few years (e.g. within 5 or 10 years of a periodic census). There are two major issues that make the interpretation of data challenging. First, within the sample, households that were renters might have moved several times during a 5-year or 10-year window whereas households that were owners are unlikely to have moved even once. Second, households can change their tenure and/or living arrangement when moving by, for example switching from renter to owner or splitting from a multi-generational household to two households (young couples moving away from their parents). Particularly, compared with households that maintain the same tenure, households that change tenure may have quite different tradeoffs to make, regarding residence duration and housing bundle choices. As a result, simple interpretation of census-based moving rates can yield moving and tenure transition rates that are quite biased. This paper accounts for several of these complexities while analyzing a recent-mover survey in Singapore. Among the sampled households, 18% made at least one move between 2013 and 2015. A simple interpretation of the data suggests that 6% of all households move each year, 51% of movers are renters, and 91% of the renters switch to homeownership. However, a more detailed analysis of the survey using Markov Chain models indicates an annual moving rate of 6.6%, a renter proportion of 51%, but a rent-to-owner transition rate of 26%. By accounting for family formation issues and first-time purchase behavior, in addition to age effects...
and tenure changes, we are able to estimate moving transition rates with sufficient detail for use in calibrating microsimulation models of housing market behavior.

References


Key Words:
Residential mobility, Markov Chain models, Spatio-temporal housing patterns, Housing market models, Recent-mover survey

NOISE & THE CITY: SPATIOTEMPORAL RELATIONSHIP BETWEEN DEVELOPMENT PATTERNS AND RESIDENTIAL NOISE COMPLAINTS
Abstract ID: 1406
Individual Paper Submission

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Central theme or hypothesis:
This study investigates whether neighborhood noise is related to urban development patterns. Noise is one of the most frequently complained nuisances and public health hazards in many cities (Adams et al., 2006). Chronic exposure to noise is known to increase stress levels (Schmidt et al., 2013), and even low-level background noise can cause annoyance, increase stress levels, and decrease work productivity (Baliatsas, et al, 2016). In addition, a large body of literature examines associations between noise and metabolic/mental health (Chang et al, 2009). In urban areas, motorized traffic and construction activities constitute the largest sources of noise. While noise from traffic sources is often monitored and managed by physical intervention, such as noise barrier or vegetation, noise from construction is often regulated by noise control bylaws, which typically prohibits construction activities during sleeping hours and holidays (Berglund et al, 1999). Although construction activities are occasional across the city, citizens may be exposed to such nuisance consistently, especially when the city is growing rapidly. Due to planned developments, there could be multiple construction projects developed simultaneously, and large construction projects can last over three to five years. Because there is no routine monitoring of noise from construction sites, the only way to understand the construction noise is when someone submits a formal noise complaint to the city. The linkage between noise complaints and construction-related noise regulation provides a unique opportunity to explore the relationship between urban development patterns and neighborhood noise. Using noise complaints from 3-1-1- call data as a citizen-sensing platform, we seek to explore how to leverage the crowd-sourced call data to generate useful
knowledge about the environmental health impact of urban development patterns in a rapidly growing city.

Approach and methodology:
We first assess the urban development patterns through two sources of data: historic building permits data from the City of Vancouver and the major projects inventory (2005 – 2016) from the BC Provincial Government. The major projects inventory includes a listing of private and public sector construction projects in B.C. with an estimated capital cost of $20 million or greater within the Vancouver area. To understand neighborhood noise, this study takes advantage of a crowd-sourced 3-1-1 call data, a general hotline regarding maintenance issues in the city. In the City of Vancouver, the 3-1-1 data has been archived from 2009 through 2015, providing enough data points to explore the spatiotemporal relationship between urban development patterns and neighborhood noise. Testing the linkage between building construction data with crowd-sourced noise data is a novel approach to examine the impact of urban developments on acoustical environments.

Findings:
We obtained the 3-1-1 call data from 2009 to 2015 from Vancouver Open Data Catalogue and geocoded the data based on the proximate address information. The historic building permits and major projects data from 2005 to 2016 have been collected, and we are also processing the data to quantify urban development patterns. The final data linkage between urban development pattern and the noise complaint data will be done in the next few weeks, and we will conduct a series of statistical analyses to examine the spatiotemporal relationship between urban development patterns and neighborhood noise.

Relevance to planning scholarship, practice, or education
The study results will help understand whether urban development patterns are related to neighborhood noise. Results will inform planning policies and decisions for determining how effective urban noise regulations are and where to target more concerted effort to mitigate noise pollution in a rapidly growing city.

References

Key Words:
urban development, neighborhood noise, 311 data, crowd sourcing, spatiotemporal analysis

ASSESSING EFFECTIVENESS OF TRANSPORTATION PROJECTS USING SENTIMENT ANALYSIS OF SOCIAL MEDIA
Abstract ID: 1411
Poster

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Background:
We live in an era of real-time information gathering and dissemination. These data might provide a substantial amount of information about the users’ interests and sentiments. Sentiment analysis is a way to gain insight into social media. The information obtained from analyzing sentiments can be used in mining opinions, moods, and attitudes in market intelligence, product comparison, and opinion summarization.
The purpose of this study is to examine methods for utilizing large data from social media sources to understand users satisfaction with transportation systems.

Study Design:
This study uses Twitter data to gain insights on the rider satisfaction of SunRail which is a rail system that operates in the Orlando metropolitan area in Florida. User opinions were collected using REST API (Application Program Interface) that were programmed to gather all tweets relevant to SunRail. The data was cleaned from the irrelevant attributes and a final dataset was prepared for further analysis. The Stanford Core NLP (Natural Language Processing) was employed to conduct the sentiment analysis of the Twitter feeds. A model was constructed and trained to interpret the rider Twitter feeds based on a pre-existing corpus of sentences that are unique to transportation domain and are known to be positive or negative.

Results:
The results are categorized on a 5-point scale: Very Negative to Very Positive and are generated using the Stanford Core NLP libraries. Given the magnitude of data available, the results provide viable and easy outputs to store and use for further analysis.

Contribution:
Assessing the transportation users’ perception could provide significant insights that help both transportation professionals and policymakers regarding the performance of the transportation system. Compared to periodical perception surveys, the use of social media data is inexpensive and relatively easy to collect and process due to technological improvements in understanding human language.

References
WHO CAN BE PHYSICALLY ACTIVE AND WHERE? A SPATIAL EPIDEMIOLOGY ANALYSIS OF THE ACTIVE LIVING INDEX (ALI) AS PREDICTOR OF CHILDREN’S OBESITY
Abstract ID: 1444
Individual Paper Submission

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Find the locally-specific spatial evidence needed for a more efficient allocation of planning resources and interventions to increase children’s health is still a challenge.

Background: Physical inactivity is a public health epidemic and leading causes of long-term chronic diseases. U.S. researches on population health and urban planning suggested the presence of ‘neighborhood effect’ on health as a result of obesogenic environments. Walking and active transportation are the basic steps to conduct an active lifestyle. But, how conducive to active living our communities are? Who can be physically active and where? Can spatial epidemiology provide a deeper understanding? A CDC-APA grant helped Dane County, WI to respond to those research questions, and an interactive AGoL-based tool to assess communities in Dane Co, WI was developed.

Synopsis: The present study will address a peculiarity that characterizes the objective studies of the built environments as determinants of health, the level of aggregation. The features of the built and food environment related to mobility will be tested aggregated in a novel index designed ad-hoc. The geographic scale of this study will be the US Census Block Group, the aggregated geographic scale at which the health data was available for the first time.

Objectives: To address children obesity epidemic, as it relates to the built environment they are exposed to; to test our novel Active Living index (ALI) as predictor of those health outcomes; to apply pioneering spatial epidemiology techniques to predict where and how the mobility elements of the built environment can predict variability in the prevalence of children’s obesity.

Method: Using locally specific GIS data, we developed a countywide index -ALI; we measured walkability by, street connectivity, variety of destinations, and residential density at ¼ mile or ½ mile around each destination. Bikability by BLOS and the presence at 1/2 mile of premium bike facilities. Access to Transit, measured as % of jobs at 45 minutes travel time by transit. Prevalence of children Obesity at the Block Group level was provided by UW Family Medicine. The correlation between ALI and the health outcomes, adjusted for multimorbidity and socioeconomics, was tested in multilevel regression analyses. To address the non-stationarity of the model that characterizes spatial data, and to identify ‘where’ the model performs better, a GWR spatial regression analysis was then conducted in ArcGIS 10.3
Results: In the adjusted model, ALI statically significantly predicts 35.5% of the variability in the Block Group prevalence of children obesity (R²=35.5% - spatial range R²=13.4 - 51.5%), and an average 1.6% decrease in prevalence of children obesity for every 10 points increase in the ALI score.

Conclusion: active living places correlates with prevalence of obesity with the ALI being a predictor of those health outcomes. Spatial analysis is a valuable innovative technique per public health and planning research.

References


Key Words:
Childhood Obesity, Built Environment & Health outcomes, Spatial Analysis, Active Living Places, Health Data
Track 2 - Economic Development

PRE-ORGANIZED SESSION: EMERGING MODELS OF PLACE-BASED ECONOMIC AND ENTREPRENEURIAL DEVELOPMENT
Proposal ID 2: Abstracts 526, 527, 528, 529

DRUCKER, Joshua [University of Illinois Chicago] jdruck@uic.edu, organizer
DONEGAN, Mary [University of North Carolina at Chapel Hill] mdonegan@live.unc.edu, proposed discussant

The papers in this session will explore the new and developing ways in which urban and regional economic development actors aim to boost innovative and entrepreneurial activity in concert with broader trends in planning around creative place-making. Instead of engaging in economic development primarily as a stand-alone function, strategies and policies are organized around locations and their attributes in order to attract innovative businesses and talented people to create contemporary industrial areas.

Objectives:
- Contemporary approaches to economic development, place-making, and area revitalization.

PRE-ORGANIZED SESSION: URBAN POLICY AFTER THE GREAT RECESSION
Proposal ID 15: Abstracts 206, 207, 208, 209

KIM, Yunji [University of Wisconsin-Madison] ykim535@wisc.edu, organizer
DRUCKER, Joshua [University of Illinois at Chicago] jdruck@uic.edu, proposed discussant

Economic development has been celebrated and critiqued as a driver of urban policy around the world. However, fiscal stress at the local level challenges previous theories of urban policy. The growth paradigm has been re-emphasized after the Great Recession with cities increasing their use of unsustainable business incentives. Meanwhile, increased social needs pressure cities to provide services. How are cities responding and what does this mean for the balance in urban strategy between economic development and social wellbeing? This panel explores changes in urban policy after the Great Recession. The first paper finds local governments are maintaining their social service role but cutting investments in infrastructure and planning. The second paper explores changes in cities’ use of business incentives, and the third paper shows how different work training programs affect the outcomes of business incentives. The last paper broadens our framework by examining how cities in China respond to population loss – a common challenge of deindustrialization in advanced economies. These papers outline the limits of local government action in a multilevel context.

Objectives:
- Building a theoretical framework of urban policy under fiscal stress.
- Assessing the impact of structural pressures on urban policy and identifying potential agents for pushback.
- Comparing and contrasting the effects of multilevel governance structures on urban policy.
PRE-ORGANIZED SESSION: SHIFTING OCCUPATIONAL STRUCTURES’ IMPACT ON LOCAL ECONOMIC DEVELOPMENT
Proposal ID 38: Abstracts 361, 362, 363, 419

ANDREASON, Stuart [Federal Reserve Bank of Atlanta] stuart.andreason@atl.frb.org, organizer
WOLF-POWERS, Laura [Center for Urban Research, City University of New York Graduate Center] lwolfpowers@gc.cuny.edu, proposed discussant

This session will explore the role that changing occupational structures and arrangements play in local economic development policy and practice.

Objectives:
- Understand how to align local economic development efforts with economic trends

PRE-ORGANIZED SESSION: RECENT TRENDS IN THE GEOGRAPHY OF INNOVATION AND ENTREPRENEURSHIP
Proposal ID 60: Abstracts 776, 777, 778, 779, 1315

RENSKI, Henry [University of Massachusetts Amherst] hrenski@umass.edu, organizer
SCHROCK, Greg [Portland State University] gschrock@pdx.edu, proposed discussant

This session presents research on emerging spatial patterns in innovation, technology, and entrepreneurship-based regional development and discusses the factors driving these emerging trends.

Objectives:
- Emerging patterns of regional development
- Economic development policy
- Entrepreneurship and innovation

PRE-ORGANIZED SESSION: THE HIDDEN POLITICS OF ARTS, PLACEMAKING AND PRESERVATION
Proposal ID 64: Abstracts 1044, 1045, 1271

ZITCER, Andrew [Drexel University] awzitcer@gmail.com, organizer
RIVERO, Juan [New York University] jj_rivero@yahoo.com, proposed discussant

An ensemble of economic players participates in the cultural life of the contemporary city. Some champion the “creative city” approach, seeking economic growth and vitality through investments in placemaking, cultural districts, and arts economic development. Others toil at the margins of the creative economy, working as artists attempting to thrive among conditions of economic uncertainty. This session explores plans, places and people affected by investments in arts, culture and heritage. The papers grapple with these issues at variety of scales, from individual artists embedded in geographic communities, to neighborhoods and districts combining historic preservation with placemaking strategies, to public sector entities struggling to come to terms with arts based development schemes. It mines the politics of collaboration and partnership, asking how different interests are served when culture becomes a tool for economic development.
Objectives:
- Develop a more in-depth understanding of the challenges and tensions surrounding creative city and creative placemaking tools and strategies
- Examines the politics of collaboration and partnership, asking how different interests are served when culture becomes a tool for economic development.

USING NETWORK ANALYSIS TO OPERATIONALIZE, MEASURE, ANALYZE, AND DESCRIBE THE INNOVATIVE AND DYNAMIC CAPACITY OF LOCAL/REGIONAL MILIEU: RESULTS FROM PITTSBURGH
Abstract ID: 74
Individual Paper Submission

RIGOPOULOU-MELGHER, Aspasia [St. Cloud State University] arigopoulou@stcloudstate.edu, presenting author

New dynamic city or regional economic environments are characterized by strong relational contexts. These are related to specific economic development efforts and the ability of areas to develop and sustain conditions present in dynamic places. These conditions include the existence of productive supportive local milieus involved in production, organizational and support networks and their intra and inter-network linkages as these relate to a specific industry as well as cooperative strong relations between companies of specific industries, companies and their specific milieu, and their milieu organizations.

Research suggests, that it is the strength, the cohesion of network relationships, and the embeddedness of all the actors that may be the new predictors of and/or measures of success as these exist in the economically dynamic and innovative environments. The question then becomes how do we operationalize this relational environment? What are the specific relations, and what are the variables that we can use to measure the strength and cohesion of relations of a specific area as this relates to a specific industry or economic development effort? What do these variables mean in the context of the relational and dynamic character of regions? What do measures of these variables mean as connected to assessment of the economic dynamism of local/regional environments?

This paper, reports on the use of network analysis to operationalize and measure the dynamism of the Pittsburgh economic region as connected with the region’s ability to develop, sustain, and expand its software industry.

Secondary research, informant interviews, and survey research of 165 software companies and related organizations were used to collect the data and to develop analytical constructs, while the main method of data analysis was network analysis, supplemented with qualitative and descriptive analysis of the local environment. The use and application of network analysis allowed this study to incorporate two general orientations into the analysis of the relational networks. The first deals with the overall strength and compactness of relations through measures of cohesion as represented via network density, centralization, and measures of network reachability, centrality, and distance. The second orientation of the analysis focuses on the networks at the micro-level. This includes measurement of pertinence to the network actors’ centrality, identification of cliques or subgroups within the networks, and measurement of their density.
This work operationalizes, identifies, measures, and analyzes the relational context of a specific industry in the context of its local or regional milieu. If the relational context is important as the literature on innovative dynamic environments suggests, then finding a way to measure, assess, and analyze the offers the possibility for more focused economic development efforts, new way to approach and teach economic development planning, and new areas of research that will lead to validation of the study’s variables, the development of measures to study and examine local/regional dynamism.

The study documents the existence of a regional milieu that contains many elements and conditions present in dynamic regions. The analysis though, showed that the relational context of the elements that constitute the milieu of the software industry were not functionally integrated and that the region lacked the dense and cohesive relational contexts asserted to exist in dynamic environments.

References


Key Words:
Economic development, Dynamic regions, Innovative Milieu, Embeddedness, Network Analysis

ETHNIC-BASED CREDIT NETWORKS AND SOCIO-ECONOMIC IMPACTS: THE CASE OF CORPORATE SPONSORED PROGRAM
Abstract ID: 95
Individual Paper Submission

KIM, Jihwan [University of Illinois at Chicago] jkim512@uic.edu, presenting author
LEE, Aujean [University of California, Los Angeles] aujean@ucla.edu, co-author

This study aims to examine the socio-economic dimensions of alternative credit, particularly looking at ethnic-based credit networks and how they reshape residential landscapes in U.S. cities. Many new immigrants in the U.S. experience limited access to institutional credit because they do not have credit history, which can constrain their housing and neighborhood choices. The competitive and regulatory environment for the financial sector further restricts new immigrants’ access to credit. As an alternative, ethnic credit networks increasingly offer those immigrants an opportunity to access credit in the U.S.

For example, the US has seen a growth of ethnic banks (e.g., Chinese and Korean banks) in the past few decades (Zonta, 2012; 2015). While African American-owned banks primarily aimed to serve redlined communities, these Asian ethnic banks have expanded their distinct roles in banking and finance by mobilizing capital (Dymski and Li, 2004; Li et al., 2001). In contrast to these banking institutions, there are newer non-bank ethnic credit institutions that help immigrants not reached in the competitive and
regulatory environment. This study illuminates the socio-economic dimensions of such non-bank credit by examining key features of the Corporate Sponsored Program (CSP) from the Hyundai/Kia Motor Company.

The CSP provides auto loans with low interest rates for Korean immigrants without any U.S. credit history, as long as they secure sureties who live in Korea. By increasing mobility, Korean immigrants may improve job opportunities while keeping their housing affordable. This project focuses on investigating how the CSP created job and housing opportunities and investigating its distinct spatial consequences. The study consists of interviews with key stakeholders who can relay their knowledge or experiences with the CSP. Key stakeholders include CSP staff, borrowers, and Hyundai/Kia salespersons that are located within the intersection of lenders and borrowers.

This study is important for several reasons. First, ethnic capital is oftentimes framed as informal capital and/or a small banking industry niche to support new immigrants. This is the first corporate, non-bank program we know of that offers assistance for immigrants in the US through financial globalization. By examining its distinct characteristics, this study sheds new light on the evolving nature of non-bank financial institutions and instruments that have emerged. Second, this study focuses on investigating how alternative credit has altered the relationship between financial exclusion (e.g., limited credit) and social exclusion (e.g., constrained housing and job opportunities) for new immigrants. By doing so, this study explicates the distinct mechanics of how market and social efficiency can have fundamentally changed within the emergence of non-traditional, alternative credit.

References

Key Words:
Alternative Credit, Ethnic-based Credit Network, Financial Globalization

EVALUATING THE DEVELOPMENT IMPACTS ASSOCIATED WITH STREETCAR INVESTMENT: A MULTIPLE CASE STUDY
Abstract ID: 204
Individual Paper Submission

MENDEZ, Joel [Florida State University] jm14af@my.fsu.edu, presenting author
BROWN, Jeffrey [Florida State University] co-author
Streetcars once dominated the landscape of American transportation before giving way to the bus in the mid 1900’s. Only a few systems remained after this, providing a sense of nostalgia to days past. Recently, this mode of transportation has experienced a re-birth with twelve systems being constructed since 2000, and many more currently under construction or in the planning phase. The Portland Streetcar system, which opened in 2001, is perhaps the most successful modern system in operation. This system regularly achieves higher ridership than many bus routes while its corridor has experienced billions of dollars in investment. Many cities which try to justify investment in a streetcar system point to Portland as an example of what such a system can accomplish. This has helped spark the resurgence in streetcar development that we see today.

Most cities pursuing streetcars are doing so for their purported development effects. This is troublesome as there is little evidence on these effects due to a lack of empirical research on the matter. Most work simply presents descriptive development outcomes within streetcar corridors as a measure of the development effects of the streetcar. Alternate factors which may have influenced such development are not considered, placing into question the validity of such measures. The authors address this weakness by employing a multivariate analysis which accounts for such factors and produces a representative measure of the development impacts of streetcar systems.

This study examines the development effects in a set of 4 U.S. cities that implemented streetcar transit between 2000 and 2010. Cities which met this criterion, and are the focus of this study, are Portland, OR; Seattle, WA; Little Rock, AR; and Tampa Bay, FL. Historic construction permits and assessed parcel data was acquired from various departments within each city. Development patterns, in terms of new construction, were analyzed post announcement of streetcar construction. The square footage, valuation, and number of residential units produced as a result of new construction was tabulated for areas within ¼ mile of streetcar corridors. A control group was developed via a matching technique which consists of census block groups not serviced by streetcars but with similar growth potential at pre-streetcar conditions. Development outcomes (sq. ft., valuation, and new residential units) between streetcar corridors and the control group, downtown area, and city as a whole, were compared. This comparison helps account for development which was likely to occur regardless of the presence of the streetcar system. The resulting measures produce an improved measure of development activity which can be attributed to streetcar investment. The development effects of streetcar service were further explored through the analysis of historic assessed parcel data via a hedonic regression model. Appraised property values were collected and analyzed seven years after the opening of each streetcar system. This model allowed the estimated influence which streetcar proximity has on property values to be captured while controlling for key spatial, demographic, structural, and socioeconomic factors.

Results present an improved measure of the economic development impact of streetcar service for each of the areas of focus. Success, in terms of attracting development along streetcar corridors, is observed to vary across cases. Results of the hedonic analysis present the same level of variation regarding the value which properties assign to streetcar proximity. This challenges the many claims which present streetcar investment as an effective stimulant to economic development. Findings from this study are significant as they produce a careful examination of development effects which can be more confidently attributed to streetcars, as opposed to other factors. Such information can be of assistance to cities which are considering investing in a streetcar system due to their perceived development effects.

References


Key Words: Streetcar, Economic Development, Property Values

CROWDING OUT DEVELOPMENT: THE IMPACTS OF STATE AUSTERITY POLICY ON LOCAL GOVERNMENTS

Abstract ID: 206
Pre-Organized Session: Urban Policy After the Great Recession

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Austerity since the Great Recession requires attention to both empirical realities and the theoretical frameworks with which we understand urban policy. Fiscal federalism argues for a decentralized system where local governments provide most services to achieve efficiency and promote growth. This view argues that the local government is a developmental state (Peterson 1981) that is complemented by the redistributive role of state governments. Austerity urbanism theories offer a more critical view of the developmental state and argue the emphasis on economic development leads cities to ignore community needs and equity concerns, especially in the context of state austerity policies (Peck 2014). However, the context of federalism has changed with decentralization and state governments not only pushing down fiscal stress to the local level, but also mandating redistributive services by local government. Recent empirical analysis finds these devolution pressures for redistribution at the local level may be crowding out developmental expenditures (Xu and Warner 2016). Does the assumption of local government as the developmental state still hold after the Great Recession? What role does state government play in local fiscal stress? Are local governments pursuing austerity or development, or are they attempting to also maintain redistributive services?

We use survey data of all local governments (cities, counties, towns, and villages) in New York State to examine changes in local government services under fiscal stress. We find that local governments are not cutting redistributive services as austerity urbanism theories predict. Instead, local governments are making the deepest cuts in allocative and developmental services, such as roads, planning, and infrastructure. We find state policies, such as cuts in state aid, limiting local property taxes, and mandating local services, are the main drivers of local fiscal stress.

We find local governments in New York State are responding to community needs and holding on to their redistributive role, which suggests the possibility of local governments leading the pushback against austerity pressures. National research has found local governments are pragmatic actors that balance fiscal needs and community needs (Kim and Warner 2016), but this strategy may not be sustainable. Cuts in infrastructure and long term planning signal the erosion of a developmental role. These services form the basis for economic development and the urgency of redistributive services may be crowding out future potential for economic growth.
Theories of city behavior need to be updated to recognize the unique position that local governments occupy in a multilevel governance system. Urban scholars and policymakers should pay more attention to state policies that download stress to local governments and act as barriers to local resilience.

References


Key Words:
Local governments, Fiscal federalism, Austerity, Fiscal stress, Multilevel governance

THE COMPLETE PACKAGE? WORKFORCE DEVELOPMENT, SECTOR STRATEGIES, AND IMPROVING THE SUCCESS OF TRADITIONAL ECONOMIC DEVELOPMENT INCENTIVES

Abstract ID: 207
Pre-Organized Session: Urban Policy After the Great Recession

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In the wake of the great recession, state and local governments are continuing to face tight budgets, often due to recession-era policy decisions that reduced available revenues through costly tax cuts or tax incentives. These fiscal constraints have heightened the age-old budgetary trade-offs between long-term investments in education and short-term investments in economic development, a tension that many scholars from Mollenkopf to Markusen have noted as privileging often short-cited economic development efforts—especially business incentives—over more strategic investments in basic education and job training. Yet, there is increasing evidence that incentive-granting is becoming more precise, accountable, and strategic in ways that allow local governments to pursue traditional business incentives alongside—and without sacrificing—efforts to improve the educational and skill attainment levels of its workers.

One approach that is gaining widespread support is tighter coupling of incentive granting and workforce development, with the recognition this combination can benefit workers that receive those investments in training, even if they move on to other jobs. As Tim Bartik and others have noted, incentives in the form of workforce training have greater community staying power through an increase in workforce skill.

But what is the best approach for linking incentive granting and workforce development? Research suggests this coupling can take different shapes. One approach highlighted in Osterman and Batt, Bartik, and others is the creation of a customized training program, whereby an individual firm receive grant awards designed to cover the costs of training services tailored to the specific needs of that company and provided by a community college or other training institution. In contrast to training customized and delivered to a single specific firm, a second approach involves investing in workforce training
programs that benefit all the firms in an entire, pre-identified industry sector. In turn, these sector-wide programs can become part of the institutional assets that enable state and local practitioners attract and retain incentive-seeking firms. While the former may provide long-term benefits for individual workers that are trained as a result of these customized funds, the latter has the potential to extend those benefits throughout the wider economy as use of those sector institutions is not just limited to firms or workers involved in an incentivized deal. In fact, studies of sector-specific workforce institutions have noted the multiple touchpoints of sector-specific institutions— their use by a range of job seekers, by firms in related industries and even by home-grown establishments looking to expand or fill job openings.

This paper uses a mixed methods approach and a unique dataset to explore the ways in which these two different approaches to workforce development influence the effectiveness of North Carolina’s state-level business incentives programs. This dataset includes all of the state government’s incentive deals from 2002 to 2013 and was constructed using government reports, publicly available data sources like the BLS and BEA, and a review of news articles. Additionally, the key indicators around workforce development were developed and configured using semi-structured interviews and program document reviews. These qualitative methods are also used to identify anomalous cases, which are then explored to maximize the validity of our final results.

Resolving the policy question of how to most effectively integrate workforce development and traditional incentives can provide an important roadmap to elected officials with limited budgets as they balance their educational and economic development budgets and improve the effectiveness of their job creation efforts. Preliminary findings suggest that both approaches increase the impact of the incentive when compared to those projects that did not involve workforce development interventions.

References

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Key Words:
Economic development incentives, Workforce development, Customized job training, Sector strategies, Fiscal

SHRINKING CITIES IN URBANIZED CHINA: THE GEOGRAPHIC DIVERSITY OF STATE RESCALING
Abstract ID: 208
Pre-Organized Session: Urban Policy After the Great Recession

XU, Yuanshuo [Cornell University] yx246@cornell.edu, presenting author
Shrinking cities have become one of the most critical challenges for urban societies. Despite being extensively studied in Western countries, this issue has not been addressed in the developing world, especially in those with rapid urbanization, e.g. China. The “developing” and “rapid growth” tags often hide the uneven developing procedures and the parallel urban shrinkage problems in China. In fact, China’s urban development is primarily state-led at different levels, in which local government has played a critical role and been largely influenced by its multilevel structure and state rescaling process. Led by a powerful central state, the rescaling process in China is actively affects urban policies in a spatial uneven fashion. By repositioning cities and reconfiguring the function of different subnational governments, this process through fiscal decentralization, dual-land ownership system, and special economic zone designation etc., has fundamentally shaped local fiscal policies and land governance practices, which has resulted in divergent local development trajectories. However, empirical work on urban development in a multilevel system is rare, mainly due to the challenge to quantify the state rescaling process, and the inadequacy of modeling techniques to capture the spatial diversity of local responses to rescaling.

This research quantitatively measures urban shrinkage and examines how local urban development is affected by a multilevel governance system through state rescaling spatially and temporally. The data include the most recent city statistical Yearbook data from 2006-2014, remote sensing data and land transaction data from China Land Transaction Website for all cities. For the dependent variable of urban development, I develop a comprehensive metric of demographic, economic, social and geospatial dimensions to measure both the dimensional coordinated level and the general development level of urbanization for all cities in China. This will descriptively identify shrinking localities. Next, the key independent variable, state rescaling, mainly focuses on two interdependent urban policy arenas: fiscal policies and land governance policies, to capture the land-based finance urban development model in China. The fiscal side of state rescaling includes state action - decentralization of expenditures, general state aid, aid for urban construction and maintenance, and other fiscal related variables. Land governance measures local action - the amount of land transactions, land conveyance fees, special economic zone designations, and new district built-up etc. These measures capture local responses in planning land resources under state rescaling. Pressures or restrictions from state rescaling are also identified, such as state spatial regulation of local land use, and fiscal stress due to rising local expenditure responsibility. All these capture the spatial selectivity of the state as it rescales its resources and functions to either promote or limit local government policy actions.

The typology of urban shrinkage can be analyzed to identify problematic regions and regional problems. Spatial pattern of shrinking clusters and “prey-predator” relations are examined via local spatial autocorrelation (LISA) analysis. Spatial regression models further show these neighboring effects statistically. Moreover, the most important methodological contribution of this study is to employ Geographical and Temporal Weighted Regression (GTWR) techniques to model how local urban fiscal and land policies respond to state rescaling across space and time. This modeling technique will solve the empirical inadequacies in modeling state rescaling and its spatiotemporal varied impacts on local urban development. By allowing multilevel mechanisms to vary across space and time, the model result generates not only context-specific explanations of urban development but also multilevel planning strategies to shrinking. Thus, it gives implications to urban policy to respond to economic stress with a more balanced and sustainable multilevel urban/regional development model.

References
Incentives and Austerity: Economic Development during the Recession in Eight U.S. Cities

Abstract ID: 209
Pre-Organized Session: Urban Policy After the Great Recession

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Previous studies of the use of economic development incentives have focused on their effectiveness (Peters & Fisher, 2004) or their adoption (Reese & Rosenfeld, 2001). But most of these studies have not addressed the dynamic interaction between such policies and the changing fiscal and economic structures that are likely to shape how cities think about and approach development over time. We use a case study approach to analyze economic development policy changes before and after the 2007-09 Recession, looking in depth at eight U.S. cities that experienced a wide range of economic and fiscal changes as a result of the crisis. By focusing on how fiscal and economic changes affected the orientation of development policy within a city over time, we are able to overcome some of the significant challenges of drawing conclusions from comparative studies of incentive use between cities.

The shift to more entrepreneurial strategies for promoting local economic growth has been well-documented, as cities respond to changing economic imperatives and new dynamics of urban growth (Clarke and Gaile 1998). The impact of fiscal stress on urban policy has been less studied (for an exception see Warner and Zheng 2013). While there has been documentation of retrenchment (Donald et al 2014) and decreased fiscal autonomy (Hinkley 2015), there has been less research on how the recession affected specific types of city spending varied from place to place. The complex interplay of state and city finances in shaping a city’s fiscal autonomy interacts with significant variation in how state and local governments divide responsibility for economic development. These city-state dynamics complicate efforts to generalize across state lines about the relationship between local fiscal stress and development policy.

The effect of the recession was not uniform across cities – some experienced significant fiscal stress even though their economies recovered relatively well; others experienced sustained loss of economic activity but relatively little impact on their fiscal capacity. What can we learn from the difference in how officials in those different city types adjusted their approach to economic development during the recession? How do officials frame their responsiveness to both increased fiscal scarcity and demand for accelerating economic activity?
This paper makes three important contributions to the economic development literature: (1) It determines how responsive the use of business incentives is to changes in both economic and fiscal context; (2) It places incentives in the context of overall economic development and austerity policies; (3) It provides an expanded typology of economic development regimes, based on a set of indicators measuring subsidy use, fiscal autonomy, and economic resilience.

References

Key Words:
Incentives, Economic development, Entrepreneurialism, Fiscal stress

SMALL BUSINESS VULNERABILITY IN THE FACE OF NATURAL DISASTERS: THE CASE OF HURRICANE SANDY AND NEW YORK CITY

Abstract ID: 221
Individual Paper Submission

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The density of urban areas is what makes them productive, but it is also what makes them particularly vulnerable in the face of natural disasters. This is all the more true as the threat of, and damage from, natural disasters becomes more severe, especially for coastal cities like New York. In this paper, we consider small businesses, a critical part of the urban economy, and the nature of their risk, in the context of Hurricane Sandy. Specifically, what share of businesses, and the economic activity that they represent, is vulnerable to extreme flooding? What are the characteristics of the businesses, and the nature of their economic activity, in the areas of highest estimated risk, compared to those in areas of lower risk? And did Hurricane Sandy affect the economic activity of these businesses?

To answer these questions, we rely on a combination of several rich micro-datasets on business activity, employment, and property characteristics in New York City. We currently have data for five to ten years leading up to the storm and, in some cases, several years following the storm. We overlay these data with spatial information on locally determined evacuation zones to capture pre-storm risk estimations, and then inundation zones that show us exactly where, and to what height, the floodwaters surged. We analyze businesses before Hurricane Sandy and employment, both before and immediately following Sandy, across these zones in order to understand the pre-storm vulnerability of small businesses and the very immediate repercussions from Hurricane Sandy.
We find that before Sandy, more than 25,000 establishments were located in the highest risk evacuation zones and, of those, nearly half were providing critical services, like grocery and drug stores. In addition, a majority of buildings in the higher risk areas are of lower-scale construction, implying that most businesses were likely located on floors closer to ground level. Moreover, the buildings were mostly built prior to any resilient building code standards. As for impacts, we find that they differed depending on the nature of the business. While overall employment did not exhibit any significant declines after Sandy, the retail sector did suffer. And the losses were most acute in areas that experienced surge levels of three feet or more – places where flooding severely disrupted business operations. Looking at data from two years after the storm, we find a 40 percent reduction in retail employment (an average decline of about 8.5 jobs) for the typical neighborhood in these high-surge areas. We do not yet know whether these job losses were driven by business closures or contractions; but, it is likely that they were accompanied by interruptions in community services and in earnings for those formerly employed at the damaged establishments.

Our findings so far offer two important lessons for urban planning and policy. First, there are implications for the city’s management of risk. The fact that there were significant job losses in areas designated for evacuation suggests that the actual evacuation response and storm preparation were inadequate in terms of achieving resiliency. Second, communities within the same municipality can suffer very different costs from natural disasters. These findings therefore indicate a need for neighborhood-based planning and localized responses in the face of extreme events.

References


Key Words:
Natural disasters, Small business, Resiliency

DO “GOOD JOBS” AFFECT INTERREGIONAL MIGRATION OF COLLEGE GRADUATE YOUTHS IN KOREA? EVIDENCE FROM HIERARCHICAL CROSS-CLASSIFIED LINEAR MODELING APPROACH

Abstract ID: 279
Poster

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Abstract
College graduate youths are regarded as the most economically productive and future-oriented population group and the key factor that underpins the sustainable regional development process. Thus, a substantial body of research focused on factors that increase a city’s appeal to college graduate youths. The total number of jobs was identified widely as a factor that influences migratory decisions (Choi and Lim 2015); however, only a few migration studies on the quality of jobs in the local labor market. Green (2010) argues that the quality of jobs and the job-related well-being of individuals are significant predictors of labor mobility.

This study empirically examines the role of the quality of jobs at a local labor market on the interregional migration of college graduate youth in Korea. The main objective of this study is two-fold: (1) to define the concept of a “good job” with objective and subjective criteria while answering the question, “which factors determine the quality of jobs?”; (2) to empirically investigate the effect of good jobs on the migration inflows and outflows between the local labor market areas in Korea. The hypotheses are as follows.

Hypothesis 1: A large number of “good jobs” results in increased regional migration inflows and low regional migration outflows.
Hypothesis 2: A large share of “good jobs” results in increased regional migration inflows and low regional migration outflows.

To assess the hypothesis, we use individual-level data from the Graduates Occupational Mobility Survey conducted by the Korea Employment Information Service. In addition, our explanatory variables, including the amount and the proportion of good jobs, and various control variables, are set at the regional level. To this effect, we construct a nested data structure, wherein individuals are nested within a region. Finally, we adopt a hierarchical cross-classified linear model as a basic modeling framework. This model allows us to analyze the effects of individual and regional characteristics on interregional migration within a single model and estimate the push and pull effects from the origin and destination regions, respectively (Goldstein 2011). Our spatial unit of analysis includes 137 local labor market areas, as defined by the Korea Labor Institute.

The empirical results support our expectation that individual and regional characteristics would significantly affect the likelihood of interregional migration. Furthermore, the effects of the origin (push effect) and destination regions (pull effect) on the migration of individuals are statistically significant. In accordance with Hypothesis 1, the number of good jobs does not have statistical significance in explaining the migration behavior of college graduate youths. By contrast, regions that possess a large share of good jobs secure increased migration inflows and low migration outflows of college graduate youths. Thus, Hypothesis 2 is supported.

Labor mobility is directly related to multiple planning issues (Vitiello 2009), such as shrinking cities, interregional disparity, public housing, and economic resilience. Thus, challenges in “good job” creation are particularly pronounced in regions that are struggling to cope with planning issues. Moreover, from a planning perspective, Markusen (2004) argues that economic and community development planners should target particular jobs as well as industries when shaping economic development strategies. In this context, this study represents an additional step in framing policy discussions and identifying ways of thinking relative to regional economic development.

Individuals as worker and entrepreneurs matter to local economy, and their success is bolstered by judicious planning and policy (Markusen 2004). Particularly in Korea, it has long been recognized that
highly-educated individuals are the main engine of economic growth and development (Choi and Lim 2015). Thus, policy makers should emphasize on effective arrangements to improve the qualitative aspect of jobs as well as the total amount of positions at the local labor market. Moreover, formulating a policy framework that appraises the quality of each job and realizes the occupation preference of college graduate youths is important to reduce labor underutilization and attract potential migrants.

References


Key Words:
Interregional migration, Job quality, College graduate youths, Hierarchical cross-classified linear model, Korea

THE ACCIDENTAL COMMERCIAL DISTRICT? EXPLORING THE RELATIONSHIP BETWEEN RETAIL GENTRIFICATION, TRANSIT NEIGHBORHOODS, AND SAFETY

Abstract ID: 292
Individual Paper Submission

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Dense commercial districts near transit play a key role in the attainment of walkability and livability goals, thereby reducing greenhouse gas emissions. Although the increased pedestrian traffic generated by transit riders should lead to significant economic benefits for local businesses, rising land values near transit could drive out locally serving or ethnic enterprises, resulting in an increase in boutique retail stores that fail to serve the budgets and cultural preferences of long-term residents. Likewise, economic development could have significant consequences on pedestrian and cyclist safety, as gentrifying commercial districts may attract automobiles, which are heavily utilized for shopping trips. Drawing from our compiled neighborhood- and parcel-level databases of gentrification, rail transit ridership, and crashes in Los Angeles and the San Francisco Bay Area, this research explores the relationship between commercial transition and pedestrian/cyclist safety in transit neighborhoods. Using multivariate regression, we show that gentrification is related to higher accident rates, controlling for other factors. Case studies suggest a transformation in how locals shop for goods in these areas, altering travel patterns and creating new conflicts. This analysis will aid policy makers, transportation planners and urban designers to promote design and policy interventions to address the negative effects of commercial gentrification in transit neighborhoods.
After the Korean War, Korea’s rapid economic growth brought an increase in the number of vehicles. In order to address the consequentially worsening traffic problems, Seoul Metropolitan Government constructed excessively many elevated freeways in 1960-1970s. These transportation infrastructure, however, have generated visual nuisance and attracted misdemeanors and crimes, as the spaces under the freeways were not properly maintained. From 2000, with the paradigm shift in urban design and the increasing recognition on the importance of pedestrian-friendly environment, the city government began to demolish the elevated freeways, totaling 18 of those by 2015.

The Yaksu elevated freeway, the subject of this study, was one of such infrastructure built in December 1984, and torn down in September 2014, after twenty years of use. Before the demolition, the Yaksu area was not considered as attractive because Yaksu elevated freeway cast constant noise and shade, as well as its deteriorating condition posed safety concern. With the removal of the freeway, however, the area has begun to change. The neighborhood environment was improved and the real estate value has increased, in both residential and commercial property market.

While the demolition of elevated roads has been of interest in existent studies, the focus has been mainly on making a utilization plan for the spaces under the elevated roads, or investigating the improvement in traffic conditions. Some research has examined the effects of its transformation to an urban amenity, such as a restored creek and linear park on real estate market values. Research has not been conducted to assess the effect of its removal on the retail business operation.
In this research, we quantitatively investigate how the removal of the Yaksu elevated freeway has influenced on retail business operations, i.e. the survival of retail establishments, in the vicinity, using a discrete-time survival model within a regression discontinuity. The low survival rates indicate that retail businesses are more vulnerable to business closure after they undergoes the removal of the freeway; while, on the contrary, high survival rates of retail markets indicate that each market could remain as relatively stable.

By combining these two approaches – 1) discrete time survival model and 2) a regression discontinuity model, we can infer unbiased estimates of the impact of the freeway removal on viability and vulnerability of retail establishments – from 2012 to 2016. The main dataset in our study is the construction permit records from the Ministry of Government Administration and Home Affairs in Korea. We also consider other factors that might influence the retail market together – not only individual market characteristics, but also locational, and demographic characteristics of neighboring areas.

In South Korea, approximately 80 elevated roads have remained from the former use now. This research will have many opportunities to be used for those, and be of value for urban planners to construct and design better urban environments.

References


Key Words:
Demolition of Elevated Roads, Retail Market, Discrete-Time Survival Model, Regression Discontinuity

BE CAREFUL WHAT YOU WISH FOR: REASSERTING ECONOMIC DEVELOPMENT’S ROLE WITHIN URBAN PLANNING SCHOLARSHIP IN AN AGE OF URBAN TRIUMPHALISM, RISING INEQUALITY AND CLIMATE DISRUPTION

Abstract ID: 355
Individual Paper Submission

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This paper engages contemporary concerns that economic development planning scholarship has become marginalized within the larger planning discipline. Possible symptoms of this malaise include a reduction in conference papers in the ACSP economic development track, fewer planning dissertations on economic development, and weak integration of economic development theories into contemporary planning theory.
One might downplay this apparent retreat: most planning specializations experience cyclical ebbs and flows. Climate change, (autonomous) transportation planning, gentrification and water resources might dominate contemporary discussions, but economic development’s current lull is temporary and will soon rebound. This paper explores why this marginalization might be structural and long-term, requiring a coordinated effort of renewal.

I examine seven rival explanations:

1. Economic development was not part of the original Progressive Era formulation of modern city planning, but rather was inserted (somewhat awkwardly) into mid-century planning scholarship during a brief period of rapid expansion and annexation of allied topics. But planning bit off more than it could chew, diluting its core mission and professional competencies, leading Aaron Wildavsky (1973) to lament that “if planning is everything, maybe it’s nothing.” The contemporary retreat of economic development planning is thus a needed correction to planning’s late 20th century overreach, restoring the original coherence to the field’s physical focus on the built environment, land use, housing and infrastructure.

2. 20th century economic development planning arose in response to two historically specific crises: the Great Depression and the 1960s Urban Crisis. In this urban triumphalist era of innovation districts, smart cities, and postindustrial gentrification, the urban crisis is long over. Economic development planning has not been able to adequately transcend its rootedness in these former crises and reinvent itself, so it has become reactive and fallen behind. Yes, the contemporary high-tech city is a fascinating and dynamic stage, but we largely document it, not plan it. And our awestruck stance towards this “back to the city” era hinders rather than helps a critical discussion of urban economics.

3. Late 20th century ED planning concepts were rooted in industrial-era concepts of labor relations and capital accumulation. In this post-Marxist era, progressive economic development planners have not found a viable, compelling theoretical replacement, so we just flounder and rail against neoliberalism, platform capitalism, and the loss of a social democratic social contract (and sometimes embrace the complex trivialities of actor-network theory). Our antiquated models can’t keep up with the creative new urban economic activities generated by late-modern capitalism.

4. The ostensible marginalization of ED planning is a misdiagnosis. We research an economic landscape more complex and interesting than 20-30 years ago: the "gig" economy; the transformation of work; new forms of globalization; housing financialization; privatization; reurbanization of R&D; commercialized social media; new forms of gentrification; arts-led development; the maker culture; sustainable development. What is lacking is a visible, coherent, integrated research profile. The field faces two options: either be reassured that economic development planning is a vibrant albeit decentralized, loose affiliation of ideas; or make a concerted effort to coalesce around several core ideas.

5. Urban planning has understandably expanded its attentions from economic development to sustainability and social justice. And economic development has not sufficiently demonstrated how it adds to these two fundamental priorities and is (unfairly?) viewed as hostile to both.

6. Economic development’s marginalization is the direct consequence of state contraction. We follow the money, and there is reduced support for this kind of work. We were spooked by neoliberalism.
It is not external forces, but internal academic politics (within departments, journals and conferences) that marginalized ED. We got distracted by the not very important topics, made poor research choices, lost sight of the bigger picture, and failed to fully connect ED to the grand planning issues.

I conclude by proposing several steps to reassert the centrality of economic development within urban planning as a whole (including links to sustainability, placemaking and transportation).

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Key Words: economic development, planning theory, planning history, urban triumphalism, sustainable development

**UNEVEN OPPORTUNITY: EXPLORING EMPLOYERS' EDUCATIONAL PREFERENCES FOR MIDDLE SKILL JOBS**

Abstract ID: 361
Pre-O rganized Session: Shifting occupational structures’ impact on local economic development

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This analysis follows research published in 2015 by the Federal Reserve Banks of Philadelphia, Cleveland, and Atlanta on “opportunity occupations,” which are defined as occupations that pay at least the national annual median wage, adjusted for differences in local consumption prices, and that are generally considered accessible to a worker without a four-year college degree (Wardrip et al., 2015). Among the primary findings in the original research is that, in online job advertisements, employers often express a preference for a college-educated candidate even for occupations that have not traditionally required one. Further, the authors find that even for the same occupation, employers’ educational expectations can be much higher in some metropolitan (metro) areas than in others.

In this paper, we focus on four middle-skills occupations and investigate whether the observed variation can be fully explained by the characteristics of the jobs themselves. Even after controlling for the characteristics of the online job advertisements, we find that that employers’ preferences for a bachelor’s degree are higher where recent college graduates are relatively more numerous, where wages are higher, in larger metro areas, and in the Northeast.

References
Technical skills are critical for manufacturing firms to maintain and upgrade their position in global trade and yet numerous studies show smaller firms are less likely to train and retain skilled labor than their larger-sized counterparts. This paper helps identify skill interdependencies between large and small firms across the automotive value chain in a single automotive cluster.

In the global automotive industry, the rise of the multinational supplier and the co-location of multinational suppliers with lead manufacturing firms limit local firms’ opportunities for learning through direct relationships with lead firms. This paper identifies and investigates supply chain segments operating under increasing constraint, and compares firms’ human resource responses, in order to identify areas of labor market interdependence, or complementarities in skill demand, where integrated workforce development systems support firms along an entire production chain.

A quantitative analysis of skill demand, based on the cluster’s export, market and product orientation, as well as staffing patterns, organizes sets of firms for further study. Qualitative analysis demonstrates differentiated human resource responses by firms under similar constraints. Initial research suggests that economic development practitioners can help smaller firms leverage public policy interventions introduced by larger firms in order to cross-train and diversify their workforce, and can engage multinational enterprises to advance public policy solutions that aid local firms. These findings may help reduce the training gap between large- and small-sized firms to address some of the underlying sources of labor market inequity.

References


Key Words:
- economic development
- workforce development
- small firms
- training

THE GEOGRAPHY OF OCCUPATIONAL CONCENTRATION AMONG LOW-SKILLED IMMIGRANTS

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The prevalence of ethnic niches in organizing immigrants’ employment is a salient feature of urban labor markets. While previous studies have documented the importance and characteristics of occupational concentration of immigrants in different cities, we know little about the degree and variation of such concentration dynamics across cities, their changes over time, and the associated shaping factors.

Using U.S. Census Data, we trace the occupational niches occupied by low-skilled immigrants from 1990 to 2010 to account for changes over time and document the relative (in)consistency of such concentrations to see whether low-skilled immigrants expanded into a greater number of occupations. We also performed such analysis for Asian and Latino immigrants separately to examine their respective niches. We then adopt Herfindahl-Hirschman index (HHI) to numerically represent the relative concentration of immigrants across occupations for the two decades nationally as well as for the top 100 MSAs (by immigrant population in 1990). Lastly we explore what metropolitan contexts help explain the variation in HHI across MSAs for 2000, 2010 respectively using lagged variables. We test whether metropolitan areas with larger immigrant population and more diverse economic structure would enable low-skilled immigrants to penetrate into greater range of occupations and foster their occupational mobility.

This research will highlight the occupational structure and its change over time of low-skilled immigrants in various metropolitan areas and shed light on what metropolitan contexts explain their variations. Results have important implications for workforce and economic development planning that match immigrants to jobs with their skills.
Planners and environmental advocates often argue in favor of compact growth and the consolidation of commercial activity into well-defined centers as a method to curb traffic and improve air quality. However, recent scholarship has shown that sprawling land-use patterns are also linked to lower levels of economic mobility (Chetty, Hendren, Kline, & Saez, 2014; Ewing, Hamidi, Grace, & Wei, 2016). This work has reignited debates over spatial mismatch and how specifically “geography matters” in determining economic opportunity. This paper contributes to this emerging field by providing a national reassessment of the spatial mismatch hypothesis. Specifically, we analyze the degree of labor market integration between metropolitan employment centers (ECs) and distressed inner-city neighborhoods using new data available from the Local Origin Destination Employment Statistics (LODES) program. We define employment centers using McMillen (2003)’s method of subcenter identification based on local peaks in employment density the census tract level. We then define inner-city residential locations as all economically distressed census tracts located within the main principal city of each metropolitan area (Porter, 1997). We then measure the labor flows between inner-city tracts and each defined employment center by type (i.e. suburban, urban and CBD). We find that while the centers accounted for less than a fifth of the total employment in the United States, they grew twice as fast between 2004 and 2014 as deconcentrated employment, an indication that job sprawl may be slowing nationally. Furthermore, non-Central Business District employment centers in the urban areas grew at a faster rate than suburban employment centers even though they had roughly the same number of jobs in 2004. However, inner-city residents make up for a relatively small share of employment within these employment centers (~3.5 percent to 8 percent). Furthermore, structural conditions such as transit accessibility, and the level of inner-city poverty influence the proportion of these jobs that are filled by inner city residents who take up jobs in these employment centers. In addition, we also find that the industry structure of the center matters, with centers with higher proportion of administrative services, hiring more inner city residents and centers with higher proportion of professional services, hiring fewer. Most importantly, we find a strong and independent impact of sprawl on the chances of inner-city hiring at defined employment centers. Specifically, counties with more compact development patterns and regions with less jurisdictional complexity have employment centers that tend to hire more workers from distressed inner-city neighborhoods.
Policy implications of this work for planning include a stronger empirical basis for arguments encouraging place-based economic development strategies to encourage growth or urban employment centers tied to transit accessibility, as well as overall efforts to encourage “smart growth.” In addition, our work highlights the need to better connect economic development and equity planning with land-use planning.

References


Key Words:
Sprawl, Spatial Mismatch, Employment Sub-centers, Inner-city economic development

LOCAL ECONOMIC DEVELOPMENT IMPACTS OF SHIFTS IN MANUFACTURING DEMAND FOR WORKERS AND ROBOTS
Abstract ID: 419
Pre-Organized Session: Shifting occupational structures’ impact on local economic development

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Questions about how automation is changing the nature of work and the composition of the workforce are taking on new urgency in the age of robotics and artificial intelligence. However, the question of where these changes will have the greatest impacts is largely un-examined. While the effects of technological change have a global reach, some local and regional economies will experience greater technology-related labor disruptions than others, depending on the particularities of their industry structure, production processes, and supply chains.

The research presented in this paper[1] identifies local and regional economies being impacted using actual data about robotics labor demand. This approach stands in contrast to other recent impact estimates that infer the effects of robot use based on sales data and industry structure (e.g. Acemoglu & Restrepo, 2017; Graetz & Michaels, 2015). Using robot sales data as a proxy for robot use entails several problematic assumptions about how robots are actually used in practice, how long they last, and how productive they are.
Using a novel data source called Real Time Labor Market Information (RTLMI), we track recent demand for occupations involving robotics-specific skills and work within the U.S. manufacturing sector, which is the only major sector routinely using robots to date. The analysis compares robotics-related occupations within and among metropolitan statistical areas, as well as non-metropolitan (rural) counties. We assess robotics labor demand within the context of other characteristics of regional manufacturing workforces, such as overall employment and compensation, and determine which regions are developing a robotics-specific workforce that diverges from general patterns of manufacturing labor demand.

We then discuss emerging regional workforce development responses to the growing demand for robotics skills within existing manufacturing occupations, drawn from cases in regions that have been at the forefront of addressing this issue.

[1] This research is supported by NSF Project #1637737: NRI: “Workers, Firms, and Industries in Robotic Regions.”

References


Key Words:
robots, economic development, workers, manufacturing, RTMLI

MEASURING THE MAKER MOVEMENT IN THE HEARTLAND

Abstract ID: 423
Individual Paper Submission

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A “Maker”: a commercial enterprise integrating design and production to [mainly] create physical objects for sale[1]

Since the USA began to exit the “great recession”, policy analysis, academic discourse and business development have identified and prompted a reawakening of interest in innovation and entrepreneurship manufacturing. While gaining traction from Federal-level policy initiatives such as the Advanced Manufacturing Partnership, the Nation of Makers Initiative and the Manufacturing Communities Partnership a range of more localized programs began to emerge. Several regional and urban manufacturing initiatives were encouraged by local entrepreneurial and business groups, foundations and organized labor, eager to support this emerging trend (see, for example, the Urban Manufacturing
Alliance). This trend also resonated with the concept of shared production space connecting the urban manufacturing renaissance with the commercial innovation in the “shared economy”.

Simultaneously, this so-called manufacturing renaissance was connected with place-based local economic development and the concept of “rooted” public policies [2]. Such policies and programs are designed to facilitate entrepreneurship and business growth that “fits” the culture and characteristics of the locality, with a common focus on local sourcing and encouragement of a local “maker ecosystem”. A recent Kaufmann Foundation study of makers conducted surveys in Portland OR, Chicago and New York City [3] and the current Urban Manufacturing Alliance's “State of Urban Manufacturing” study is looking at Baltimore, Cincinnati, Milwaukee, Philadelphia and Portland [4]. [Detroit has recently been added to this list].

This paper presents the initial findings drawn from a survey of makers and local economic development agencies (“enablers”) in the Detroit region. While building from the Kaufmann funded study, and employing a similar survey instrument, the work reported here takes the survey into the suburbs of Detroit, identifying and commenting on a geography not covered, to date, by the studies cited above. The paper will also address the connections between an emblematic manufacturing culture, as found in Detroit, and the “renaissance” culture of the maker movement.


References

Key Words:
Maker Movement, Local Economic Development, Detroit

SUCCESES AND CHALLENGES IN AN INNOVATION DISTRICT: THE CORTEX INNOVATION COMMUNITY OF ST. LOUIS

Abstract ID: 526
Pre-O rganized Session: Emerging Models of Place-Based Economic and Entrepreneurial Development

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Numerous cities across the United States are establishing and supporting innovation districts (Katz and Wagner 2014; Katz et al. 2015). Although they share a few fundamental features, innovation districts vary widely in terms of their settings, organizational structures, development trajectories, and
programmatic activities (Barnett et al. 2014; Katz 2016). Since these differences both reflect and occasion important policy choices, this research aims to provide information and guidance to economic development scholars and practitioners by delving into the details of a particular example.

I report on my comprehensive investigation of the Cortex Innovation Community in St. Louis, Missouri. This represents an uncommon example in the U.S. of an innovation district that already boasts a remarkable level of economic development accomplishment (Reed 2016). The district has a relatively long timeline that precedes its being labelled and promoted as an innovation district; it was first established as an independent entity in 2002. Cortex has progressed in interesting and revealing ways over its history, as a district and as an accompanying set of economic development aims and policies, and is continuing to adjust to reflect new challenges and opportunities. In examining the formation, development, and likely advancement of Cortex, I differentiate key features and factors that are unique to Cortex and its surroundings from those that resemble circumstances elsewhere or may be generated or adapted to bolster innovation districts in other cities.

This investigation of Cortex is part of a larger project that examines four innovation districts as case studies. Two other cases—Boston and Detroit—will be described by colleagues in companion presentations within the pre-organized session.

References


Key Words: economic development, innovation, entrepreneurship, urban policy, redevelopment

INSTITUTIONALIZING THE MAKER-MANUFACTURING NEXUS: IMPLICATIONS FOR SPATIAL EQUITY AND GENERATIONAL INTEGRATION

Abstract ID: 527
Pre-Organized Session: Emerging Models of Place-Based Economic and Entrepreneurial Development
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The maker movement is often heralded as disruptive force. A way to democratize North American manufacturing by giving the millennial generation access to more affordable, high-quality technologies and inclusive marketing platforms (e.g., Etsy, Grommet) through which to design new products and get them more quickly into the hands of design-savvy consumers. As a place-based economic development strategy the maker movement has much to offer: it is helping inspire the next generation of product-making innovative urban entrepreneurs; it is repositioning public institutions, from libraries to community colleges to high school “shop” classes, as reenergized maker-spaces in support new product design and development; and it is reinforcing production-in-place sensibilities, through “made-here” marketing campaigns that promote an ethical economy through local jobs, local innovation and local sourcing.

But as we look towards the maker economy to refresh urban manufacturing and particularly with an eye towards extending economic opportunity, we might be overlooking its larger geographic reach—not the ways it upends manufacturing traditions, nor revives or concentrates those traditions within urban limits, but the opportunity it creates for shoring-up and revitalizing manufacturing communities, establishments and sources of expertise beyond the metropolis. While framing the maker movement as an urban economic development tool can certainly help animate a younger, more-educated and tech-savvy generation of urban entrepreneurs, exploring interconnections with traditional manufacturing communities, workers and institutions may offer more for U.S. manufacturing innovation and inclusion. It could be a means to engage the growing interest in the maker economy to forge greater interdependencies between non-metro and urban communities, between old and new manufacturing clusters and ultimately, between blue-collar and millennial America.

We develop this argument through an in-depth case study of the Carolina Textile District (CTD), an innovative ‘value chain’ experiment that helps incumbent textiles firms connect with and support a new generation of urban-based textile designers and entrepreneurs. We construct this case using survey data of CTD clients, as well as in-depth interviews conducted with CTD leaders and member companies. While recent scholarship on the maker movement has focused narrowly on its effects on urban manufacturing, the CTD case allows us to study the maker phenomena in the context of a non-urban legacy textile region hit hard by the cumulative effects of global integration and the Great Recession. The CTD was founded in 2013 and currently serves 150 incumbent textile manufacturing firms dispersed throughout North Carolina’s Piedmont Crescent. CTD is helping manufacturers stabilize employment and revenue by securing production contracts from a new generation of textiles designers and entrepreneurs in large urban centers, especially in Los Angeles and New York. At a basic level, the CTD is helping firms reduce their dependency on more volatile, price sensitive and standardized product lines by competing for smaller batch, design-intensive orders. To augment production, the CTD helps firms develop product design-skills and prototyping services.

But the co-creators of the CTD are also using their industry connections and influence to promote further organizational changes in support of job quality, succession planning and employee ownership. Through their work with both urban designers and traditional manufacturers, they are pushing to advance living wage standards and improve working conditions at the same time that they are preparing the next generation of ethically-minded textile manufacturers. In this regard, CTD functions as more than just a supply chain aggregator. We argue it is an innovative distributive platform for harnessing and fortifying the urban millennial-maker ethos in support of social equity and environmental sustainability.
As the maker-economy gains traction among economic development planners, the CTD offers an innovative model for promoting spatial inclusion—an alternative to global sourcing that uses cross-regional strategies of supply chain integration to extend progressive business practices, standards and sensibilities well-beyond North America’s urban core.

References

Key Words:
maker economy, economic development, manufacturing, non-urban America, millennial

BUILDING CITIES LIKE STARTUPS: THE SILICON VALLEY ETHOS AND ITS EFFECT ON ECONOMIC DEVELOPMENT
Abstract ID: 528
Pre-Organized Session: Emerging Models of Place-Based Economic and Entrepreneurial Development
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The successes of Silicon Valley and Boston’s Route 128 captured the imagination of policymakers and urban planning practitioners for decades, effectively forcing economic developers to move beyond firm location incentives to incorporate talent, higher education, and building entrepreneurial ecosystems (Plosila, 2004). This is physically evident from the various cluster developments across the globe, many named aspirationally, such as Silicon Alley in NYC and Silicon Docks in Dublin. Less researched is the way the culture and strategy of tech startups is permeating city building and governance. For example, government positions are increasingly filled by experts in computer programming and data analytics, skills more commonly found in technology startups (Shelton et al. 2015), public spaces are programmed and designed to make the urban fabric a cubicle for continuous on-demand work, much like networking events and the wide provision of food, entertainment, and services found inside tech companies, and technology is used to monitor citizens in the same way tech companies use it for performance management and optimized efficiency.

This paper asks: How is startup culture and the allure of the tech entrepreneur influencing urban redevelopment? I use over 100 interviews, site-observations, and policy recommendations for innovation districts in Boston, MA; Detroit, MI; St. Louis, MO, Research Triangle Park, NC; and Dublin, Ireland to answer this question. I demonstrate how economic developers use the metaphor of cities as laboratories, promote the current startup language of incentivizing risk, de-stigmatizing failure, and fetishize smart grids and open data portals to run continuous analytics on the mechanics of the city. I argue that the emergence of innovation districts represents a new era of economic development—one that moves beyond state-science and technology-based strategies to individual-science and tech-startup
based strategies. The result is outsourcing risk from the state to the individual and to the city. This “Silicon Valley Ethos” has implications that economic developers and urban planners alike must consider. Replicating the allure of startup culture on the urban fabric also replicates issues of housing affordability and provision, class and gender bias, and reducing intractable political struggles to problems of information and technology adoption.

References

Key Words:
innovation district, startup culture, economic development, entrepreneur, urban redevelopment

LIVE, INNOVATE AND PLAY A CASE STUDY OF THE BOSTON SEAPORT INNOVATION DISTRICT
Abstract ID: 529
Pre-Organized Session: Emerging Models of Place-Based Economic and Entrepreneurial Development

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Innovation districts are a recent policy phenomenon fast gaining attention among local economic developers and planners. The basic premise of the strategy is to stimulate the formation of a vibrant and self-sustaining entrepreneurial ecosystem through a mix of place branding, entrepreneurial support programs, and the creation of mixed-use communities where the entrepreneurial sect can live, work and play. In this way, innovation districts are emblematic of a new wave of local economic development strategies that leverage lifestyle amenities to attract desired residents, namely young knowledge workers. It is believed that such workers will spawn or lure innovative businesses that will also benefit from the co-location of similar firms and place cache.

This paper examines the conceptual foundations underlying innovation districts, using the South Boston Seaport as a focal case study. The Seaport (est. 2010) is the first designated innovation district in the United States, and is widely viewed as a development success story inspiring others around the nation to follow suit. We trace the evolution of the Seaport from its pre-district history to its contemporary state using evidence collected from a review of plans, articles, and interviews with residents, developers, entrepreneurs, and public officials. We show that civic actions catalyzed on dormant market forces to bring forth the current development boom in the district. However, the rapid acceleration of these
market forces quickly outpaced the ability of planners to proactively shape development and now threaten the very entrepreneurial culture that is at the core of the innovation district concept.

References


Key Words:
Entrepreneurship, Economic Development Policy, Real Estate

INVESTIGATING THE RELATIONSHIP BETWEEN URBAN FORM AND REGIONAL INNOVATIVE CAPACITY, THE FORGOTTEN DIMENSION
Abstract ID: 531
Poster

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In the era of knowledge economy, knowledge is known to be the key driver of economic growth. Although the role of business clustering on knowledge production, driving urban enmities of location decision for knowledge businesses and workers have been well studied, there is little evidence on how urban form influences regional innovative capacity. In addition, there is still a need to clearly identify the urban form attributes that impact the knowledge production, innovative capacity and idea generation. To address this gap, this study-at the regional level-examines the relation between urban sprawl and innovative capacity using three indicators of regional innovative capacity: These three indicators are the patent generated per capita, innovation awards by small businesses and the number of innovative small business firms. On the other hand we used Ewing and Hamidi (2014) Sprawl Index as which is built upon the four built environmental traits of compacted urban form factors through measurement of 22 indicators. These four forming factors are development density; land use mix; activity centering; and street accessibility (Citation).

Accounting for confounding factors, we found that all three indicators of regional innovation capacity are positively associated with the regional compactness. For every percent increase in the metropolitan compactness index, the number of patent generated per capita increases by 0.38 percent and the number of small business’ innovation awards increases by 0.47 percent.

Through the results of this research, cities’ policy leaders aiming to catch up on the pace of growth through knowledge economy, can find that compacted urban form is more influential. This influence is due to the more opportunities for knowledge spillover in compact urban areas and that knowledge workers are more interested to live and work within the compacted cities.

References

Key Words:
Innovation Distritcs, Sprawl, Urban Form, Innovative Capacity

IS TAX INCREMENT FINANCING A FISCAL BANE OR BOON? EVIDENCE FROM IOWA
Abstract ID: 571
Poster

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Among urban planners, tax increment financing (TIF) is a popular economic development financing tool. Critics, however, claim that TIF during its duration is a fiscal bane, reducing property value for affected jurisdictions, especially school districts. Three TIF regulations in Iowa provide the opportunity to test this argument. First, annual base values for affected jurisdictions may fall to zero as a result of the state’s assessment limitation law. Second, municipalities in Iowa have an option to return to affected jurisdictions excess increments, that is, superfluous increments not needed for development needs. Third, affected jurisdictions in Iowa can tap the entire increment for debt service purposes. Using 18 years of TIF district-level data for simulated estimations, this study finds that TIF provided affected jurisdictions with a fiscal boon—substantial tax levy for both general funds and debt service. The finding of this study may help economic development planners garner more support for TIF, especially from non-residents affected by TIF-financed municipal economic development initiatives.

References
• Rachel Weber, University of Illinois Chicago
• Ann Markusen is a professor of planning and public policy at the Humphrey Institute of Public Affairs, University of Minnesota
• Kenneth Kriz, Wichita State University

Key Words:
tax increment financing, economic development, school district

RESILIENCE IN THE FACE OF CHRONIC DISTRESS: U.S. METROPOLITAN AREAS AFTER THE GREAT RECESSION
Abstract ID: 659
Individual Paper Submission
A significant number of US Metropolitan regions experienced chronic distress before the onset of the Great Recession. This was the subject of the third chapter of Wolman, Harold, Howard Wial, Travis St. Clair and Edward [Ned] Hill, Coping with Adversity: Regional Economic Resilience and Public Policy. Cornell University Press. However, the treatment of these metropolitan areas stopped in 2006, just before the onset of the Great Recession.

In this paper, we examine the economic performance of this set of metropolitan areas during the Great Recession and through the recovery. [Data are available through 2014 and we are attempting to collect the 2015 annual data.] We will also use the same definitions to identify other metropolitan areas that entered a state of chronic distress with the Great Recession.

Common attributes in terms of the supply-side of regional factor markets will be examined in keeping with the original work to determinants of chronic distress. We will also add demand-side factors related to the composition of the economic base of the regions as well. In all cases regression analysis will be used. We expect that logistic regressions will be the technique of choice.

References

Key Words:
chronic distress, regional economy, economic recovery, recession, resilience

APPETITE FOR GROWTH: CHALLENGES TO SCALE FOR FOOD MAKERS IN THREE U.S. CITIES
Abstract ID: 686
Individual Paper Submission

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Entrepreneurship among food and beverage “makers” embodies some of the Maker Movement’s most promising contributions for local economic development. It offers relatively low barriers to entry and significant potential for contributing to the local consumption base and urban distinctiveness, often
building upon culturally-specific food activities on the part of immigrants and communities of color, giving them pathways into entrepreneurship, job and wealth creation. Yet the challenges of growth and scaling for makers of “bites” are in many ways similar to those facing makers of “bags” (durable and/or household craft goods) and “bots” (technology-based or -embedded products). The growing ease with which makers can start enterprises stands in direct contrast with the stubborn realities of business growth and expansion.

Drawing on semi-structured interviews with 20 food- and beverage-related makers in three cities – Chicago, New York City, and Portland, Oregon – we analyze the challenges facing these makers in realizing their potential for local economic development. We focus on three aspects of the local ecosystem for makers – the character of local demand, the urban land and production infrastructure, and distribution networks. We find that although local demand is essential for helping food makers get their start, it is insufficient for helping them navigate the opportunities and challenges of scaling up. The role of supply chain intermediaries – both backward to procurement of food inputs, and downstream to food retailers – is especially important among food-related makers as they move from micro-scale, artisanal production methods toward more standardized methods. We conclude that efforts in many cities to promote food-related entrepreneurship through food incubators, microenterprise finance, and local farmers markets are helpful but unlikely to yield significant economic development benefits unless they are linked to supports down the line as makers attempt to scale and grow into food manufacturers.

References

Key Words:
maker movement, urban manufacturing, entrepreneurship, food economy, local economic development

WHICH CHINESE CITIES ARE MORE INCLUSIVE, AND WHY?

Abstract ID: 691
Individual Paper Submission

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Urbanization has driven economic growth in China and other developing countries, but not every urban dweller enjoys the benefits of growth equitably. In the U.S., large cities tend to have greater income inequality than the rest of the nation, and such widening socioeconomic gaps within cities may lead to social tension and hamper urban economic growth (Holmes, 2015; Shah et al., 2015). Concerned with the negative social consequences of the rising inequality in cities, an inclusive development agenda emphasizing a broader coverage of growth beneficiaries has been brought to the policy agenda (e.g., Ianchovichina & Lundstrom, 2009; UN Habitat, 2015). Nevertheless, the current literature has yet to
define or measure urban inclusiveness beyond Florida’s (2014) concept of tolerance, the open attitude toward cultural diversity.

China has been undergoing the largest wave of urbanization in human history. The unequal sharing of growth benefits in China’s cities is exacerbated by the discrimination against migrants based on household registration or Hukou. Chinese local governments use Hukou as a tool to define access to local public services such as social insurance benefits and public education, and many migrants are denied of these benefits due to their nonlocal Hukou. The discrimination and marginalization of urban migrants have led to a persistent socioeconomic gap between urban native residents and migrants. Such institutional barriers to the equal access to basic public service contribute to exclusive instead of inclusive urbanization in China’s cities.

This study examines urban inclusiveness disparities in the Chinese context and investigates its potential causes. We hypothesize that cities with strong fiscal capacity are more inclusive towards migrant and that cities that are economically and culturally open are more inclusive towards migrants. We apply factor analysis to construct inclusiveness index for over 200 Chinese cities using data on urban migrant labor’s coverage of social insurance benefits in the National Migration Survey. We use the share of industrial output that utilizes non-domestic fund to measure economic openness and use a city’s historical exposure to nonlocal culture to measure cultural openness. Results indicate that significant disparities in the provision of local public service to migrants exist in Chinese cities with similar levels of economic productivity and natural amenities. Cities with high local fiscal capacity are more inclusive towards urban migrant. Economic openness and cultural openness are positively associated with urban inclusiveness.

As an early empirical study of inclusive cities in China, this study contributes to the understanding of the factors making a city more inclusive towards newcomers. It also informs China’s current policy reforms aiming at liberalizing the location choices of labor and households for equitable and sustained economic growth.

References

Key Words:
inclusive cities, urban migrant, local public service, Hukou, China

LOW PAY AND LONG COMMUTES? THE IMPORTANCE OF PROXIMITY IN LOW-WAGE LABOR MARKETS
Abstract ID: 693
Individual Paper Submission
The suburbanization of jobs has shifted economic opportunity, creating a spatial mismatch between low-wage workers residing in central cities and appropriately skilled jobs (Kain, 1992). Research suggests that low earners are more likely than high earners to work close to where they live (Andersson, Holzer, & Lane, 2005) and that physical proximity to employment can improve employment outcomes for low-income and minority workers. In response, planners and policy makers have long sought to promote the construction of affordable housing near urban and suburban job centers. (Cervero, 1989). The concept of a jobs-housing balance or, more recently, ‘jobs-housing fit’ describes the extent to which the character and affordability of housing units in an area are well matched to the quality of locally available jobs. As commute distances increase for all workers (Kneebone & Holmes, 2015), placing low-cost housing in proximity to places where demand for less skilled workers is high continues to be a significant element of local-level affordable housing and anti-poverty strategies.

Research by Nelson, Wolf-Powers, & Fisch (2015) on recent changes in commuting patterns in the New Orleans metropolitan area, however, challenges conventional thinking on the importance of job proximity for low-wage workers. Their findings indicate that many low-wage earners in metro New Orleans work in jobs far from where they live even when they reside in close proximity to concentrations of jobs that would require shorter commutes. This finding problematizes the assumption that physical proximity to appropriate jobs conditions low-wage workers’ job-seeking behavior, and raises a number of policy-relevant questions about the relationship between residential location and job match for these workers.

This research examines the commuting patterns of low earners in four metropolitan regions: Albuquerque, NM; Atlanta, GA; New Orleans, LA; and Philadelphia, PA. The study regions were selected based upon Kneebone and Holmes’ (2015) examination of commute distances in the 96 largest metropolitan regions. One region was selected from each of the commute distance quartiles.

Utilizing data from the the Longitudinal Employer-Household Dynamics (LEHD) Origin Destination Employment Statistics (LODES) for 2014, this research will answer three questions:

- To what extent do the commute distances of low-, middle- and high-wage earners differ in each region?
- How do employment centers containing high proportions of low-wage jobs in each region differ in terms of industry mix, commuting flows and proximity to public transportation networks and affordable housing options, as compared with employment centers containing more middle- and high-wage jobs?
- What are the policy implications of these findings for practitioners whose goal is to improve the economic conditions and social mobility of low-wage earners?

Findings will enable us to determine whether conditions in low-wage labor markets other than those in New Orleans depart from what is assumed by policymakers concerned with “jobs-housing balance” and “jobs-housing fit” and (if so) begin developing theories about what might explain this “leap-frogging” pattern.
REFERENCES


KEY WORDS:
low-wage labor markets, commuting patterns, jobs-housing fit

DISPARITIES AND DIVIDED GROWTH: ETHNIC ENTREPRENEURSHIP IN GREATER LOS ANGELES AREA
Abstract ID: 703
Individual Paper Submission

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Ethnic minority owned enterprises have boomed significantly over the past several decades in the United States. However, the rate of ethnic minority business ownership is significantly lower than white business ownership; ethnic minority owned businesses are smaller in size and have a lower survival rate; furthermore, non-white businesses are highly concentrated in low-skilled industrial sectors (Bates, 2011; Fairlie and Robb, 2008). This study examines ethnic entrepreneurship in the Greater Los Angeles Area in addressing two questions: How do ethnic groups differ in entrepreneurship and business ownership? What are the factors associated with the difference in business ownership across ethnic groups?

Using the American Community Survey 2011-2015, this study employs a multilevel research design to examine business ownership across ethnic groups. It finds that disparities remain significant over the past several decades across ethnic groups in business ownership and the rate of business incorporation. With continuous economic restructuring nationwide and globally, industrial distribution of businesses across ethnic groups has shifted as well in the study area. However, a divide between white and non-white businesses has long sustained with white owned businesses concentrated in high-end industrial sectors and non-white owned business in sectors with low-barriers to entry. In addition to individual person and household characteristics, the overall entrepreneurial environment, availability of ethnic communities, ethnic concentration in particular niche sectors, and ethnic diversity in local areas are all related to business ownership and disparities across ethnic groups.

The current study directly addresses the disparities in entrepreneurship across race, ethnicity, and place, and thus, contribute to understanding the diverse and fluid nature of entrepreneurial process (Welter et al., 2016). As institutional theories have long argued the role of “context” and “environment,” this study brings place and local community to the forefront of ethnic entrepreneurship studies. It argues that geographic contexts not only provide entrepreneurship a social, economic, political, cultural, and
regulatory milieu, but also forge into the process through which ethnic entrepreneurs creatively mobilize and capitalize entrepreneurial resources in the business adventures (Davidsson, 2015; Welter, 2011).

The findings have significant implications for practice and policy making. First, as “entrepreneurship” becomes the key component for economic development and revitalization in many U.S. cities, ethnic minority labor force may not benefit from the initiatives and programs related to entrepreneurship promotion, due to sustaining differences between whites and ethnic minorities. Particular efforts have to target minority labor force who have long lagged behind in entrepreneurship activities. Second, the long-term practice of entrepreneurship promotion has been mainly focused on high-technology and “mainstream” activities. As ethnic minority labor force have remained segmented from majority whites for many decades, such a narrowly defined concept of entrepreneurship may lose the perspectives and opportunities that are most relevant to minority labor force across social groups (such as race, ethnicity, gender, and class). Third, different from most existing studies, findings here suggest that both spatial concentration and industrial segmentation matter in ethnic minority entrepreneurship; further, spatial concentration goes beyond “residential segregation” only. That is, both tangible and intangible resources are bounded with spatially clustered people and firms, especially for ethnic minorities. Results from this study suggest that place and race/ethnicity are actually rooted within each other in ethnic entrepreneurial process and often constructed through the attribution of a range of other social characteristics (Bates 2006; Porter 1995). Public policies in community development through ethnic entrepreneurship should take the interactive approach, being both place-specific and ethnic-group-specific.

References

Key Words:
Ethnic entrepreneurship, social capital, institution, community, inequality

EXPLAINING INCENTIVE ADOPTION: POST-CRISIS ECONOMIC DEVELOPMENT “REGIMES” IN THE MIDWEST
Abstract ID: 704
Individual Paper Submission

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Offering incentives to businesses is one of the oldest and most dominant activities within the practice of economic development, as well as one of the most controversial (LeRoy 2005). Although the
circumstances in which incentives contribute positively to the economic well-being of local communities remain unclear, substantial variation in the use of incentives suggests the existence of different “regimes” or constellations of actors, practices, and approaches to the challenges of growing and diversifying the local economic base (Reese and Rosenfeld 2001). Our research examines the municipal use of incentives in the 2010s to identify these regimes, reveal how practices associated with economic development have changed, and ascertain whether municipalities are still as committed to using discretionary funds and tax expenditures to address their economic challenges.

From the perspective of public sector entities offering incentives, we explore how variation in fiscal situations is related to taxation, spending, and incentive regimes. We posit that the ability and desire of local governments to offer incentives relates to the diversity of revenue sources that it can tap to pay for expenditures as well as the other claims on those revenues. A municipality’s fiscal and political structure influences the degree to which it relies on incentives as an economic development tool, as opposed to other strategies like infrastructure provisioning and tax policy. The variation also reflects different capacities and adaptive responses to the economic and fiscal conditions created by the Great Recession (Warner and Zheng 2013). Some states and municipalities pulled back on their use of economic development incentives after the crisis; others rolled out new instruments to attempt to retain or lure businesses.

We utilize a uniquely constructed dataset combining incentive information (for tax increment financing districts and abatements) with socio-economic, geographic, and fiscal characteristics for all municipalities in the largest Metropolitan Statistical Areas of Illinois, Wisconsin, and Michigan. These states share similar historical conditions and settings such as a heavy manufacturing legacy and slowly growing populations. All three states recently elected conservative Republican governors who, despite shared party affiliation, have taken very different approaches to economic development. Michigan, for example, has eliminated some of its largest tax breaks while reducing its corporate income tax rates, whereas Wisconsin has established new firm-specific exemption and abatement programs.

Our methods include descriptive correlations and causal (regression) models to test hypotheses about whether and to what extent fiscal structure, entrepreneurial activity, and economic health influence incentive use. Some specific questions we raise include: What fiscal circumstances spur the adoption of incentive programs? For example, do states and localities offer incentives as relief from relatively heavy tax burdens? Do the types of incentives offered relate to the revenue structure and fiscal well-being of government entities? Do municipalities that rely heavily on property taxes offer more property-tax based incentives (e.g., abatements and tax increment financing)? We seek to test whether more entrepreneurial municipalities use more incentives or use them more frequently than other local governments. Based on the literature, we see reliance on credit, competition with neighboring municipalities, and cuts to social spending as reflecting the degree of entrepreneurial activity (Sbragia 1996; Ward 2010).

References


Key Words:
economic development incentives, subsidies, municipal fiscal condition, infrastructure, entrepreneurialism

RETAILERS AND STATION TYPES: GEOGRAPHICALLY WEIGHTED REGRESSION IDENTIFICATION OF STATION TYPES NEAR RAPID TRANSIT IN LOS ANGELES
Abstract ID: 705
Individual Paper Submission

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Retail location choice impacts cities as it affects sales and property tax revenue, creates employment and tourist activity, changes traffic patterns, and influences office and residential choice locations. Meanwhile, retailers look for profitable locations that are likely to have and draw many clients. Also, in efforts to decrease congestion and improve sustainability, cities have made increased efforts to expand their fixed transit systems: both rail and bus rapid transit. Cities frequently encourage higher density mixed use development, providing new retail opportunities for retailers.

To determine effects of transit systems on city form, most studies focus on the impact on residential and, to a less extent, commercial rents. Some studies have also measured the amount of new construction in the area (Ratner and Goetz, 2013). They have generally found that certain types of stations are more likely to see impacts, and make classifications, such as downtown, high-density residential, and low-income. (Atkinson-Palombo and Kuby, 2011; Bollinger and Ihlandfeldt, 1997; Ratner and Goetz, 2013). This should similarly affect retail choice and density.

Most past studies determine the relationship between the location choice and the decision-making factors using a set of fixed estimated coefficients in an ordinary regression model. This approach neglects the possibility of spatially varying explanatory effects on location choices. As compared to the ordinary regression models, geographically weighted regression (GWR) models allow us to identify if relationships in a regression model vary in geographical space (Brunsdon et al., 1996). For instance, built environment variables may have varying influences at different stations. Identified counter relationships between retail location choice and explanatory factors across the stations will help identify the different station types.

We conducted a field survey of 27 randomly selected fixed transit stations in Los Angeles from June 2014 to June 2015 to identify 8,417 sites of retail use and other users of retail space. GIS was used to determine distances to highways and transit stops and to create a grid to subdivide the ½ mile radius data into smaller neighborhoods and associate them with the Census tracts. Socioeconomic data is from the American Community Survey. Transit ridership and arterial traffic volumes are from the Los Angeles Metropolitan Transit Agency and Los Angeles Department of Transportation. A GWR model accounting for built-environment effects, location effects, and socioeconomic characteristics will help determine retail patterns. This modeling approach will provide an insight into the importance of standard factors of retail location choice and add how stations types affect these choices. Understanding the important factors will allow developers and planners to understand factors influencing retailers, informing future zoning decisions, and help identify areas subject to retail change.

References


Key Words:
GWR, Location Choice, Rapid Transit, Retail Location

THE LOCATION DECISIONS OF REMOTE WORKERS
Abstract ID: 776
Pre-Organized Session: Recent Trends in the Geography of Innovation and Entrepreneurship

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Household location decisions under traditional neoclassical models of urban and regional development are understood to be based on a set of tradeoffs between access (distance) to employment and quality of life factors such as residential amenities (Alonso 1964). There is an inherent locational requirement for the household to be located in proximity to a central office location, a market, or customer base to complete work activities. The rise of informationalism and rapid advancements in information and communication technologies (ICTs) have had profound impacts not only on the structure of economic activity but also on the nature and location of the workplace (Castells 2001; Bakely 2001) coinciding with demands for greater flexibility in the global information and innovation economy (Carnoy et al 1997).

Work activities for many occupations, particularly those that are information intensive, can now be done entirely distributed from a centralized location using ICTs and are often based at home. Under the neoclassical model, this suggests that household location decisions of the remote worker can be based solely on residential amenity and quality of life factors without the need to consider physical access to a work location. There is a large body of related scholarship centered on the concept of telework and home-based work that has focused primarily on the implications of ICT substitution for commuting patterns and residential location decisions (e.g. Helling and Mokhtarian 2001). Yet, there is a much more limited emphasis on workers that are entirely location independent of a place of work and the implications for regional economic development and place attraction. This research seeks to address the following questions:

- What are the socio-economic characteristics of remote workers?
- What factors drive the migration and location decisions of remote workers?
- How does quality of life and place-based attributes influence the location decisions of remote workers?

To shed light on these questions, this paper uses data collected from a web-based survey of remote workers administered in 2016 and a series of semi-structured interviews with remote workers completed
in 2016 and 2017. We use a conceptual definition of remote work based on four dimensions proposed by Garrett and Danziger (2007): location, time, technology mediation, and contractual agreement. The findings of this research will contribute to planning scholarship and practice concerned with evolving locationally flexible modes of work and the implications for regions, labor markets, and economic development.

Remote work has a number of potential important implications for rural and small and mid-sized urban regions that lack the dense economic opportunities provided by large metropolitan areas. These implications extend to the firm’s access to remote talent as well.

References


Key Words:
remote work, quality of life, telework, location decisions, economic development

WHAT KINDS OF JOBS DO ENTREPRENEURIAL HIGH GROWTH FIRMS CREATE?: LINKING THE EMPLOYMENT GROWTH AND JOB QUALITY USING THE CASE OF INCHEON

Abstract ID: 777
Pre-Organized Session: Recent Trends in the Geography of Innovation and Entrepreneurship

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This paper investigates the quality of jobs created by high growth firms using a matched employer-employee dataset for the City of Incheon, South Korea during the period of 2007-2016. While high growth firms(HGFs) have been one of central policy interests for their remarkable ability to create new jobs, little is known about what type of jobs they create and under what circumstances. What if a group of HGFs, measured by the rate of employment growth over a certain period of time, display persistently declining sales growth during the same period? What do these mismatching indicators tell us about the types and qualities of jobs created by them?? What if a group of HGFs, measured by the rate of sales growth, create many jobs but they are mostly low paying position? Who are jobs takers and how long do they stay in those positions? These are imperative questions for the realm of economic development given the dominant influence of HGFs in employment growth. However, these far more complex dynamics nested in the nexus of 'firm growth-employment growth-job quality' are concealed in the macro-scale approaches and aggregate figures adopted by existing studies on HGFs. The underlying
reasons might include the lack of firm specific data matched with data on individual employees and the disproportionate emphasis placed on the job growth over job quality.

In order to bridge the chasm in the literature, this paper builds a matched employer-employee dataset by combining entrepreneurial firm data (Korea Enterprise Data(KED)) and the Ministry of Employment and Labor's Employment Insurance Data(EID). KED contains various firm characteristics while EDI provides variables that allow identifying the quality of jobs such as the employment relationship, employment duration, wage level, occupations, job loss experiences, and the reasons for job loss. To correct the endogeneity stemming from measuring HGFs by the rate of employment growth, the sale growth is used to define HGFs in this paper. Then, according to the quantitative and qualitative outcomes of employment, HGFs are characterized into four different categories including 1) high number-high quality jobs, 2) high number-low quality jobs, 3) low number-high quality jobs, and 4) low number-low quality jobs. Then, these diverse employment outcomes are linked back to characteristics of firms such as age, size, industry, type of organizational structure, R&D intensity and internal human resource practices.

The analyses results will inform us under what circumstance (or under which firm characters) more good jobs are being created which again will be useful for local and regional policy makers in providing better and more relevant support for appropriate types of businesses and balancing the number of jobs and job qualities.

References

Key Words:
High growth firms, Employment growth, Job quality, Local and regional labor market

GROWING LOCAL BUSINESS: AN ANALYSIS OF SPINOFF ACTIVITY IN BURLINGTON, VERMONT
Abstract ID: 778
Pre-Organized Session: Recent Trends in the Geography of Innovation and Entrepreneurship
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New business activity is a source of jobs (Birch, 1987) and regional diversity (Jacobs, 1969). Spinoffs of existing firms are one source of new business activity (Klepper and Sleeper, 2005) and are defined as firms founded by former employees of local firms, government entities, or scientific laboratories. Given the importance of new firms to regional vitality, this paper will examine spinoff activity in the Burlington, Vermont metropolitan area. This metropolitan area is located on the shores of Lake Champlain and has evolved over time into railway freight and petroleum refining and shipping (CEDO, 2016). This community is perhaps most famous for the Ben and Jerry’s ice cream brand and several famous U.S. based companies including Seventh Generation sustainable cleaning products.
The methodology for analyzing spinoff activity involves identifying existing businesses from which spinoffs are likely and then surveying these businesses or using social media scraping to identify spinoff activity. Existing businesses are identified by compiling information about major employers in the metropolitan area from economic development organizations and the National Establishment Time Series Database (NETs) which is a Dun and Brad Street-based list of all establishments in the metropolitan area. From this business list, a combination of firm surveys and social media research are used to identify spinoffs and cross-reference information about the start date of new firms, industry membership, and founder names. This list of spinoffs is then merged with information about existing businesses to construct a database of parent firms and their spinoffs.

To analyze these data, the number of spinoffs from existing (parent) firms will be analyzed to understand the firms producing the most spinoff activity. Temporal trends will be analyzed to understand the extent that macroeconomic trends and/or local policy initiatives contribute to spinoff activity. Industrial trends will also be analyzed to understand the industries producing and not producing spinoff activity. This analysis will answer three research questions:

1. What are temporal trends in spinoff activity?
2. Are temporal trends associated with macroeconomic and/or local policy initiatives?
3. What are industrial trends in spinoff activity?

Expected findings from this analysis are clusters of spinoff activity in core industry competencies for Burlington which include energy, craft food and beverage, and environmentally friendly products. However, it is also expected that spinoffs will occur in industries that are not core competencies of the metropolitan area. This unexpected industry information, and the information about temporal trends, will provide valuable information to economic development practitioners in Burlington, Vermont who are responsible for fostering new business activity. The temporal information in particular will inform entities responsible for developing economic development policies about the efficacy of existing policies in fostering new business activity.

References

Key Words:
entrepreneurship, new businesses, spinoffs, industrial diversity

INFORMED INDUSTRY TARGETING: GROW CLUSTERS FOR INNOVATING INDUSTRIES AT OPTIMAL SIZES
Abstract ID: 779
Pre-Organized Session: Recent Trends in the Geography of Innovation and Entrepreneurship

FANG, Kerry [University of Maryland] kfang@umd.edu, presenting author
Research question: This paper answers a relevant question for researchers and policy makers: which industries and which geographical scopes would be optimal for targeting with cluster-oriented policies?

Background: Recently, economic developers have recognized the role of clusters—geographical concentrations of related industries—in elevating innovation (Feser, Renski, and Goldstein, 2008). The U.S. Department of Commerce has invested millions of dollars to encourage innovation through clusters in high-tech, biochemistry or energy-related industries in relatively large geographical regions, such as a over 200-acre industrial park. Naturally, a question emerges: Do these cluster-oriented policies indeed encourage innovation? If yes, are they optimal in terms of industry and geography choices? These are questions that researchers and economic developers would want answered.

Methodology: This paper answers these two questions with unique datasets and advanced methods. It employs a unique restricted version of the plant-level dataset from the Quarterly Census of Employment and Wages for the state of Maryland from 2004 to 2013, and matches it with the patent application and citation data from the United States Patent and Trademark Office.

This paper is the first 1) to estimate and compare the effects of clusters on patenting activities across a wide range of industrial clusters based on six-digit NAICS industries defined by the Harvard cluster mapping project (Delgado, Porter, and Stern, 2014), 2) to rank industries by the magnitude of the cluster effect, and 3) to identify industry-specific optimal geographical scope of clusters which maximizes the effect on innovation. These goals are achieved with a continuous quantile analysis method developed by Combes, et al. (2012), ArcGIS python programming, spatial analysis and the Newton optimization method.

Findings: I have obtained the effects of clusters on patent filings for half of the six-digit NAICS industries, and upon the completion of the other half of the analysis and the spatial analysis, I expect to obtain the following final results: 1) a ranking of six-digit NAICS industries by the number of patents induced by clustering, and 2) the optimal geographical cluster size associated with each industry to maximize patent production.

Relevance: This paper can help practitioners to perform knowledgeable industry targeting and design efficient industrial policies. They can grow clusters in the most innovative-prone industries at optimal geographical sizes.

References

Key Words:
Cluster, Innovation, Industry, Geographical scope

OCCUPATIONAL SKILL DEMAND AND REGIONAL WELLBEING
Abstract ID: 804
Individual Paper Submission
Pursuit of science, technology, engineering, and math (STEM) degrees has moved from one of personal interest or professional ambition to a matter of economic imperative and public priority. The policy assumption is clear: Economies benefit from more scientists making discoveries, engineers solving problems, and computer experts programming solutions. Despite the certainty evinced by widespread federal, state, and local policies supporting STEM education, does research endorse this policy goal? There is only limited research demonstrating that a greater supply of STEM-degreed workers brings about the expected public gains for regional economies. The broad support for policies to increase the supply of STEM degrees within a region obscures complexities and disregards contradictions. Beyond degrees, what can regional economies do to develop and enhance a workforce that meets the needs of 21st-century organizations? Does an increase in college-degreed workers actually improve the regional economy? This research explores an indicator of regional human capital based on occupational knowledge, skill, and ability requirements found in the Occupational Information Network (O*NET) database. This research demonstrates how the distribution of occupational STEM requirements, as well as “soft skill” competencies, can be measured at the regional level of analysis and explores the effects of different human capital distributions on five measures of regional economic wellbeing. Results indicate that STEM degrees are not the lone path to regional economic vitality.

References

Key Words:
Human Capital, STEM, Workforce, Public Policy

ECONOMIC RESILIENCE IN GREAT LAKES REGION A DECADE AFTER THE GREAT RECESSION: A COMPARATIVE STUDY OF ECONOMIC RECOVERY PATHWAYS OF EIGHT CITIES IN THE REGION
Abstract ID: 847
Individual Paper Submission

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Abstract:
Cities of the Great Lakes region of the U.S. (GLR) have been living through decades of economic transformations, as employment in high-paying manufacturing industries has vanished, mainly, but not uniquely, because of technological changes (Hicks, 2015). The Great Recession (GR) of 2007/2009 has introduced a further negative shock to these cities, steepening their economic and demographic decline (Pendal et al, 2017). Different cities in the GLR showed different pathways to recovery after the GR, in terms of gains in employment and population. Ten years after the beginning of the GR, there is an opportunity to analyze how some of the major centers in the GLR have fared in their recovery process, and especially whether they transitioned towards a service-based economy.

In this paper, we aim to track the economic resilience/transformation of case study cities after the GR by investigating the ex-ante and ex-post composition of their labor markets and population. We adopt a comparative approach to investigate the economic recovery pathways of eight major cities in the GLR, which are identified as peer cities in terms of their general economic outlook (PCIT, 2017). We categorized these cities into two groups: the first group contains Detroit, Cleveland, Buffalo and Pittsburg and is characterized by steep demographic decline in the period 2000-2015. The second group contains Green Bay, Minneapolis, Fort Wayne and Peoria, i.e. cities where the population has been rising during the same period. We also present a comparison between these two groups and the capital cities of the GLR.

The methodology of this study includes a comparative analysis of the economic profile of the Metropolitan Statistical Area of these cities. Data for the descriptive analysis were retrieved from the Economic Modelling Specialist International (EMSI) dataset. We examine economic indicators such as employment and unemployment in each industry, earnings, and Gross regional product with a focus on the economic shock during 2007-2009 and its effects on the employment shift and the percentage population change in these cities. We focused on 7 manufacturing clusters that were identified as “Emerging opportunity clusters” for the Great Lakes region (Ketels 2015), as well as some service clusters health, education, tourism and transportation. Our preliminary results indicate an employment shift from manufacturing to service oriented clusters. Further, more resilient cities were faster in establishing a presence within selected regional clusters, and serving more attractive market segments than their peer cities. Finally, the economic diversity, availability of skilled labor and the institutional capacity had been important factors for adaptive resilience of the cities.

Our work contributes to the broader research in economic planning and transition research through the adoption of a peer-based, comparative approach. We provide a useful understanding of how cities and broader urban regions can be more inclusive and how they can learn from their peer cities.

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Coping with Adversity addresses the question of why some metropolitan area regional economies are resilient in the face of economic shocks and chronic distress while others are not. It is particularly concerned with what public policies make a difference in whether a region is resilient. To answer these questions it employs a wide range of techniques to examine the experience of all metropolitan area economies from 1978-2014.

In addition, Coping with Adversity looks more closely at six American metropolitan areas by conducting case studies to determine what strategies were employed, which of these contributed to regional economic resilience and which did not. Three of the regions studied are cases of economic resilience: Charlotte, NC, Seattle, WA, and Grand Forks, ND. Three are cases of economic nonresilience: Cleveland, OH, Hartford, CT, and Detroit, MI. In addition to containing hard data on employment, production, and demographics, each case contains material on public policies and actions that were obtained from site visits and interviews.

The authors conclude that there is little that can be done in the short-term to counter economic shocks; most regions simply rebound naturally after a relatively short period of time. However, they do find that many regions have successfully emerged from periods of prolonged economic distress and that there are policies that can be applied to help them do so. Coping with Adversity will be important reading for all those concerned with local and regional economic development, including public officials, urban planners, and economic developers.

References


Key Words:
Economic adversity, Economic shock, Economic resilience, Chronic economic distress, Path dependence
Abstract ID: 879
Roundtable

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Economic development planning stands at a critical juncture. Our discipline is well poised to shape national and regional policy debate over critical questions related to economic transformation, inclusion, equity and environment—concerns magnified in the wake of the Trump election. Yet, as a planning subfield, economic development is losing ground, marginalized in comparison to others that focus on the urban built environment, and with mainstream practice stubbornly oriented towards business recruitment and deal-making. Intellectually, we are fragmented as the seminal debates of the past about deindustrialization and urban restructuring have given way to narrower, more siloed and weakly connected empirical scholarship on industry clusters, innovation systems, workforce development, the cultural economy, entrepreneurship and so forth. Critical debates have moved to other disciplinary venues, especially those willing to draw clearer connections between race, class, economic opportunity and political power. Our sense of a collective intellectual project and vision as economic development planning scholars is threatened as a result.

The new Trump administration has demonstrated little interest in the potentially beneficial role of research-informed government intervention in local and regional economies. Without question, the President’s proposed destructive and divisive actions necessitates new thinking and a renewed emphasis on engaged scholarship and theory building. Economic development planners need to reassert the relevance of our planning subfield and enliven its practice utilizing new analytics and considered understanding of the challenges facing our nation’s communities. Proposed budget cuts for key Federal economic agencies and a related retreat of Federal domestic policy leadership reinforces the importance of state and local support, coordination and agency—all areas that insightful, targeted scholarship can inform.

Trump’s surprising victory serves as a pivotal moment for collective reflection on our future responsibilities as economic development scholars. As a field, we have the potential to address critical policy questions related to: how (and whether) to remedy income, wealth and racial inequality; how to build new opportunity through tempering the labor market impacts of “disruptive” technologies; how to shore up American manufacturing in ways that recognize and reward the innovative contribution of frontline, “blue-collar” workers; how to counter the rise of contingent and precarious work; and how to foster a dynamic, low-carbon and job-creating economy that stems climate change. In this moment of growing economic and political uncertainty, economic development planners and scholars can offer critical insight, collective leadership and data-driven analysis to confront the coming era of economic change.

The goal of this panel is to start honest dialogue about our future role and influence as economic development scholars. Named panelists—drawing across generations and sub-specializations—will help open this conversational space, offering brief opening remarks. But we envision this as a participatory
process—a roundcircle, rather than roundtable—in which all attendees are given an opportunity to reflect on and draw out common challenges and concerns that affect our field of practice around which to motivate collaboration, organize future research and shape public debate.

References

Key Words:
Economic Development, Equity, Climate Change, Planning Relevance

CAN FIXED GUIDEWAY TRANSIT ENHANCE NEW FIRM SURVIVAL? – EVIDENCE FROM EFFECTS OF LIGHT RAIL TRANSIT ON NEW FIRM SURVIVAL OVER TIME
Abstract ID: 950
Individual Paper Submission

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Adopted from psychology and ecology, the concept and operationalization framework of resilience have been widely accepted by planners for use in a variety of contexts such as recovering from natural shocks to bouncing back from urban decline or economic recession (Martin and Sunley 2015). As a dynamic process, resilience in urban economics allows a regional or local economy to resist the shock and return back to the previous normal condition, but sometimes leads to a different economic phase. During these dynamics process, new firms tend to be vulnerable in response to economic recessions and struggle to be adaptive to these changes (Latham 2009). Under these conditions, having good access to public transit services at both local and regional levels provide new firms with opportunities to maintain the connection with their customers or existing firms, which in turn allows them to survive under the economic recessions or urban decline. In the recent literature, a few studies have attempted to examine the role of public transit on the economic efficiency of urban areas and productivity of businesses (Drennan and Brecher 2012). Nevertheless, the role of public transit investment in new firms’ survival rate has not been examined so far.

As one of the pilot interdisciplinary studies between urban economics and transportation planning, this study focuses on developing the methodological framework of measuring economic resilience in terms of the dynamic process of firm births and deaths within areas, and understanding characteristics of change in firm resilience along fixed guideway transit routes – especially measuring the role of light rail
transit (LRT) on new firm survival over time. To achieve the goal, this study uses the annual InfoGroup Business data from 2000 and 2010. The InfoGroup Business data contains detailed firm information such as the year when a firm appeared in the database, industrial sectors, and its geographical location. By calculating the survival times of new firms established before and after presence of LRT services, this study hypothesizes that economic resilience can be identified by analyzing the degree of firm resilience – that is, how well firms weathered and bounced back from the Great Recession – and further hypothesizes that firms located near fixed guideway transit stations tend to be more resilient than firms without access to fixed guideway transit stations because their customer base and labor pool have better access to them. By using the Kaplan-Meier survival analysis method, the results of this study suggests that more new firms in the year 2000 falling within a 0.5-mile buffer of the nearest LRT station survived than new firms without access to the LRT station. Also, in case of existing firms, existing firms located near the LRT stations experienced firm death less severe than those without the LRT stations. In terms of industrial sectors of new and existing firms, wholesale, retail, and technology firms tend to have stronger survival rate and time than other industrial sectors such as manufacturing, utilities, etc. From these results, this study contributes to the current discussion of economic resilience as well as suggests a quantifying approach to measure the degree of new firms’ survival over time and identify positive effects of fixed-guideway transit on new and existing firms’ survival during the economic recession or a period of urban decline.

References

Key Words:
Firm survival, Light rail transit, Economic resilience, New firm growth

WARNING SIGNS OF ECONOMIC DECLINE: WHAT FLINT, LOWELL, & PITTSBURGH CAN TEACH THE NEXT GENERATION--1960-2015
Abstract ID: 999
Individual Paper Submission

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This paper analyzes the history and current status of three American cities that had the highest unemployment in January 1961. Initially considered to be sporadic or temporary, the job losses were in communities whose fortunes had long been associated with manufacturing, textiles, and steel. The three individual cases and cross-site analysis show the confluence of forces—technology, social, environmental, and political—that precipitated the decline of labor-intensive sectors generally. The paper focuses on the role that local and regional public-private partnerships had in bolstering or thwarting revitalization efforts. The historic and longitudinal perspectives provide an important
contextual framework for more accurately assessing the current policy debates around job loss, outsourcing of jobs, and trade policy.

After World War Two, the run-ups of the War economy created unemployment downturns that in many cases were temporary, structural shifts. But in other places, the post-war period mirrored the pre-War decline in demand for goods produced and lack of integration of new technologies. In the decade after the end of World War II (1945 to 1955), the Gross National Product increased by almost 175 million (67 percent) and non-agricultural employment gained 29 percent. Despite significant efforts in some places, neither the localities nor the federal government wanted to accept the condition as permanent or national in scope. These “depressed” communities were left with a willing workforce without work. What began as a descriptive decline—loss of populations and jobs—was evolving to a functional decline—the ability of a city or metro area to perform its social functions. The three cities profiled in this paper had staggered but consistent decline.

These cities and this paper highlight the importance of local economic development policies built on clear-eyed realism, creative place making, and fundamental quality of life investments. As the nation turns its attention to the “re-shoring of jobs and sectors in traditional manufacturing, extraction, and labor-intensive assembly, this paper provides an important longitudinal perspective that can inform contemporary practice and current policy.

Three fundamental questions drive this research. First, why did structural economic change occur in these 17 cities and when? Second, what local, regional, and national policies or investments had the most significant and sustainable impact? And third, what role did public-private economic development groups play in the recognition of changes, the launch of public-private ventures, and the long-term economic vitality?

Using a mixed methods approach, individual and cross-site narratives have been developed on a series of local interviews as well as city data from the U.S. Census 1960-2010, Department of Labor Bureau of Employment Security reports beginning in 1953, and corporate and local economic development archives. These profiles analyze the booms and busts that disguised the shifting of the American economy, and particularly in these cities, that shielded policymakers and the public from the collective impact of post-industrial decline.

References


Key Words:

economic distress, post-industrial, economic resilience, quality of life, public-private partnerships
Both the arts and historic preservation have been at the forefront of gentrification debates for decades. Artists are often portrayed as the “urban pioneers” who initially catalyze neighborhood upgrading that ultimately leads to gentrification. At the same time, preservation of historic neighborhoods has longstanding perceptual ties to gentrification, supported by a relatively large body of literature demonstrating improvements to property values in the wake of preservation. Yet, the nexus of arts and preservation remains relatively understudied, particularly within the context of neighborhood revitalization in declining city contexts. This research begins to fill this gap through a qualitative case study of Cleveland’s Detroit Shoreway Community Development Organization (DSCDO).

In 1973, residents in Cleveland’s Detroit Shoreway neighborhood formed DSCDO, with the goal of stabilizing the neighborhood. The organization’s early leaders embraced historic preservation as the primary means of saving the neighborhood’s commercial core – one of the city’s few mixed-use corridors that remained intact by the 1970s. Over its nearly 45-year history, DSCDO has evolved into a high-capacity community development organization that expertly blends the arts and historic preservation, epitomized in 2007 by the formal creation of the Gordon Square Arts District. Today, DSCDO broadly focuses on neighborhood improvement through youth programming, safety initiatives, code enforcement, housing assistance programs, and commercial revitalization efforts in its signature Gordon Square Arts District. Despite Cleveland’s continued population decline, Detroit Shoreway is nationally recognized as a neighborhood on the upswing and questions remain about the possibility and impacts of gentrification within the context of severe urban decline.

This paper uses the case of DSCDO to ask: How do the arts and preservation intersect as neighborhood revitalization strategies? How do local leaders plan for success (gentrification) in revitalization? Is there a possibility of an arts/preservation/equity nexus? And, if so, how might this reframe approaches to neighborhood economic development?

Our findings show that this arts/preservation intersection exists. However, this nexus is murky and complex particularly around affordable housing priorities and targeted economic development audiences. While the DSCDO promotes “the alleviation of poverty and social justice” as one of its core values, there are open questions about the extent to which the organization embeds equity concerns within its arts/preservation strategy. This research provides greater insight into the opportunities and challenges of aligning different organizational priorities for achieving equitable economic development.

References

PLACING ARTISTS IN THE CREATIVE CITY: HOW ARTISTS LIVE AND WORK IN RICHMOND AND PHILADELPHIA

Abstract ID: 1045
Pre-Organized Session: The Hidden Politics of Arts, Placemaking and Preservation

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Scholars and policy-makers have long recognized the role of artists in processes of urban change such as urban revitalization and gentrification (Zukin, 1989; Ley, 2003; Cameron and Coaffee, 2005). Scholarship on the “creative economy” and “creative class”, coming from a variety of perspectives, has focused on how policy can support creative workers and provide a boost to local economic development (Florida, 2005, 2014; Markusen and King, 2003). Yet, policies informed by this scholarship aim to foster artistic and cultural spaces that valorize culture as a consumer good, and thereby privilege highly-educated and high-earning workers. This policy paradigm encourages a cycle of development that may displace low-income people, including artists in those communities (Cole, 1987; Martin, 2014; Susan Seifert & Mark Stern, 2008). This framework reduces art to a practice of consumption, divorced from the diversity of communities’ cultural needs, and restricts our understanding of who artists are how they manifest their agency (Martin, 2014).

This study engages members of the arts communities in Richmond, VA and Philadelphia, PA according to an actor-centered framework (Markusen 2004), to understand how artists shape community space and contribute to the social and cultural life of their communities. Building on methods previously employed by Markusen and King (2003), we aim to illuminate the diversity of artists' experiences and integrate them into broader understandings of the urban political economic landscape. By engaging the Richmond and Philadelphia arts communities through artist focus group discussions, participatory mapping exercises, and expert interviews, the study examines artists’ ingenuity in creating and maintaining space for working and living. The study describes how artists’ practices fit within their particular contexts of urban change, informing policy that can meaningfully support a diverse group of artists and the communities in which they make their work.

By engaging directly with artists in the communities in which they live and practice, this study surfaces critical shortcomings in the concepts of the “creative economy” and “creative class” and will produce new community-based knowledge about how artists live and work and what resources they need to support their activities. These findings will contribute to understanding how artists act as political economic agents and therefore provide a stronger basis from which to define policy that would foster artists and art as community-engaged practitioners.
References


Key Words:
artists, arts economic development, Philadelphia, PA, Richmond, VA, gentrification

MAPPING THE SUCCESS OF SPORTS DISTRICTS: THE ROLE OF FORMAL PLANNING INITIATIVES ON DEVELOPMENT OUTCOMES
Abstract ID: 1063
Individual Paper Submission

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The arenas used by professional sports teams in the United States and Canada are increasingly tied to broader strategies for urban development in their host cities. Generally, these strategies seek to leverage the large audiences generated by arena events to support a cluster of entertainment, retail, housing, and commercial land uses.

Despite years of research from high profile sports economists, public funding for major leagues has continued, and new facilities continue to be built. While there is not a lot of research that specifically addresses sports-led urban development, there are a handful of studies that help frame this research study such as Chapin’s study of the Cleveland’s Gateway District and Baltimore’s Camden Yards in which he evaluated the change in new construction as evidence for the inclusion of sports facilities in urban redevelopment strategies. This research study is positioned to explore the urban development gap and examine urban development outcomes.

Using the case of major league arenas, specifically 26 major league arenas opened between 1990 and 1999, I investigate whether arena-led urban development strategies are successful and how urban development outcomes have been affected since the opening of these sports facilities.

In particular, I investigate how these strategies are manifested in different policies, such as a formal arena district plan, a plan within a special financing initiative (e.g. a tax increment financing district), a master developer agreement, a community benefits agreement, and so forth. More specifically, these strategies aim to attract new private investment to the area in three ways: 1) new private investment in the form of new construction and/or renovations, 2) a new land use mix (typically favoring a sport- and entertainment-orientation, alongside new housing and businesses), 3) increased property assessments and tax revenues. As such, the definition of “arena-led” development strategies can be tied to a set of
physical urban development outcomes: an increase in the volume of built area, desired changes in the land use mix, and an increase in property values.

I begin by creating a record of urban development outcomes that is systematically measured across each of the 26 arena projects. I measure and categorize the urban development outcomes associated with each arena development, with a focus on three physical measures of success: changes in the volume of built area (square feet), changes in the composition of built area (land use mix), and changes in property values (assessed values). An arena-led district development is successful if there is evidence of new construction (or renovations), if there are substantial shifts in land-use mix, and if there are increased values in district properties. To test the increase in total built area, shifts in land-use mix, GIS is used to digitally map the changes in land-use from 1990 to 2010 and assess the percentage of new construction in the area. Assessment data acquired from local municipal planning offices offer the capability in assessing the increase in property values over time.

I find that new arenas built as part of a formal planning effort are more successful in generating private investment as compared to those arena developments that were undertaken as stand-alone projects. Of the 50 new major league arenas built since 1990, just under half were either part of a formal district plan, or are part of an ongoing discussion to create a plan. I will discuss examples such as Cleveland's Gateway District, that has attracted a higher amount of new construction, a more desirable land use mix, and higher property values, when compared to those same metrics for other arenas such as the United Center in Chicago, that were not part of formal planning effort.

As cities increasingly look to sports and entertainment districts as key element of their urban strategy, this research will provide a better understanding of this trend and its impact and is the first comprehensive and systematically measured analysis of their urban development outcomes.

References

Key Words:
urban development, sports facilities, local policy, GIS

THE GEOGRAPHY OF RACE, PLACE, AND (CULTURAL) ENTREPRENEURSHIP – INITIAL FINDINGS FROM THE 2012 SURVEY OF BUSINESS OWNERS IN CALIFORNIA
Abstract ID: 1069
Individual Paper Submission

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Characterizing spatial concentration through agglomeration economies has been a longstanding agenda of economic geographers. But outside of residential segregation, how racial identity structures economic space has been studied far less; even rarely by industry type. Therefore, I ask: How does race structure entrepreneurial activity in cities, neighborhoods, and places? And is there a distinct clustering pattern among cultural entrepreneurs by race and ethnicity?

To begin answering this, my paper tested the use of economic place - a spatial unit representing local areas with populations 2,500 or greater in the U.S. Economic Census’ Survey of Business Owners (SBO) - for measuring the geography of race and (cultural) entrepreneurship. I used location quotients (LQs) as a measure of spatial concentration and tested this approach on a single state (California) during a single study period (2012).

To generate comparative spatial statistics on the geography of businesses ownership by race/ethnicity (i.e. Black, non-Hispanic White, Hispanic/Latino, Asian, Native American) and industry, I created two types of measures. First, descriptive statistics on economic productivity for that place in three dimensions: average jobs per firm, average sales per firm, and average annual payroll for firms making $1,000 or more. Second, location quotients as a type of cluster analysis of agglomeration. My preliminary results indicate five significant findings.

First, there are minority-owned businesses clustered in 340 places in California (i.e. a location quotient of 1 or greater); this is nearly 40% of the places in the state. One in four of these places - 85 of them - were economically productive, with most competitive in all three dimensions. Second, of the 1.14 million minority-owned firms in clusters, Hispanic/Latino-owned firms (48.8%) occupied the highest number of firms in minority-owned clusters, while Asian-owned firms were second (31.1%) and Black owned firms were third (11.3%). However, Asian-owned firms employed the greatest share than any minority group in terms of cluster employment (47%), annual pay (54.4%), and sales (52.2%). The worst performing racial groups were American Indian/ Native American and Native Hawaiian/Pacific Islander firm owners, occupying barely 1% of jobs, pay, and sales.

Third, there were nearly as many minority-owned firms as white-owned businesses in clusters (1.32 million for latter), but there were exponentially less jobs, pay, and sales (on average). However, fourth, clustering seemed to be a better economic strategy for Asian-owned and Hispanic-owned firms than other minority- and White-owned firms. Over one-third of clustered Asian firms and 13% of Hispanic firms were economically competitive in all three dimensions compared to only 9% of White-owned and Black-owned firms; again, Native American and Pacific Islander groups lagged.

Fifth, the cultural sectors of the economy exhibited similar patterning of racial clustering but is even more polarized. The cultural economy is concentrated in a fraction of the places (112 out of 888) but absorbs most of the economic benefits: between 61% to 79% of the firms, jobs, pay, and sales. These have important implications for how economic development scholarship and practice addresses the racial wealth gap through enterprise. Being able to identify where entrepreneurial enclaves (do not) exist, not simply metropolitan regions as previous studies offered, could form the basis of racially inclusive placemaking strategies that develop economies based on local human assets. This type of cultural asset mapping could also help serve as a benchmarking tool for measuring equitable development.

Future studies will disaggregate the data further by ethnicity and empirically determine the most influential factors sustaining entrepreneurial activity by race/ethnicity, neighborhood type, and cultural
industries. It also spurs additional questions about the durability (i.e. does it extend back in time?) and the spatial diffusiveness of these racialized patterns over time (e.g., is endemic to or beyond California).

References


Key Words:
Race and ethnicity, culture, entrepreneurship, economic geography, California

GREENOVATION: HOW SOME CITIES ARE WINNING IN THE HIGH STAKES GREEN ECONOMIC DEVELOPMENT GAME.
Abstract ID: 1193
Individual Paper Submission

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Sectoral strategies have been the rage in urban economic development for at least a decade. Yet evidence suggests that only a few places can succeed in any given sector. We see this in many “green” or “clean” technology sectors. But some cities are strategically linking climate action to economic development. This paper examines three key green technologies: smart grid; water and wind energy in pairs of U.S. and European cities. In smart grid technology, the cities are Austin and Stockholm. In water, approaches in Rotterdam and Milwaukee are compared. The wind energy cities are Copenhagen and Cleveland.

Both Austin and Stockholm have created projects, the Pecan Street Project and the Stockholm Royal Seaport Innovation Centre, respectively, to promote wider dissemination of smart grid technology for energy demand management and to more effectively integrate increasing amounts of renewable energy. Both cities anticipate economic development opportunity as new technologies and systems are developed.

Milwaukee is linking the creation of eco-industrial districts to the creation of a whole new industry—freshwater technology—which seeks solutions that address water quality and quantity. The city’s Water Council was created in 2006 to foster the program. A key component of the strategy is the Water Technology District, which is a testbed for some of the technologies being incubated. As part of the initiative, the University of Wisconsin, Milwaukee has developed the nation’s first graduate School of Freshwater Sciences. And the International Water Association located its North American Regional Office at the Global Water Center. Rotterdam aims to become “climate proof” by 2025 and is employing...
several strategies to achieve this goal. The approach links urban revitalization and entrepreneurship in supporting small businesses in creating water-related technologies and products. This activity is advanced in the context of several Dutch companies that serve international markets in flood-protection technology.

After overcoming technical and political setbacks, Cleveland’s initiative to develop offshore wind on Lake Erie and create up to 26,000 jobs to northeast Ohio that started in 2004 is back on track. Construction of Project Icebreaker, a specially designed turbine that can break up the foot of ice it could be sitting in during winter months began in 2016. Wind energy is essential to Copenhagen achieving its goal of becoming the world’s first carbon-neutral capital by 2025. A policy innovation the city adopted to achieve this goal is the “Buy Legal System” which requires wind farm developers to offer residents 20 percent of the shares of the total project. The policy provides funding for projects and builds citizen support, which will be needed if the city is to build more than 100 turbines needed to meet the goal. This project is analyzed in the context of the city’s broader concentration on clean-tech innovation.

The goal of this ongoing research project is to identify successful strategies for supporting the integrated achievement of climate action and urban economic development goals while taking into account different levels of state and national support. A quantitative analysis will include direct and indirect employment as available data permits and exporting of technologies. The qualitative analysis includes interviews with elected officials and public and private sector actors involved with developing the strategies and technologies.

References


Key Words:
green economy, climate action, clean technology

UNDERSTANDING RETAIL CLUSTERS; WHAT CAUSES THEIR GROWTH AND DECLINE? - A CASE STUDY OF SEOUL, SOUTH KOREA

Abstract ID: 1202
Individual Paper Submission

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Retail clusters, once established, do not remain static but change their size and density, by influences of internal and external factors affecting business operations. First internally, retail clusters create their own attractiveness, with shared infrastructures, available choice sets, images and atmosphere, which determines profits of individual stores, hence the success of the retail cluster as a whole. Second externally, retail clusters require a substantial customer base to sustain the business operations, of which the change would directly link to the change of the retail clusters. Changes in public transportation and/or property developments in vicinity, are some of the factors explaining the change of customer bases, and consequential change of retail clusters.

One more to consider is its interaction with lower-level shopping districts. This type of retails, mostly neighborhood shopping streets, is closely located to residential districts, serving basic household necessities. While this type of retails differs from the major retail clusters in terms of scale, target customers and the types of products, a recent trend shows that they also have attracted customers beyond the neighborhood, with their unique products and services. On the contrary to this, large-scale stores or franchise brands have encroached to the street shopping areas and alter the landscape, by raising rent, inducing gentrification and erasing local characteristics of the retail streets. Retail clusters and neighborhood shopping districts, now closely affect each other’s business operations.

Extant studies on retail geography have focused on finding logistically advantageous locations of retail clusters and delineating their catchment areas. However, the changes of retail clusters, especially their growth and decline, have not been fully researched. Questions have remained unanswered; which internal or external factors as well as the interactions with lower-level shopping districts have induced the change of retail clusters.

This study aims to assess the causes of growth and decline of retail clusters and unfold its interrelationship with neighborhood shopping districts in Seoul, South Korea, from 2000 to 2015. The investigation focuses on first, how those two types of retails differ in reacting to certain changes occurring in their catchment areas, and second, how the growth (or decline) of one influences the other. The change of the retail cluster is measured as the change in the total number of retail establishments. Those exogenous factors include a few known as critical in retail operations, related to real property developments – the area footage of residential and commercial properties permitted for construction, number of new housing units, number of residents and employees, and assessed land value. Data sources include business and demographic census data from Business Census of Seoul, The Korean Statistical Information Service, building permit records from the South Korean Ministry of Land, Infrastructure and Transport, and assessed land value records from Korean Appraisal Board.

Under this overarching inquiry, first, I detect the presence of retail clusters and neighborhood shopping districts, and the extent of their catchment areas, using cluster analysis on retail density and Huff modeling, respectively. After identifying the geographic extents, second, I reveal the influences of external factors on the change of those two types of retails, as well as the mutual relationship between those, using panel vector autoregressive modeling. With this modeling, multiple time-series data are analyzed simultaneously, discerning the sequence of causation to infer whether those two types of retails compete or complement each other in long-term operations.

This study will shed light on retail geography literature, emphasizing changes in and interactions of retail clusters, and provide useful reference to urban planners on a mission of retail revitalization.

References


Key Words:
Retail Clusters, Growth and Decline, Interaction, Huff Model, Panel Vector Autoregressive Model

Making Room for Manufacturing: A Review of the Policies and Practices of Planners Concerning Industrial Land

Abstract ID: 1229
Individual Paper Submission

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Many cities across the nation are facing new pressures to convert urban industrial land in the face of swelling populations and planning goals that are implicitly hostile to industrial work even in cities that have strong industrial employment bases. Recent work from Leigh and Hoelzel (2012) and Lester, Kaza and Kirk (2014) highlight how existing planning paradigms are biased against urban industrial development and steps for preserving valuable industrial space. These works do not directly ask planners how they value industrial land or how industrial land is understood, or not, to be an important asset in their cities. In this piece, I address two gaps in the literature: first, I reviewed zoning codes in the fifty largest cities in order to assess how cities manage industrial land; second, I surveyed planners in order to gauge how industrial land is viewed in practice. First, I reviewed the zoning codes of the fifty largest cities to see if they included specific land use regulations regarding the conservation of industrial land above and beyond the standard strictures of zoning. Second, I surveyed planners from the fifty largest cities in the US in order to ascertain not only how planners perceive the importance of industrial land in economic development but also to explore the political context in which planning decisions regarding industrial land conversion are made. My analysis includes whether the question of industrial land management is present in comprehensive plans; urban manufacturing’s presence in economic development priorities; and whether cities are actively converting or preserving industrial land. The goals of this research are two-fold: first, to fill the knowledge gap on the use of industrial land preservation policy use across the country; second, to better explore the planning and political contexts in which practicing planners fight to preserve, or not, industrial land in the face of conversion pressures. I find that relatively few cities are actively considering the management of industrial land even though urban manufacturing remains a nominally important area of economic development concern.

References

- Greg Schrock
- Nichola Lowe
- William Lester

Key Words:
Economic Development, Land Use, Manufacturing, Zoning
Manufacturing has been the backbone of the US economy for more than a century. Whether the emphasis is durable goods or biotech/life sciences, our ability to make things continues to drive local markets. Globalization has shifted these trends; with larger, multinational firms often moving operations and manufacturing to cheaper labor markets. Yet urban manufacturing remains a core component of the US economy, providing diversification strength in local markets. Understanding the current state of urban manufacturing is crucial to maintaining a resilient economic base.

Compounding global challenges, recent urban economic development and land planning practices have been replacing lost industrial activity with service based industries, threatening the integrity of legacy industrial corridors in crucial urban markets. Evidence also includes inactions such as infrastructure in industrial corridors that is allowed to deteriorate while ‘new and improved’ development completely erases industrial activity. As a case in point, the recent proposal in St Louis, Missouri to relocate their NFL stadium to a prominent north riverfront location threatened to obliterate the existing industrial neighborhood, all in a now failed effort to keep the football team from relocating to another city. In essence, the proposal would have replaced vital industrial land with a use that would see, at best, economic activity 8 to 10 days per year. These kinds of activities threaten not only the individual manufacturing landscapes, they potentially undermine the overall fiscal health of these post-industrial cities at a time when municipal budgets are straining under the weight of the recent economic recession. Using St Louis as a case study, this paper examines the state of urban manufacturing in a mid-sized post-industrial city relative to overall development activity as identified by projects receiving incentive support from the city. Where is development activity occurring relative to the locations of active industrial neighborhoods in the city? We are seeking to understand the relationship between urban manufacturing and broader development goals in the city. Are there unique characteristics that we can identify with urban manufacturing that require special attention? Does a typology emerge that identifies characteristics associated with urban manufacturing neighborhoods? The paper will address these research questions in the following way. First, using the Longitudinal Employment Household Dynamics data provided by the US Census we will identify employment concentrations in the goods producing, trade, transportation, and utilities sectors. Using census block level data, we will map the patterns of employment by total number of jobs. This will allow us to identify areas of employment concentration by neighborhood. Once we identify the employment types by neighborhood we will map the locations of incentivized projects (projects receiving TIF or a special district designation) based on city reported data over the past 10 years. Using a sensitivity analysis we will examine the characteristics of these manufacturing neighborhoods relative to the city supported development projects to determine whether there are common themes among these neighborhoods.

This project is the initial component of a larger project sponsored by St Louis Makes, an urban manufacturing support organization that is interested in fostering growth among small to medium sized enterprises (SMEs) across the St Louis metropolitan region. The larger report will ultimately identify an urban manufacturing ecosystem map that will include SMEs, service providers, government agencies and related support organizations.
As an emerging yet leading group in Seattle region, tech companies have aroused many discussions from realms of public media and real estate. Despite such fact, we still lack solid knowledge of where they choose to locate in a city, what factors they would account for, how much space they need, and when did they come. This study has tried to investigate both spatial and temporal distributions of tech companies in the region of Seattle and Bellevue, using the real estate database CoStar. It also makes an attempt to provide both qualitative description and quantitative analysis of location decisions of tech companies. Beyond market reports and media news, we hope this study would contribute to researchers’ further understandings of location choice of tech companies, as well as literature on general firm location choice.

Spatially, Seattle CBD and Bellevue CBD have the highest rent as well as the highest supply of office space in the region. In terms of SF (square footage) occupied, tech companies are the second largest tenant group in Seattle and Bellevue office market. From 2003, they began to enter Seattle and Bellevue, and have kept a steady increase in the number of newcomers since then. In 2012 and 2016, they experienced two influxes, while rent level has approached to the grand average of the region gradually in recent years after fluctuations.

The second part of this paper employs logit models to test the significances and magnitudes of factors that are of planners’ interest. The factors include measurement of physical features of a property, rent, and diversity of tenants etc. Through step-by-step transformation and model selections, this paper finally identifies 5 significant factors and their effects accordingly. The size of existing tenants and the age of buildings are the two most influential factors. It suggests a strong attraction of large companies to tech companies and a preference on properties with a stable operation track of at least 7 years. Interestingly, the paper finds the diversity of industries and rent also positively contribute to the log odds of tech firms’ location decisions. It is to say, tech firms prefer to locate in more well-developed properties with diverse industries, proving an inclination to agglomeration economy. Finally, transit accessibility is
negatively associated with the odds of location choice of tech tenants, which suggests a low reliance on public transit when they choose for sites. Findings from this study can help to inform policies and planning practices to attract new tech firms as well as to guide new office space development projects.

References


Key Words:
Real estate, Technology companies, location choice, logit model

CREATIVE RURAL PLACEMAKING: FROM COWBOYS TO CREATIVES IN THE RURAL AMERICAN WEST

Abstract ID: 1268
Individual Paper Submission

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Planning interventions have focused on urban areas and ignored the creation of strategies for rural places. Typically, for rural areas planning only offers urban solutions that are imposed on the rural context. This has included attempts to revive downtown spaces through Main Street programs and place branding initiatives that have sought to attract recreation industries, agritourism, and other niche markets. Instead of viewing rural as an accessory to urban, it is time to develop innovative strategies for twenty first century rural places (Frank 2014). This is especially true in the American West where rural places are haunted by a mythology of western expansion; often thought to be quiet, quaint spaces engaged in agrarian and extractive livelihoods, disconnected from the outside world (Robbins et al 2009). Many rural places are trying to create a modern identity, searching for an expression authentically their own. Creative placemaking (Markusen and Gadwa 2010) is an intervention recent in rural and urban places of Colorado, since the institution of statewide policies that support the development of creative districts. McGranahan and Wojan (2007) argue that the high quality of life available in rural areas supports the development of the creative class (Florida 2002). Additionally, Florida (2012) argues that to attract creative class technology, tolerance, and talent must be present. I argue that rural areas offer quality of life attributes that overwhelm the importance of these attributes and display a unique pattern of development. Implementing a creative district in a rural place is not accomplished by scaling down an urban model.

To test the hypothesis of rural places as unique planning contexts, I present the case study of Trinidad, Colorado, a small town in southern Colorado in the process of implementing a creative district. This site was selected because it is engaging in creative placemaking yet possesses classic western characteristics: it is a frontier town, bordered by open spaces, possessing a heritage of Native American settlement, mining, western characters, a boom and bust economy, and historic structures that reinforce traditional images of a western town. Drawing on insights from site visits and interviews, public meetings, and additional spatial and economic data, I will present the themes of rurality and the changing nature of this
small town as an example of how creative placemaking strategies may or may not fit into the rural context. In the case of Trinidad, artists locate here because of the quality of life, access to beauty in nature, proximity to urban areas, and the presence of a supportive artistic community.

The preliminary findings from this study indicate that rural towns are places where planning initiatives are extremely visible. Community members are attached to places and traditions but are committed to working toward positive change. Trinidad, Colorado demonstrates the capacity of rural areas to retain the rhythm and relationships so treasured while creating an identity through the renovation of places and welcoming of creatives. It is yet unclear whether creative placemaking, through the implementation of creative districts and artist live-work space, is an authentic means of differentiation for other rural places or simply a new opportunity for gentrification.

References


Key Words:
Rural Planning, Placemaking, Creative Districts

WHEN PLANNERS MEET PLACEMAKERS: THE ROLE AND IMPACT OF PLANNERS, ARTISTS, AND COMMUNITY BUILDERS IN CREATIVE PLACEMAKING AS A REVITALIZATION STRATEGY
Abstract ID: 1271
Pre-Organized Session: The Hidden Politics of Arts, Placemaking and Preservation

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Creative placemaking as a strategy for revitalization continues to gain popularity across US cities. Organizations such as ArtPlace are investing in efforts that infuse art, culture and creativity into the physical transformation and activation of public spaces in order to achieve multiple aims such as economic development, increased social capital, place attachment and a more vibrant public life (Markusen and Gadwa 2010). However, such varied goals have led to “fuzzy” outcome measures and a limited understanding of creative placemaking’s impact on revitalization (Nicodemus 2013).

One potential source of complexity is the diverse makeup of creative placemaking planning networks. Although presumed outcomes of creative placemaking clearly align with municipal planning interests, projects often engage actors who are not traditional planners. Rather community developers, nonprofit and arts organizations, urban design firms, and tactical urbanists are likely participants. The inclusion of diverse actors and the absence of municipal participation in creative placemaking raises several issues regarding how differences in values, assumptions and practices across planning, arts and economic
development fields may impact what is prioritized in terms of economic and social goals as well as actual revitalization outcomes.

For example, steeped in the assumptions and values of communicative planning theory, public planners ideally draw together and facilitate discussion with affected stakeholders in order to make planning processes transparent and fair. Although non-public actors involved in creative placemaking are often committed to community engagement, they are not subject to the same public scrutiny. Nor do they necessarily subscribe to planning’s assumptions regarding participation. On the other hand, communicative planning has been critiqued for not facilitating authentic engagement but rather using the performance of public participation to legitimate neoliberal interests, which could be especially problematic in culture-led development initiatives emerging out of creative city policies (Ponzini and Rossi 2010).

In order to better understand these relationships between creative placemaking actors and their impact on revitalization outcomes, this paper draws on research analyzing ArtPlace funded creative placemaking projects focused on revitalization. The paper includes a typology identifying patterns between participant makeup, creative placemaking project type and development goals, which is then used to model the impact of network and project type on revitalization outcomes. The paper also focuses on two case studies in order to critically compare projects that intentionally engage public planners with those that operate outside the purview of municipal governments in order to explore differing assumptions, values and priorities.

Considering that arts, culture and development have a complicated relationship in terms of revitalization versus gentrification outcomes (Grodach, Foster, and Murdoch 2014), there is continued need to unpack the ways in which creative placemaking projects are both envisioned and implemented by artists, planners and others who may define and prioritize project processes and goals differently. Furthermore, as planning continues to be conducted in an increasingly “fuzzy governance environment” (Roo and Porter 2016), it is important to understand the ways in which public planners can best interface with artists and other non-traditional community builders in order to pursue more equitable economic development outcomes.

References


Key Words:
Creative placemaking, Arts-led development, Revitalization, Networks
RESIDENTIAL SEGREGATION AND SELF-EMPLOYMENT OF RURAL MIGRANTS IN CHINA
Abstract ID: 1297
Individual Paper Submission

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In China, both the urban labor market and housing market faced by migrants are segmented. Self-employment becomes a new venue for living when rural migrants are constrained by the labor market segmentation and their weak educational background. Urbanizing village, a special segment of the urban housing market, is one of the few low-cost housing options that are accessible to migrants due to exclusionary housing regulations. While rural migrants in China are found to be concentrated in urbanizing villages, they are also observed to have higher tendency to engage in self-employment than migrants living in other kinds of communities. Through a survey conducted in twelve cities across the four most rapidly urbanizing regions in China, we explore the impacts of residential segregation in urbanizing villages on migrants’ self-employment propensity, scales, and earnings. We apply Instrumental Variable approach to address the self-selection bias associated with migrants’ location choice. The findings suggest that residential segregation in urbanizing villages has positive impacts on migrants’ self-employment propensity, scales and income. These are consistent with the ‘enclave theory’ but inconsistent with the ‘assimilation theory’. It is the cheap living costs, large demands for consumptions, and unique network externalities in of these urbanizing villages that facilitate migrants’ self-employment. As many cities in China are in the process of urban renewal and urbanizing village demolition, this paper suggests policymakers to rethink the important role of urbanizing villages in fostering small businesses among rural migrants as they are assimilating into the urban labor market. This research also have policy implications to other countries where residential segregation of immigrants or minority groups is prevailing. In these countries, residential segregation could have similar role in facilitating self-employment.

References
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Key Words:
Residential Segregation, Self-employment, Rural Migrant Workers

THE EVOLUTION OF INDUSTRIAL STRUCTURE THROUGH ENTREPRENEURSHIP: IDENTIFYING OPTIMAL PATHWAYS FOR LOCAL ECONOMIC DEVELOPMENT
Abstract ID: 1315
Pre-Organized Session: Recent Trends in the Geography of Innovation and Entrepreneurship

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Cities and regions constantly evolve by adapting to their surrounding environment through competition and collaboration with neighboring areas, and also by responding to changing socioeconomic and physical conditions within their boundaries. In this sense, cities and regions can be viewed as evolving “ecosystems” where a plethora of agendas act together to shape the overall outcome of the system as a whole (Batty 2013). A key aspect of an ecosystem is the interrelatedness of its different elements, where each component influences one another to bring about emergent outcomes. As such, with a focus on industrial structure as one aspect of the local economic ecosystem, this study envisions an “industry space” where industrial sectors are connected to each other within a network of relatedness (Hidalgo et al. 2007).

One way to characterize local economic development is to view economies as developing by upgrading the goods and services they produce through innovation. At the local level, through time, regions diversify into and specialize in different industries as a result of regional competition and local comparative advantages. A large part of this evolution of industrial structure is a result of entrepreneurship, with studies suggesting that the vast majority of new establishments are new firms created by entrepreneurs (Fairlie 2014). Accordingly, the evolution of a region’s industry space – and thus local economic development – can be measured by analyzing how entrepreneurship alters the underlying industrial composition of the region.

Utilizing data on new firm formation and industrial composition for MSAs taken from the Statistics of U.S. Businesses (SUSB) at the four digit level for the years 2005 to 2013, the underlying industry network is constructed such that the nodes are defined as individual industrial sectors. The links are defined using the Ellison-Glaeser index of coagglomeration (Ellison et al. 2010) measured for newly formed establishments, to take into account the relatedness between any two industries. Then, any MSA’s industrial structure is depicted within the network by assigning values corresponding to the location quotient for each industry to the nodes. As a final step, the evolution of industrial structures for the MSAs are analyzed across years, and economic development is measured using the Method of Reflections (Hidalgo and Hausmann 2009).

Ultimately, this study attempts to answer three distinct questions:

1) Are the dynamics of evolution in industrial structure important in shaping economic development outcomes?
2) Do more successful regions show different patterns of evolution compared to those that are less successful?
3) How should cities faced with different circumstances promote entrepreneurship in different industries such that their economic development capacities are maximized?

Preliminary results suggest that the change in industrial structure over the years for which data is available significantly shape the economic development outcomes of regions, and that in some cases these dynamics are more important than the actual industries in which these regions specialize in. In addition, more successful regions show distinct patterns of evolution that distinguish themselves with their less successful counterparts.

References

Key Words:
Entrepreneurship, local economic development, industrial structure

JUST HOW INNOVATIVE ARE INNOVATIVE DISTRICTS? PITFALLS IN CONFLATING PROCESS WITH OUTCOME

Among the many approaches being used by those charged with securing the future growth and prosperity of cities, perhaps none is as commonplace as the current focus on making cities more innovative. The underlying presumption is two-fold. First, that innovation is a driver of long-run economic growth, and second, that cities can positively influence growth outcomes, and particularly the share of high-value employment in their economic base, by actively supporting innovation. While the former proposition is a generally well acknowledged relationship in scholarly and policy circles, the latter is more debatable since cities are often understood to be quite limited in being able to influence the aggregate level of employment in their jurisdictions, and instead focus on the work of attracting investment and talent (Logan and Molotch, 2007).

As the pursuit of innovation has become a key organizing concept for achieving economic development, today’s cities are drawn into a logic of supporting a process that is inherently uncertain. What cities actually do in this regard is quite diverse, but the most common trait are the area management policies that lead to new districts centered on innovation. What this paper examines is again two-fold.

First, what are cities getting out of what kinds of innovative districts? Although the measurement framework for innovation is heavily oriented toward private sector research and development (R&D), as contained in the OECD’s Oslo Manual, many of the outcomes that matter to city managers such as new firm formation, job creation, or even venture capital per capita, still can be seen as falling on the process side of innovation, albeit sometimes ambiguously so. This is a function of the high failure rates and generally precarious nature of innovative entrepreneurship. However, measurement leaves out a host of activities across the public sector, as well as social and organizational innovations, that feed significantly into innovative effort. This paper will address these challenges and propose some alternative directions for how planners can better organize for innovation-led economic development.

Second, just how much planning is necessary to produce innovation in the first place? The districts are as heterogeneous as the cities of which they are a part. However, one of the key characteristics in how they differ is along a spectrum of the planned, less-planned, and even the un-planned, along with differing degrees of intervention on the part of the public sector (Storper and Manville, 2006). This realization, along with the variation in resource commitments to create, organize, and sustain these
places, the relevance for the theory and practice of economic development planning in cities should be clear. The paper will present findings from completed as well as ongoing research to analyze the types of innovation districts, and to what extent they are a product of the planning process, or the absence of it.

This research uses international comparative case study methodology built around mixed methods involving direct survey work, geo-spatial analysis, city-level data collection on innovation and economic growth, as well as extensive interview data to study the trajectory and dynamics of district development. The paper covers a range of innovation districts across Asia, Europe, and North America. Specifically, it investigates these developments in Singapore, London, and New York City. The paper also draws on the Oxford Economics (OE) Global Cities Historic Database to help make meaningful statistical comparisons across regions where possible. Although still at preliminary conclusions stage, the findings point to a reciprocal tension between the extent of spatial and sectoral economic planning for district development, and the realization of city economic development objectives centered on innovation. Also at issue, is the difficulty the planning apparatus sometimes has with seeing the development of innovation districts as an amalgamation of inputs on the process side of innovation, as distinct from what can usefully be regarded as measureable outcomes from innovation leading to economic development.

References


Key Words:
economic development, innovation, innovation districts

INCENTIVES IN MODERATION: A NATIONAL STUDY OF CHANGING STATE AND LOCAL PRACTICE

Abstract ID: 1331
Individual Paper Submission

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Incentive packages to private businesses have become the modus operandi among state and local governments competing for large-scale corporate relocations and new branch plants, bringing the promise of increased employment and tax revenue. But incentives are also widely criticized, with scholars and practitioners equally frustrated by their limitations and costs. As private businesses increasingly demand incentive payments to locate or remain within a region, economic developers have responded with efforts to make incentive payments more effective by using a mix of more sophisticated
analytical tools, integrating incentives within broader sectoral or industrial targeting strategies, and adding additional checks to excessive incentive use.

New data sources create the possibility to study some of these moderating steps and explore their varying effect on incentive performance. In this paper, we present the results of a national, time-series, establishment-level study of state and local economic development incentive deals, comparing establishments that received an incentive package to a control group of similar, non-incentivized establishments.

We rely on three national databases: the Good Jobs First Incentive Database (GJF), the National Establishment Time-Series (NETS) database, and the State Economic Development Expenditure Database from the Council for Community and Economic Research (C2ER). While there is no single public source of incentive deals in the U.S., the GJF dataset is the most complete and comprehensive listing of deals and includes information on firm name, location, number of jobs promised and incentives offered. We identify those establishments in the GJF database that promise to either increase or retain 100 or more employees. Using a text-matching algorithm, we locate records for these incentive-receiving establishments in the NETS, a unique dataset that allows time-series observations of establishment-level employment, locations and detailed industry codes for nearly all establishments in the U.S. Using data from the NETS, we then identify five control establishments for each incentive-receiving treatment establishment. Our third data source from C2ER uses consistent funding categories to aggregate state budget data for economic development activity across 15 functional areas and multiple funding sources. For each state, we know the relative proportion of their budget allotted to incentives and how that compares to public investments in other areas of economic development.

Using these data sources, we seek to answer three inter-related questions: First, do establishments that receive incentive details create the jobs they promise and outperform non-incentivized firms? Second, does prioritizing incentives to establishments within a region’s targeted or specialized industries enhance the efficacy of the incentive? Finally, do states with more balanced economic development ‘portfolios’ (i.e., similar public investment in recruitment, entrepreneurship and workforce development) make more effective use of their incentive dollars with respect to employment ends, when compared to those states with unbalanced portfolios?

The findings of our paper will inform critical policy debates surrounding economic development incentives. First, by showing that incentivized firms do not create more jobs than their controls, we cast doubt on the biggest claim made by incentive proponents that “but-for” the incentive payment job creation would not occur. Second, we illustrate several ways in which states can use incentives in a smarter way, including combining them with additional moderating policies such as broader coordination with sectoral targeting and workforce development strategies.

References

THE WIDER IMPACTS OF THE HIGH-TECH INDUSTRY: EVIDENCE FROM THE UNITED STATES

Abstract ID: 1355
Individual Paper Submission

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Innovative, high-technology activities are widely seen as drivers of regional development. In addition to the rewards that accrue directly to workers in such sectors, they are of interest because of the spillover effects that are felt throughout the local economies that surround them. Yet our understanding of the actual impacts of ‘tech’ on non-tech workers remains partial. Evidence shows that local tech employment generates more nontradable (nonbasic) jobs than traditional manufacturing. Yet job quantity is only one dimension of economic wellbeing. Quality is also crucial, measured in terms of how jobs permit workers to conduct their lives in an economically advantageous manner, demanding consideration of both nominal wages and local living costs. In this paper, we explore the relationship between tech workers and ‘nontrade’ workers across metropolitan regions in the US, over the period 2000-2015. Central to this research is the following question: do workers in the nontraded sector of the economy earn higher real wages in metropolitan regions with a higher share of ‘tech’ workers compared to regions with relatively few ‘tech’ workers. More concretely, does a worker engaged in the nontraded sector of the economy, such as a retail worker or a hairstylist, earn higher real wages in a vibrant ‘tech’ region such as the San Francisco Bay Area or Seattle than a relatively low tech region like Brownsville, Texas or Joplin, Missouri.

The present paper seeks to fill a number of gaps in our understanding of the relationship between tech employment and broader local economic welfare. Data relating to employment, industrial sector and wages are drawn from the Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW) program. Data relating to local housing costs – the primary driver of cost of living differences across regional economies – is drawn from the Housing and Urban Development Department (HUD). Our provisional findings reveal that workers in the nontraded sectors of the economy receive modestly higher real wages in the most vibrant tech regions compared to regions with relatively fewer tech workers.

References

In parallel with other large emerging countries, the Brazilian economy has undergone profound industrial restructuring and technological change since the turn of the century, and through this experienced substantial growth. For most countries this period has been marked by the experience of growing inequality, labor market polarization, and rising informality. Yet during the last two decades Brazil has successfully reduced inequality and expanded economic opportunities to millions of poor people, most notably in relatively impoverished and underdeveloped regions such as the Northeast. Between 2002 and 2014, the Brazilian middle class expanded from 37% of the population to 60%, and the rate of informal employment declined from 55% to 30% (IBGE/PNAD 2016). This economic and social transformation is typically described as a top-down program of welfare state expansion initiated by the leftist government of Luis Inácio “Lula” da Silva and his Workers’ Party. However this narrative neglects the significant bottom-up efforts of street-level bureaucrats and workers themselves in driving these aggregate changes in the labor markets, and it neglects the legacies of previous eras of institutional reform, upon which the Lula government built, in shaping the tools available to contemporary planners and policy makers.

The inquiry in this paper will serve as a corrective to elite-driven accounts of reform by using the lens of vocational training to explore trajectories of social mobility and mechanisms of inclusion in Brazil. I focus on the role of vocational training institutions in processes of social mobility because these have historically played a central role in skill formation and labor market incorporation for the working class (Cunha 2006). The paper will be guided by the following research questions: What is the structure of vocational training institutions, and how do public and private components of the institutional system interact with one another? Through what mechanisms are vocational training institutions connected with trajectories of economic growth and industrial upgrading? How do workers themselves use vocational training institutions in the pursuit of social and economic mobility? In order to understand the historical conditions which have shaped the present moment, this paper will explore these questions during three reform periods: the early developmental state (1930s and 1940s), the military dictatorship (1960s and 70s) and the era of Workers’ Party (2000s and 2010s).

In brief, the research finds that the inclusionary reforms of the Workers’ Party era were not cut from whole cloth, but rather they were assembled from institutional components that were introduced under earlier developmental regimes, which were decidedly not at all interested in questions of mobility and inclusion. Yet beyond recombining existing tools, the Workers’ Party government introduced new elements, most notably racial and other quotas, to open up vocational training to segments of the population that had been previously excluded. The paper will also show that the reform of vocational training institutions required significant innovation among trainers and other street-level bureaucrats responsible for administering and delivering training services. Finally, it will highlight the risks that
workers assume in engaging with vocational training, and consider the non-economic factors, such as family and community, that shape and enable workers’ decisions to pursue training.

References:


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Key Words:
Economic development, Workforce development, Labor markets, Social mobility, Equity

HEALTH CARE, BIOMEDICAL INNOVATION, AND ECONOMIC DEVELOPMENT IN CENTRAL CITIES: "ARRIVING AT" SIMILAR APPROACHES TO DEVELOPMENT
Abstract ID: 1430
Individual Paper Submission

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Interest among scholars and practitioners in universities and hospitals as anchor institutions and in local ecosystems for innovative, knowledge-intensive entrepreneurship has directed the focus of many communities to health care and biomedical research as a source of economic development. One product of this interest, and of the uneven restructuring and transformation of regional health care systems, has been the proliferation of efforts to designate, plan, and coordinate investment and collaboration within inner-city clusters of biomedical institutions -- a version of what has recently been labelled "innovation district" (Katz and Wagner 2014). In an organizational sense, these efforts range from loose collaborations to formal organizations, which may be dedicated nonprofit partnerships, extensions of chambers of commerce and other development organizations, or public entities created and empowered by legislation. In a spatial sense, they may be identified by the presence of one or more academic medical centers or teaching hospitals, supports for the commercialization of research (e.g., incubators), and a variety of related land uses that distinguish the district as a space for health and biomedical activities. These "urban biomedical districts," in some cases, rival their CBDs as concentrated centers of employment. Their growth is only one example of how economic development practitioners and researchers have gradually reevaluated the potential for health and biomedicine to serve as a driver of urban development as the nation's health care economy has expanded, diversified, and restructured unevenly.
This paper takes a comparative approach to the pattern of development within urban biomedical districts in order to frame a dialog between health care and economic development planning. The empirical question concerns how cities "arrive at" similar policies through a mix of both local contextual factors and outside influences that shape policy (Robinson 2015). How do institutional isomorphism and socially constructed networks of policy knowledge shape the adaptation of policy across localities (DiMaggio and Powell 1983, Peck 2011)? The paper thus focuses on the degree of commonality and difference across several extant cases in their creation, development programs, organizational structure, and ability to sustain influence over development and promote collaboration among member organizations. In this case, equifinality, or the existence of multiple routes to the same end, is both a methodological problem and the key outcome of the study.

From the perspective of economic development, health care is viewed as beneficial from two perspectives. First, health care is now among the largest sources of employment in every region (providing decent earnings to workers at a range of skill levels), and specific health systems often serve as one of a given region's largest employer (Harkavy and Zuckerman 1999). Second, biomedical research provides a major source of potential commercial innovation. However, these potential local benefits are closely tied to national processes of increasing cost and consolidation in the health care system. Local actors interpret opportunity through relational geographies of uneven development within cities, by processes of policy mobility between localities, and by conditions established at other scales of policy and regulatory development (i.e., state and national).

Methodologically, the research relies on interviews with local stakeholders in the development of several urban biomedical districts; extensive archival research at three sites (Chicago, Houston, and New Orleans); and a broader scan of plans, promotional materials, and media at several additional locations. The findings raise questions for how local economic development not only ignore but marginalize debates over the costs and benefits of allowing biomedical health care to lead the transformation of local economies.

References

Key Words:
Health care, Economic development, Innovation districts, Eds and Meds

URBAN REDEVELOPMENT IN THE NEW BERLIN: AN UPDATE ON THE EUROPACITY MASTERPLAN
Abstract ID: 1433
Individual Paper Submission

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Urban Redevelopment in the New Berlin: An Update on the Europacity Masterplan
Ever since the fall of the Berlin Wall, scholars have traced the emergence of the “New Berlin”, seeking
to explain its trajectory within the larger realm of comparative urban studies. Berlin was suddenly thrust
into the brave new world of neoliberal urbanism about two decades after the onset of the world-wide
Post-Fordist restructuring. My article reviews and analytically updates urban scholarship on the ‘New
Berlin’ a quarter century after reunification. Post-1989 Berlin was generally interpreted as a city
burdened by a complex, traumatic and divisive past that was now struggling to “make up new
meanings” for itself and as a time-compressed laboratory for the rapid unfolding of neoliberal urban
restructuring processes. My paper has two main parts. First, I identify six storylines that dominated
academic discourses about Berlin since the fall of the wall: 1. “City of Voids & Ghosts” - 2. “Capital
City” - 3. “European City” - 4. “Global City” - 5. “Creative & Cultural City.” I discuss whether or not
planning and land use development processes have “normalized” in the last few years. I will then
present a detailed case study of the so-called Europacity Masterplan area behind the new Central Station
as a test case of where urban redevelopment is currently headed in the German capital.

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Key Words:
Berlin, urban redevelopment, master plan, neoliberal urbanism, comparative urbanization

TAX INCREMENT FINANCING (TIF): A TOOL FOR REDEVELOPMENT OR ECONOMIC
DEVELOPMENT? – A REVIEW OF STATE TIF LAWS
Abstract ID: 1436
Individual Paper Submission

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Tax increment financing (TIF) is one of the primary financing tools extensively used in 49 states of the
U.S.A. TIF captures future increases in property taxes generated by (re)development activities in a
designated district in order to pay for the initial costs of infrastructure improvements and/or other
financing expenditures for attracting those (re)developments activities into the district. TIF is originally
used for funding the infrastructure for blighted area redevelopment. However, as TIF evolved in the past
decades, this important redevelopment financing tool is widely used as an instrument to promote general economic development, which usually leads to TIF-supported new development in sprawling suburbs. No nationwide empirical study has examined this trend of the current TIF usage in the U.S.A. The variances in states’ TIF practices as well as difficulties in obtaining local TIF activities data make studies on TIF usage extremely difficult. Instead, conducting studies on state TIF legislation may provide a portrait of TIF practices in the U.S.A. State TIF legislation provides requirements and restrictions on local TIF adoption and implementation, and has far-reaching consequences for the choice of TIF use at the local level. Although state TIF legislation will not necessarily show how TIF is actually being used at the local level, it can indicate the primary intention of the TIF usage at the state level and imply the possible usage of TIF at the local level. Thus, understanding the various rules, limitations, and the relative flexibility of TIF statutes of different states is vital in order for researchers and practitioners to know states’ priority development patterns that TIF is used for: redevelopment or new development. The existing nationwide studies on state TIF legislations are either out of date or piecemeal. None of these studies pay close attention to the development patterns for which TIF is used. This paper fills this gap by conducting a comprehensive review of the current state of TIF legislation in the U.S.A.

This research conducts a content analysis and develops a typology of state-level TIF policies. State TIF legislation performance indexes are constructed based on five important factors in state TIF legislation: blight finding, but-for clause, permitted development types, eligible uses of TIF expenditure, and special programs or policies that promote certain types of development. The provisions of these factors are closely related with the development types by either restricting or encouraging certain TIF usages. This study evaluates TIF legislation quality for all 49 states based on their performance regarding these principles.

According to the results of the content analysis, this study categorizes states into types varying along one or more gradients based on the strength of state control on TIF usage or the priority of development projects for which TIF is used. In addition, this study identifies TIF legislation quality variations and the distribution among states. To further explain the geographic patterns of TIF legislations’ quality, the study conducts a correlation analysis between the TIF quality and the states’ contextual factors in terms of their political and socioeconomic characteristics. This detailed and comprehensive review of the current state TIF laws can help comprehend TIF policies and practices in the U.S.A. and inform regional- and local-level studies of TIF implementation and its effects on development patterns.

References

Key Words:
Tax Increment Financing, Redevelopment, Economic Development
PRE-ORGANIZED SESSION: NEW APPROACHES TO PLANNING MULTIFUNCTIONAL GREEN INFRASTRUCTURE FOR URBAN RESILIENCE
Proposal ID 40: Abstracts 433, 434, 435, 436, 437

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This session focuses on the opportunities and challenges for planning green infrastructure to enhance community resilience. Green infrastructure refer to the network of vegetation in a city that provides social and environmental benefits, or ecosystem services, including improved public health, air quality, mitigation of the urban heat island, and wildlife habitat (Tzoulas et al., 2007). It is also increasingly advocated as a decentralized, nature-based alternative to ‘grey’ stormwater infrastructure (Wise, 2008). A growing number of government agencies, organizations, and cities around the world are investing in green infrastructure, often on the basis of its multifunctionality. Yet studies and plans often do not consider the full range of benefits, potential tradeoffs, or implementation and maintenance challenges (Keeley et al., 2013; Lovell and Taylor, 2013). Furthermore, if not carefully planned, green infrastructure can promote gentrification (Wolch et al., 2014). This session brings together scholars from 5 universities in the US and UK who are developing innovative frameworks and models for collaborative green infrastructure planning.

Objectives:
- To learn about new participatory models and approaches for planning multifunctional green infrastructure.
- To share insights on green infrastructure planning processes in different cities.
- To identify common opportunities and challenges for green infrastructure planning.

PRE-ORGANIZED SESSION: NEW DIRECTIONS IN WATER RESOURCE PLANNING
Proposal ID 53: Abstracts 537, 538, 539, 540

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DYCKMAN, Caitlin [Clemson University] cdyckma@clemson.edu, proposed discussant

Efforts to reduce impacts of nonpoint source water pollution, to reduce groundwater depletion, and to improve watershed health have seen some success. However even after decades of water resource planning efforts, water quality and quantity issues throughout the U.S. persist. Across urban and rural landscapes, there has been little increase in the adoption of best management practices for water pollution reduction and water conservation. In this panel, we discuss novel approaches to water resource planning from across the U.S., including a networked approach to conservation in agriculture, efficacy of film in bridging the urban-Ag divide, the emergence of farmer-led watershed councils, and landowner outreach in relation to groundwater management. Healthy and plentiful water resources are crucial to social and ecological health and traditional approaches to water resource planning is lacking. This panel
will provide a forum for exploring new directions in water resource planning through real world examples – demonstrating new ideas that show some success in broadening participation in water resource management toward ecological and social well-being

Objectives:

- Through current project examples, participants will learn of new approaches to water quality and quantity planning, with specific attention paid to private landowners’ land management decision making.

IMPACTS OF AIR POLLUTION ON EVERY DAY LIFE IN SHANGHAI

Abstract ID: 1
Individual Paper Submission

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THE PROBLEM. Ambient (outdoor) air pollution in China has increased with the country’s rapid economic growth since the 1970’s. This growth boosted energy consumption for power generation, industry, and development. Major sources of air pollution include factories, coal burning for energy, straw burning in rural areas, and, in urban areas, growing vehicle emissions (Chan & Yao, 2008; Kan et al., 2012; Gong et al., 2012). In most major cities in China, air pollution exceeds the World Health Organization (WHO)’s guidelines for PM2.5 (a critical component of air pollution) by four or more times the annual limit (Lu et al., 2015). Poor air quality is not confined to Beijing or parts of northern China that are known for air pollution. Air pollution in Shanghai, for example, has increased substantially in recent years. In December 2013, Shanghai reported PM2.5 concentrations over 600µg/m3—above the maximum AQI (Air Quality Index) value of 500. Historically, Chinese residents had limited awareness of the health impacts of air pollution, which include premature death, strokes, respiratory infection and irritation, brain function, cancer, and others (Wang, 2006). Increasingly, however, middle class and younger Chinese residents, especially, understand the negative health consequences of air pollution. Less is known about how air pollution impacts every day life and behavior, including impacts on transportation and activities, costs to households (both financial and opportunity costs), and psychological well being. This paper addresses the research question: what are the impacts of ambient air pollution on Chinese residents’ every day lives in Shanghai?

METHODS. Research methods included in person interviews with 40 Chinese residents in November and December 2016. Respondents were age 18 and older, and were residents of Shanghai for one year or more. Most were middle income and highly educated, with a Bachelor’s degree or higher. Respondents were identified through snowball sampling. Interviews were conducted in Mandarin and English and lasted approximately 40 minutes on average. Interviews were tape recorded and translated into English and transcribed verbatim. Interviews were analyzed using an iterative process of descriptive and analytical coding and memoing. Analysis was conducted using NVivo software for qualitative analysis.

FINDINGS. Residents do not assess air quality in isolation. Rather, residents’ assessments of air pollution and its impacts on their lives depend heavily on their experiences of better—and worse—air quality in other locations. A majority of residents do not regularly check AQI ratings, though this information is readily available to most respondents through smart phones or computers. Instead, residents rely on visual surveillance and on their own bodily responses to gauge outdoor pollution.
levels. One key impact of air pollution is on outdoor physical activity. A majority of respondents reported that the primary change in their behavior was to eliminate outdoor exercise on high air pollution days, or to shift to indoor, often less vigorous physical activity. Residents also frequently chose to stay indoors and to avoid unnecessary outdoor activities on high pollution days, especially during winter months, when air pollution is worse. Many residents changed travel modes to limit bicycling and walking on high air pollution days, in favor of taking the subway or taxis. Many reported that ambient air pollution and the associated “haze” negatively impacted their mood. Respondents linked air pollution with a pervasive concern about their own health and that of their family members. Air quality factored strongly as a consideration in decisions about where respondents would be willing to work or travel. Some locations such as Beijing and Hubei Province were highly stigmatized for poor air quality. Analysis of interviews is continuing.

Findings have implications for the design of cities to promote walking and bicycling. These findings demonstrate that it is insufficient to increase active transportation and recreation without also reducing air pollution, to ensure that active travel and recreation are healthy and desirable alternatives. Air quality has clear consequences for efforts to support domestic tourism and economic development in China.

References

Key Words:
air pollution, everyday life, health

EVALUATING THE ROLE OF GOVERNMENTAL SOCIAL MEDIA DATA IN DROUGHT RISK MANAGEMENT AND WATER RESOURCES PLANNING

Abstract ID: 28
Individual Paper Submission

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Social media creates an interactive information communication platform for disaster preparedness, mitigation, response, and recovery. Recent research has analyzed the participation of social media in natural disasters, such as the Haiti Earthquake in 2010, Queensland floods from 2010-2011, Hurricane Sandy in 2012, and Colorado flood in 2013, but little research has paid attention to drought risk management. This study analyzed the social media sites of governmental agencies that were directly involved in California’s Drought Task Force in the past historic drought. The results show that state
governmental agencies have used the popular social media platforms (Facebook, YouTube, and Twitter) as communication channels with professional stakeholders and the general public. The major functions of social media in the California drought risk management process included one-way information sharing, two-way information sharing, situational awareness, rumor control, reconnection, and decision-making. However, social media was not active in donation solicitation and volunteer management. The two-way communication still stayed in relatively surficial levels with limited comments and inadequate conversations. A gap existed to reconnect public social media domain and personal social networks, even though drought risk was closely related to everyone’s daily life. During the California drought, Facebook worked actively in two-way information sharing for drought risk information and water conservation strategies; YouTube was a robust platform that attracted large number of views on drought videos; and Twitter played an effective role in reconnection of social networks to expedite drought risk information dissemination. The research methods improve our understanding on the role of governmental social media in disaster risk management and water resources planning.

References


Key Words:

social media, disaster risk management, water resources planning

STAKEHOLDER SUPPORT FOR FOREST-BASED BIOENERGY IN THE NORTHWESTERN US: COMPARING REGIONAL AND LOCAL LEVEL SURVEY RESULTS WITH IMPLICATIONS FOR FACILITY SITING

Abstract ID: 32
Individual Paper Submission

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The drive to develop renewable energy sources to reduce CO2 emissions is growing and the best solutions are those that advance a region’s competitive advantage. In the northwestern US woody biomass from post-harvest forest residuals is an abundant bioenergy feedstock. Forest-based bioenergy development could create new markets for forest residues, decrease excess fuel loads, improve air quality by reducing slash burning, and provide economic opportunities for forest-dependent communities. As a result, many entities are exploring a range of options at multiple scales. The literature on social perceptions of forest-based bioenergy suggests cautious support, but other research shows proposals for bioenergy projects can be met with community opposition that can slow or stop development. Thus, understanding stakeholders’ perspectives is critical to the long-term viability of bioenergy projects, especially with respect to facility siting.
Our study examines factors influencing stakeholder support for forest-based bioenergy. We report on two studies: a large-scale regional survey of stakeholders in WA, OR, ID, and MT, and a county-level case study of residents in two counties on Washington’s Olympic Peninsula. The two-tiered data affords the ability to examine larger-scale regional trends, and local level trends, where differences become more apparent, and potentially more salient for locating industries.

Findings from the four-state survey show benefits and worries perceived by stakeholders are strong indicators of their level of support for forest-based bioenergy. Benefits, the strongest indicator, include both socioeconomic (jobs, rural economic boost, and reduced dependence on foreign oil) and environmental (offset climate change, and lower environmental impacts than fossil fuels). The case study was conducted using adjacent counties with similar geographic and economic conditions. Clallam County residents, who focused more on benefits and downplayed concerns, showed a higher level of support than Jefferson County residents, who mentioned concerns and downplayed benefits.

These findings have implications for bioenergy siting. There may be general support at the regional level, but at the local level, if residents are not supportive, proposed developments could be stymied. The paper concludes with recommendations on educating and engaging citizens early in the decision-making process for forest-based bioenergy development.

References

Key Words:
Bioenergy, Stakeholders, Facility Siting

NOISE POLLUTION CONTROL – SINCe REAGAN’S DEvOLUTION REVOLUTION, HOW ARE CiTIES AND STATES DOiNG?
Abstract ID: 61
Individual Paper Submission

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As I prepare this abstract, Congress is considering President Trump’s drastic budget cuts to the U.S. Environmental Protection Agency (EPA). Assuming the cuts are made, this will not be the first-time EPA programs have eliminated through Presidential agenda carried out via budget cuts. The EPA once
had an Office of Noise Abatement and Control, which promulgated regulations for The Noise Control Act of 1972 (NCA), and its amendment, the 1978 Quiet Communities Act (QCA). The purpose of the NCA was to “promote an environment for all Americans free from noise that jeopardizes their health or welfare” and it did so primarily through efforts to promote and coordinate Federal noise control research and create noise emission standards for construction equipment, transportation equipment, motors and engines, and electrical and electronic equipment. The QCA’s major initiative was the Quiet Communities Program which assisted local, state, and regional governments build capacity for controlling noise and create noise abatement plans for major sources of noise, including transportation facilities.

But in 1981 the Reagan Administration de-funded the Office of Noise Abatement and Control, and while the laws remain intact, without any staff or funding, the acts were effectively abolished. Ever since, noise control in the U.S. is completely left to the purview of state and local governments. Currently, nine U.S. states have comprehensive statewide noise control regulations and hundreds of cities have local noise control laws. Yet, the problems of noise pollution are a still a significant environmental health issue across much of the U.S.

Based on a literature review and analysis of primary source documents, including local noise ordinances and noise mapping data, this research will highlight the status of state and local efforts to control noise. It will discuss preliminary findings from case study research on how local health departments work with police and planning departments to control noise. The paper will briefly discuss the impacts of the devolution on noise pollution policy and research. It will highlight some of the reasons why Reagan targeted noise control, but mostly it will focus on how state and local governments have responded. Throughout the paper, I will explicitly link to planning – the academy and practice – and discuss our roles in noise pollution control.

References


Key Words:
Noise Pollution, Local Ordinances, Environmental Protection Agency, Environmental Health

WHAT INFLUENCES A HOUSEHOLD’S PROPENSITY OF ENGAGING IN WATER SAVING BEHAVIOR?
Abstract ID: 75
Poster
Ensuring availability of sufficient water for urban areas in the present and in the future is an extensively researched topic. The US EPA estimates that nationally, about one-third of all residential water is used for landscape irrigation, totaling to 9 billion gallons per day. In Utah, single family households use about 65% of their total water outdoors. Often, yards are watered more than required. This may be due to timed and faulty sprinklers, and lack of knowledge about how much water is actually required. Water conserving behavior such as testing sprinklers, estimating the amount of required landscape water and installing an efficient lawn watering system may reduce outdoor water use, which contributes to the larger goal of water conservation.

In this research, we are interested to know how and why households adopt water saving behavior. There are two research questions which we want to answer. First, does adoption of water saving behavior vary by city? Second, what influences a household to engage in water saving behavior? Previous research has indicated that demographics and other parcel-level factors such as lot size and age of house are strong predictors of household water conservation (DeOreo, 2011; Wentz et al, 2007; Arbués et al, 2003). A survey was conducted in three cities in Utah – Salt Lake City, Logan and Heber, to understand people’s motivations in adopting water saving behavior. In Utah, Salt Lake City is the largest city in terms of population, Logan is a medium sized city, and Heber is a small city. A study across different city sizes would help generalize results, which was why these three were chosen. Information on demographics, home ownership status, perceptions of water availability, and watering habits and behavior were collected.

Survey data was analyzed by binomial regression. Results suggest that households in different cities behave differently in terms of water saving behavior. Results also suggest that renters and non-white families self-report as poor adopters of water saving behavior, and families with low income and no college education need incentive and help to engage in water saving behavior and other environmental actions.

Results indicate that water conservation and water demand reduction strategies must be built around target groups, as different residential user groups think of, and use water differently. Results may have greater implications in policy making in cities for water use.

References

Key Words:
water conservation, survey research, water conserving behavior, policy implication
The New Jersey Climate Adaptation Alliance (NJCAA) comprises more than 30 public, private, and not-for-profit organizations throughout New Jersey. The NJCAA is facilitated by staff researchers and faculty at Rutgers University. At the behest of its members, the NJCAA convened a Science and Technology Advisory Panel (STAP), composed of a pair of committees of scientists and practitioners, to develop guidance for adapting to future coastal flood risks. Using an approach similar to Vella et al. (2016), we analyze (1) semi-structured interview notes, (2) working group notes, (3) participant questionnaires, and (4) federal, state and local planning guidance that informed the STAP deliberations. By offering opportunities to deliberate varied perspectives on adaptation planning guidance, the NJCAA process enabled scientists and practitioners to collaboratively craft guidance that employs several communication strategies to span the stated preferences of practicing professionals.

Boundary organizations can play a unique role in the development and implementation of adaptation guidance for urban planning. Lemos et al. (2014) describe the effectiveness of linking boundary organizations through ‘boundary chains’ in the Great Lakes region of the United States to enhance the implementation of adaptation actions in plans and projects. Vella et al. (2016) describe a regional governmental organization that, while successful in enhancing collaboration among government entities in Southeast Florida, was challenged in engaging private sector participants successfully engaged by the ‘boundary chains’ approach in the Great Lakes region (Lemos et al., 2014). Specialized planning processes, such as hazard mitigation planning, can also constrain comprehensive assessments of flood risks based on the limited objectives of the planning process (Highfield et al., 2014). Mindful of calls to improve collaborative approaches between scientists and practitioners for climate adaptation (Mastrandrea et al., 2010), the NJCAA began the developing a deliberative approach for comprehensively considering sea-level rise and coastal storms for New Jersey in fall 2015.

The NJCAA organized two working groups of (1) scientists and (2) practitioners to develop state guidance that would incorporate expertise and participation across different areas of professional practice, including urban planning, engineering, coastal ecology, public health, and other professions (Kopp et al., 2016). NJCAA facilitators posed charge questions to each working group that reflected the need to focus on assessing the robustness of scientific evidence for future changes in local sea level rise (SLR) and coastal storms, and the ways that practitioners could use the scientific evidence in urban planning processes considerate of social, environment, and economic outcomes (Kopp et al., 2016). NJCAA staff, including research team members, facilitated three formal meetings of the working groups, held in-person interviews with working group participants, and conducted additional interviews and focus groups outside of the working groups when participants recommended additional perspectives from other areas of professional practice. We use a combination of methods from Vella et al. (2016) and conceptual frameworks from Lemos et al. (2014) to analyze the notes, questionnaires, and other process documentation created throughout the development of the final guidance for practitioners.
Interviews, working group observations, and participant questionnaires reveal practitioners value choices and illustrative examples when deciding how to interpret and communicate future flood hazards and adaptation alternatives within different planning processes. Furthermore, our analysis supports employing several communication strategies in state guidance that address practitioners concerned with the height of future flood exposures relative to physical infrastructure, rates of SLR for adaptive ecological systems, and the increasing frequency of exposure to nuisance flooding. Interviews and questionnaire responses also suggest professionals gain from the capability to relate different methods of communicating SLR, in addition to instructions on choosing between scenario-based or probabilistic communication techniques in different process circumstances. We conclude by examining the NJCAA position in the ‘boundary chain’ and the implications of future organizations acting on a collaboratively developed scientific basis for adaptation planning.

References


Key Words:
climate adaptation, adaptive governance, regional planning, sea level rise, coastal hazards

EVALUATING PROCESS DURATION AND DELAY IN ENVIRONMENTAL PERMITTING

Abstract ID: 119
Individual Paper Submission

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From upgrading out-of-date infrastructure systems, to building new infrastructure to support growing populations, public infrastructure is a critical concern for cities around the world. An important factor in developing safe and effective infrastructure projects are permits, which ensure that projects provide the benefits they promise without harming the environment. However, while permits are critical for preserving habitats and protecting air and water quality, the complexity of the environmental permitting process often results in longer review times, increased administrative costs, and overall delay of potential benefits to come from the project (Decker 2003; Kosnik 2006; Hammah 2015). As proposed infrastructure is increasingly innovative (and unfamiliar to permitting agencies), these costs are expected
to grow. Identifying ways to hasten the environmental permitting process without compromising environmental rigor is important for enabling governments to create resilience-building infrastructure efficiently and effectively.

Despite the ubiquity of permitting as a tool for planners to mitigate environmental harm, the extant literature has paid little attention to how permitting occurs and whether the process is effective. The few studies that do exist tend to be siloed, with engineers only considering environmental and project factors, legal scholars evaluating the regulatory regime, and political scientists focusing on social and political factors. However, according to interviews, these features all play a role and interact in interesting ways (summarized in a recently-published framework of factors hypothesized to affect permitting efficiency and effectiveness) (Ulibarri, Cain, and Ajami 2017).

This paper presents an empirical evaluation of factors affecting permitting delay. Using a novel dataset of Clean Water Act Section 404 permits issued for projects in the Southwest US, I evaluate the relationship between time to permit and characteristics of the projects, applicant organizations, the regulatory regime (including which other permits were required), and level of collaboration between permitting agencies and applicants. Data were compiled from permit public notices and a survey of permit applicants. A survival analysis is used to model the relationship between time to permit and the hypothesized mechanisms.

This analysis provides empirical evidence of which factors are most prominent in leading to permitting delays, offering critical information for local, state, and federal regulatory agencies to redesign their permitting approach. This has many potential impacts for the practice of planning, from local land use agencies developing new ordinances to environmental planning consultants shepherding projects through for developers. Additionally, by evaluating the effect of agency-agency and agency-applicant coordination, this work contributes to our understanding of when and why collaborative, networked approaches to environmental planning and management are effective (Margerum 2011).

References


Key Words:
environmental permitting, water quality, process efficiency, infrastructure

TRANSFORMATION: FROM PROTECTIVE INFRASTRUCTURE TO MULTI-FUNCTIONAL LANDSCAPES
Abstract ID: 161
Individual Paper Submission

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Theoretical Context and Questions
In the face of climate change there is an emerging consensus among researchers that local transformations are necessary in order to avoid the most catastrophic of losses. Specifically, when it comes to rising sea levels in the San Francisco Bay, increased flooding and habitat loss are among the greatest concerns. Based on the conception of transformation from Geels we are interested in understanding how a switch from single purpose protective infrastructure to multi-functional landscapes can be achieved (2002). In this context our research explores three critical questions regarding the potential transformation of coastal infrastructure in the San Francisco Bay: 1) Where could coastal infrastructure be transformed? 2) What would it cost to shift from static landforms as our means of protection to multi-functional landscapes? and 3) How are the cost distributed between different communities?

Approach and Methods
In our analysis we use sea level rise data developed by the US Geological Survey and shoreline infrastructure data from the San Francisco Estuarine Institute (SFEI) to assess potential transformations of over 150,000 shorezone segments. To do so we use the following four key steps. First, we apply the swarm planning concept developed by Roggemma to identify potential sites for transformational change (2012). Second, we apply a reclassification scheme to match SFEI data with the simplified typology developed by Hill (2015). Third we use a rapid assessment of overtopping to determine which shorezone infrastructure will experience flooding under which sea level rise and storm surge scenarios. Finally, based on project specific cost estimates we evaluate the potential for different climate adaptation strategies.

Preliminary Findings and Contributions
The preliminary findings suggest that some sites around the San Francisco Bay lend themselves more to transformations of protective infrastructure. Additionally, our work shows that switching strategies can be cost effective and that using multi-functional landscapes is a viable option for climate change adaptation. We also find in our preliminary results that cities with lower revenue streams will bear a greater cost burden than those with higher revenue streams. This work contributes to the literature on climate adaptation planning and local practice, by proposing a method for a cost benefit analysis in the context of sea level rise. Moreover, our work contributes to regional planning efforts, by identifying sites where innovative approaches can be tried and where regional and state agencies may best be able to help local governments.

References
ADAPTATION THROUGH METROPOLITAN OR TRANS-MUNICIPAL NETWORKS: CONVERSATIONS BETWEEN THEORY AND PRACTICE

Abstract ID: 183
Roundtable

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SHI, Linda [Cornell University] lindashi@mit.edu, co-organizer

Participants:
William Butler, Florida State University Department of Urban and Regional Planning
Kian Goh, University of California Los Angeles Department of Urban Planning
Linda Shi, Cornell University Department of City and Regional Planning
David Erickson, Senior Environmental Officer, City and County of Denver

Climate change has profound implications for urban settlements, and cities worldwide have emerged as leaders of adaptation innovation and implementation despite the absence of national mandates, incentives, or support for climate adaptation. In these efforts, local practitioners rank learning from peers as one of the most important sources of climate adaptation information to cope with the overwhelming complexity and uncertainty of climate impacts. Networks provide an opportunity for cities to exchange information and learn from each other have been demonstrated to motivate, enable, and shape adaptation at the municipal level (Kern and Bulkeley, 2009). Through networks, member cities can access resources for adaptation planning, gain knowledge about their climate vulnerabilities and potential adaptation strategies, and develop political support for action.

Two distinctive sets of networks have emerged: dispersed transmunicipal networks and place-based metropolitan networks. On the one hand, trans-municipal networks for climate change, such as the Rockefeller Foundation’s 100 Resilient Cities and Dutch Delta Cities, connect elite cities around the world and provide them with technical assistance, financial resources, and new national or global platforms. Seen from this perspective, "global" cities share more in common with one another than with neighboring jurisdictions (Sassen, 2002). On the other hand, new adaptation initiatives, such as the Southeast Florida Regional Climate Change Compact and regional climate collaboratives in California, are deeply grounded in managing the localized impacts of climate change on existing metropolitan regions.

Advocates of climate adaptation, and of climate action more broadly, have supported both types of networks as necessary to advancing adaptation on the ground. However, the two types of networks mobilize different sets of actors and political agendas, and require critical evaluation and reflection on the benefits they provide and unintended consequences.
The panel combines academic thinkers who approach environmental networks from different theoretical approaches with practitioners of climate adaptation. It seeks to understand from both pragmatic and critical perspectives the similarities, differences, contradictions, and intersections of these two forms of planning networks. How do these networks articulate goals for adaptation, resilience, and sustainability? Who has access to these networks and how do their members benefit? Who is left out? Do these networks operate synergistically, in parallel, or even at odds with one another? Do they reinforce existing uneven development or layer on a new geography of uneven development in what Hodson and Marvin (2010) call "ecological enclaves"? In what ways do or could networks – spatial and aspatial – facilitate more equitable and ecologically sustainable development?

References


Key Words:
climate change, adaptation, resilience, networks, regional

ASSESSING THE INFLUENCE OF HAZARD MITIGATION PLANNING IN THE WAKE OF HURRICANE MATTHEW

Abstract ID: 185
Individual Paper Submission

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Since passage of the Disaster Mitigation Act of 2000 (DMA), federal, state, and local governments have invested hundreds of millions of dollars in pre-event hazard mitigation planning, particularly in coastal states. Pre-disaster local mitigation planning prioritizes actions to reduce hazard risks through empirically grounded professional analysis and participatory goal setting involving the public (Masterson et al. 2014). Disaster recovery decision-making processes provide critically important windows of opportunity for reducing future hazard risks by learning from and avoiding past activities that contributed to risk and losses (Berke et al. 2015, Smith 2012). Current policy and theory assumes deductively that developing a local pre-disaster mitigation plan should result in better post-disaster decision-making and result in more effective long-term risk reduction. Yet, such assumptions have received minimal testing. Recovery from Hurricane Matthew, which hit the southeastern United States coast in October 2016, presents the perfect opportunity to test these assumptions.

This research extends understanding of if and how hazard mitigation plans are used in disaster recovery processes and provides policy makers and practicing planners insights on better coordinating long-term mitigation efforts and recovery efforts. We leverage the natural experiment presented by Hurricane Matthew and conduct web-based surveys of local officials leading hazard mitigation and recovery processes. The sample consists of counties and cities included in Matthew disaster declaration areas in
North Carolina, South Carolina, Georgia and Florida. We couple our data with multiple extensive datasets on hazard mitigation planning and implementation collected previously as part of a six-year national study of DMA planning (Berke, Lyles, Smith 2014, Lyles, Berke, Smith 2016). This coupling enables longitudinal analysis of jurisdictions in three impacted states, namely Florida, Georgia, and North Carolina. Survey questions focus on the use of hazard mitigation plans during the post-Matthew recovery process. The resulting data documents usage of mitigation plans in post-disaster decision-making, the deliberations and rationales for recovery decisions, and stakeholder perceptions of the impact of mitigation planning.

Notably, the study overcomes two barriers to systematic analysis of the relationships between mitigation planning and post-disaster decision-making. First, few large datasets exist on pre-disaster hazard mitigation planning. Second, natural disasters have not occurred in places that align with the few large datasets that do exist. Moreover, studies of pre-disaster mitigation planning have largely focused on plans as ends unto themselves and studies of disaster recovery have largely focused on single-case studies. Collecting data on local decision-making in the wake of Hurricane Matthew and linking the perishable data to pre-existing datasets on mitigation planning that align perfectly with the hurricane’s track in October 2016 provides a unique opportunity to critically and empirically examine theories and assumptions about the influence of pre-disaster mitigation planning.

Analysis of the combined datasets through multivariate regression analysis and qualitative case studies enables us to test the general assumption that localities with higher quality mitigation planning engage in more informed and efficient post-disaster decision-making that can more effectively reduce long-term hazard risk.

References

Key Words:
plan evaluation, plan use, implementation, hazard mitigation, disaster recovery

A LONGLITUDINAL ANALYSIS OF HOUSEHOLD RECOVERY AFTER 2012 HURRICANE SANDY
Abstract ID: 200
Individual Paper Submission
Long-term recovery involves the reestablishing of patterns of everyday life for affected households and potentially improving their resiliency to future disaster events. There is growing evidence that recovery is a highly dynamic and constantly evolving process--a household's recovery needs often change over time and its recovery trajectory depends on decisions made by other stakeholders. Yet, most studies continue to examine at household recovery in isolation and at a cross-section in time, instead of over time as part of a system. The lack of such a longitudinal and interactive perspective limits our ability to provide aid and assistance that is relevant to households both, in the immediate aftermath of a disaster as well as over time as the process evolves.

In this paper, we examine long-term recovery trends based on three annual household recovery surveys conducted between 2013 and 2016 in fifteen zip codes of New York City, NY severely affected by the 2012 Hurricane Sandy, as well as over 30 key informant interviews held with households, non-profits and local officials in New York City. Using descriptive statistical analysis and content analysis methods, we conclude on evolving recovery priorities of households over time, changes in their relationship with primary (family, friends and neighbors) and secondary (local and extralocal agencies) social groups, and how this relates to the changing recovery aid environment in New York City. Funding for this study was obtained from the National Science Foundation and the Natural Hazards Center at Boulder, Colorado.

References


Key Words:
Disaster, Recovery, Longitudinal, Household

THE THIRSTY URBAN LANDSCAPE: ANALYZING THE RELATIONSHIP BETWEEN YARD TREES AND IRRIGATION IN A SEMI-ARID CITY

Abstract ID: 203
Individual Paper Submission

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Urban trees yield a wide array of benefits, from micro-climate regulation to aesthetics. However, in many cities of the semi-arid west, trees do not grow naturally without irrigation, which raises the question of how much of a city’s constrained water budget should be invested in supporting such vegetation. Western water utilities are increasingly working with city foresters to tackle this question but considerable uncertainty remains. This research contributes information to the debate by analyzing yard irrigation in the Denver metro area. The presentation both frames the planning and policy issues around water use for tree irrigation in semi-arid cities and details findings of our data analysis. Our analysis modeled shade in residential yards over the course of the day in the summer months using high resolution LiDAR (Light Detection and Ranging) data. Vegetative composition of each yard was also classified using color infrared aerial imagery and LiDAR data. Individual water consumption by parcel for peak summer months was obtained for several municipalities in the region from utilities. Irrigation consumption was estimated by subtracting baseline average winter consumption rates from average summer rates. Within the population sample, each parcel’s exterior summer water consumption was then regressed against factors such as: amount of tree, grass and shrub coverage in the yard; tree type (coniferous/deciduous and species); tree height; amount of tree shade hitting irrigable surfaces; and amount of impervious area, among others. Our intent is to validate this using a set of recently developed modeling equations for estimating transpiration rates of irrigated urban yard trees, for which we have obtained all the necessary input parameters (Litvak, McCarthy and Pataki 2017). Our analysis will also address the extent to which the relationship between irrigation rates and yard vegetation is mediated by social or policy factors such as homeowner association rules, which have been found to significantly affect yard irrigation rates (Wentz et al. 2016). While it seems intuitive that more vegetation should equate to more irrigation, our preliminary findings suggest a more complex set of relationships. The quantity of grass is strongly correlated with irrigation but we see no clear and significant relationship between mature tree cover and irrigation. More importantly, the amount of tree shade is significantly inversely correlated with irrigation, suggesting that large canopy trees decrease water stress on underlying and nearby turf grass, which is the primary target of most homeowners’ irrigation efforts, a result consistent with recent literature (Litvak, Bijoor and Pataki 2013). Previous research and anecdotes from water and landscape managers suggests a potential explanation: homeowners tend not to irrigate mature trees, whose survival may potentially be attributable to a combination of incident infiltration from nearby lawn irrigation or taproot access to groundwater/ leaky sewer or storm lines (Bijoor et al. 2012)---in essence yielding a form of water recycling. These preliminary results, therefore, suggest that for those homeowners who wish to maintain lush lawns, shade-producing canopy trees may serve to save more water than they use, although further analysis is needed to confirm this and determine how this varies with context and conditions. Findings from this research will help water utility managers and urban foresters in the West make more informed decisions about how much to plant, where to plant, what to plant, and how to manage vegetation once planted. It will also help western cities better plan for future climate change adaptation through scenario modeling (Gober et al. 2010), as rising temperatures and reduced precipitation change the water requirements for yard vegetation and add further constraints to urban water budgets.

References


Key Words:
Urban water planning, Residential irrigation, Water conservation, Yard management, Environmental design

URBAN FORM AND RESIDENTIAL ENERGY CONSUMPTION: EXPLORING THE SEASONAL VARIATION OF THE RELATIONSHIP IN CHICAGO
Abstract ID: 215
Individual Paper Submission

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It has been suggested that the way we design and develop our cities can influence energy use in residential sectors significantly, but the relationship between urban forms and residential energy consumption still remains unclear (Ko, 2013). In particular, the relationship can vary across seasons (Wilson, 2013), as well as surrounding socio-economic and physical conditions. For instance, while a compact development is often found to be correlated with a higher level of energy efficiency (Ewing and Rong, 2008), it can also lead to an increase in local temperatures due to reflected heat from pavement in urban areas and thereby prompt residents to consume more cooling energy (Stone and Rodgers, 2001). This study investigates how various dimensions of urban forms are associated with residential energy consumption, with explicit consideration of the possible seasonal variation, using detailed building energy use information from the City of Chicago. More specifically, by employing a spatial econometric model, it analyzes the effects of a group of urban form indicators (including density, edge contrast, imperviousness, and vegetation) on the amount of residential building energy use in each season and the energy consumption ratios between seasons. In doing so, attention is also paid to the sensitivity of the results to the (spatial) scale of measurement.

The results show that while a higher density generally reduces the amount of residential energy consumption per housing unit, it is likely to increase the ratio of summer energy use. Impervious surface is also found to increase the amount of energy use in summer perhaps due to the urban heat island effect, whereas it tends to reduce the ratio of energy use in winter compared to the baseline (normal) season. Vegetation measured in the normalized difference vegetation index shows a reduction effect on energy use throughout seasons, but the magnitude is much greater in summer than other seasons, suggesting that plants would provide a large amount of cooling benefits in the study area.

Urban planners have paid considerable attention to urban form as a key determinant of energy use and possible ways to improve or modify our built environments to increase energy efficiency. The present study suggests planners to revisit traditional implications of urban forms with the consideration of complicated and dynamic interactions with other conditions. In addition, it is important for planners to take more prudent and sensitive approaches toward urban forms as tools of energy conservation policies because many urban forms can have different impacts on residential energy consumption in different seasons.
INFLUENCE OF THE ROAD CHARACTERISTICS ON THE SPATIAL VARIABILITY OF URBAN HEAT ISLAND: A CASE STUDY OF ULSAN, KOREA

Abstract ID: 220
Individual Paper Submission

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Rapid urban growth and an increase in the amount of impervious surfaces in cities induces changes in the urban climate that is generally warmer than the rural surroundings. This phenomenon is well known as the urban heat island (UHI). In urban areas, a considerable amount of the impervious surface comprises road surface covered by concrete or asphalt, and the radiant temperature of the road surface is one of the major heat sources that causes UHI (Park et al., 2016). Furthermore, the road is essential part of daily living space for community life, thus the thermal condition of the road is one of the important factors that determine the quality of the urban environment.

Accordingly, considerable number of studies have examined the associations between the built environment and thermal conditions. Those have reported that micro-scopic features such as road width, height/width ratio of the buildings, sky view factor and orientation of road are influential factors in changing the thermal conditions of the roads (Eliasson and Svensson, 2003; Kolokotroni and Giridharan, 2008; Coseo and Larsen, 2014). However, the study that accounts for both macro characteristics of the city such as the geographical characteristics and the micro built environment is rare. The purpose of this study is, using near-surface air temperature measured from 51 sensors in the city, to examine how different geographical features of urban road affect thermal conditions of the road while climate conditions and other physical characteristics of the roads are controlled. The study city, Ulsan, Korea, is a coastal city that contains diverse geographical features. Air temperatures of the city were collected from January 1st to December 31th in 2016.

Analysis in this study consists of two parts. The first part is diurnal cycles of urban heat island intensity (UHII) of road with different geographical context. The UHII is defined as the air temperature difference between a location in a specific geographical context and reference rural locations at a specific time. In the second part, we conducted statistical analysis to examine the influence of four geographical contexts of the roads for daytime and nighttime in summer and winter season on UHII, while controlling other
physical factors of road and meteorological characteristics. Physical factors of the road includes distance to city center, building surface fraction, road width, sky view factor, street orientation, and meteorological features are relative humidity, wind speed, cloud cover. Since the physical characteristics of road has spatial variability while meteorological characteristics varies in time, we conducted a multilevel modeling.

The study results showed that there are significant differences in UHII pattern for different geographical contexts of road. In summer, average UHII of the roads located near the coast, river, and natural green space were 1.8°C, 0.6°C, and 0.4°C lower than those located in built-up area in daytime (9am to 5pm), respectively. In nighttime (9pm to 5am) only the roads located near the natural green space showed lower UHII than built-up area. In winter season, daytime (11am to 4pm) UHII had similar pattern with summer, but there was strong UHII in roads located near the coast in nighttime (9pm to 7am).

Proximity to the coast and rivers has larger influence on lowering the daytime atmospheric temperature than the natural green spaces. But atmospheric UHI become more pronounced during nighttime due to the slow release of the heat from urban infrastructure. The study findings imply that, to alleviate the tropical weather phenomenon in summer, natural green spaces near urbanized areas are required to be conserved.

References

Key Words:
Urban Heat Island Intensity, Road Characteristic, Geographical Context, Diurnal Cycle, Seasonal Variation

PLANNING FOR HEAT: CAN GREEN INFRASTRUCTURE REDUCE EXPOSURE OF THE MOST VULNERABLE NEIGHBORHOODS?
Abstract ID: 272
Individual Paper Submission

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In the U.S., extreme heat is the most deadly weather hazard. Between 1986 and 2015, an average of 130 people a year died due to extreme heat. As a result of climate change, the intensity, frequency, and
length of extreme heat events is projected to increase. Consequently, heat related mortality and illness and are projected to increase as well.

As with other natural hazards, vulnerability to heat is not simply a function of temperature; vulnerability is dependent the characteristics of the population that determine its ability to anticipate and respond to extreme heat events. The elderly, infants, and people with chronic respiratory and cardiovascular diseases are physically more susceptible to excessive heat. The poor and socially are also more likely to suffer from heat illness and mortality due to the lack of access to resources and networks to respond and cope with exposure.

The built environment may exacerbate the risks of extreme heat among the most vulnerable populations. People that lack the resources to cope with extreme heat also tend to live in neighborhoods with greater exposure to heat stress due to sparse vegetation, lack of open space, and high impervious surface cover.

There is growing recognition that proactive planning can prevent many of the adverse health effects of extreme heat. The U.S. EPA encourages cities to increase tree canopy, install green roofs, and employ other greening techniques to reduce urban heat. Many cities have followed these recommendations and developed plans to mitigate future heat risks. In this presentation, I will examine how green infrastructure in the Chicago Metropolitan Area can reduce temperatures in the most vulnerable neighborhoods.

In July 1995, a heat wave killed more than 700 people in Chicago. Analyses of the event found that individuals that had pre-existing medical conditions, that were socially isolated, that did not have access to air conditioning, and lived in poor neighborhoods were at greatest risk of dying. Heat remains an issue in Chicago; with climate change the city may experience a six fold increase in days over 100°F. The city has taken proactive action to green the neighborhoods with highest temperatures; in particular, Chicago has become a leader in the installation of green roofs. These actions are highlighted in Chicago’s climate action plan.

By combining social vulnerability indices with climate modeling, I address three questions: Are the most vulnerable populations in Chicago currently exposed to higher temperatures? How will climate change affect the relationship between vulnerability and exposure? And, lastly, can green roofs reduce temperatures in the most vulnerable neighborhood?

The findings of this research advance planning scholarship and practice, by further exploring the tension between environmental planning and equity. Climate change adaptation occurs within a landscape of inequities in exposure to hazards and access to resources. Understanding these patterns and how our plans and actions may affect these patterns in the future is critical in creating more sustainable and urban environments. While many argue that climate change adaptation must create transformational change that redistributes resources within our communities, whether adaptation actually improves distributive outcomes remains an open question. This research provides new insights into these important questions and provides a template that could be used for exploring other climate hazards.

References


Key Words: heat, social vulnerability, green infrastructure, climate change adaptation

FIRE RISK AND ENVIRONMENTAL JUSTICE IN THE WILDLAND-URBAN INTERFACE

Abstract ID: 283
Individual Paper Submission

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As Southern California becomes hotter and dryer, the region’s notorious wildfires are likely to increase in both frequency and severity. However, the climate is not the only variable changing. Urban development and ecological disturbance continue to expand into the wildland-urban interface, rendering an increasing amount of urbanized land vulnerable to wildfires. At the same time, more low-income people of color are moving out of central cities and into inner-ring suburbs, even as desirable open space-adjacent neighborhoods remain predominantly white and upper-income. Managing wildfire risks requires investing public resources in risk mitigation, fire suppression, and post-fire recovery. An increasingly diverse suburban population may therefore be footing the bill to maintain open spaces to which they currently have little access. This paper synthesizes insights from urban planning and ecology to address the following question: how do the populations living inside and outside wildfire-prone areas compare in terms of poverty and race, and how has this changed since the 1970s?

This paper uses Orange County, California as a case study. With its increasingly diverse population, Orange County is prototypical of American suburbia’s future. And with an expanding wildland-urban interface, Orange County is an ideal site to analyze the changing geography of ecological and social vulnerability. Four time periods are examined: the 1970s, 1980s, 1990s, and 2000s. For each decade, the proportions of residents who are nonwhite and the proportion who are below the poverty line is measured at the census tract level, using data from the corresponding decennial census. Census tracts that intersect with the boundary of any fire occurring in that decade (as mapped by the State of California’s Fire and Resource Assessment Program) are classified as wildfire-prone areas. t-tests are then used to determine if these areas significantly differ from the rest of the county in mean poverty rate and mean proportion of nonwhite residents.

The preliminary results indicate that wildfire-prone areas have had consistently lower poverty and fewer nonwhites than the rest of Orange County. In addition, these two populations have been significantly and increasingly diverging since the 1970s. These findings have significant implications for environmental justice. If low-income communities of color continue to have little access to open space,
then public investment in wildfire management in the wildland-urban interface will primarily benefit affluent local residents. As Orange County’s population grows increasingly diverse, such an imbalance could imperil future political support for wildfire management. As environmental and demographic change reshapes suburbia, researchers must synthesize insights from ecology and planning to ensure that wildlands are protected in a socially equitable manner that ensures all residents’ future enjoyment of this natural resource.

References

Key Words:
climate change, environmental justice, suburbanization of poverty, wildfire, wildland-urban interface

GREEN INFRASTRUCTURE FOR DISASTER RESILIENCE: EXPLORING THE ROLE OF SCENARIO PLANNING
Abstract ID: 378
Individual Paper Submission

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Disaster losses in the United States are growing at an unsustainable rate, outpacing population growth over the past three decades (Gall, Borden, Emrich, & Cutter, 2011). Yet, in most cases hazard mitigation and other forms of resilience planning remain fragmented from other local planning efforts (Berke et al., 2015). Surprisingly, there is still a limited connection between disaster resilience and green infrastructure (GI) objectives in local plans, despite the fact that ecosystem services provided by urban GI features such as parks, open spaces, conservation areas and greenbelt networks have been identified as an essential element of community resilience (Benedict & McMahon, 2012; UNISDR, 2015).

A key challenge limiting the consideration of GI approaches for urban resilience in practice is the lack of a methodology for assessing and comparing multiple and often simultaneous GI functions, which can be complementary or contradictory to disaster resilience goals. Scenario-based planning—a collaborative process for communities to explore alternative visions for the future and learn about their consequences—offers a potential opportunity for drawing these connections more effectively. However, scenario planning as currently practiced has been critiqued for being too formulaic and normative in its methodological approach, often ignoring environmental uncertainties such as hazards and potential climate change impacts (Chakraborty, Kaza, Knaap, & Deal, 2011).

This paper highlights findings from my doctoral dissertation, which tests the utility of innovative scenario planning methods and combined GIS-based planning support tools for drawing stronger connections between GI and disaster resiliency in community planning. It asks: What are the strengths and weaknesses of using integrated scenario planning techniques for generating information about GI’s role in building community resilience?
The analysis focuses on a methodological innovation in which a widely-used scenario planning tool (Envision Tomorrow) is paired with a disaster loss estimation model (FEMA’s Hazus software) to enable enhanced scenario-based assessment of alternative GI/urbanization plans, both in terms of their internal sustainability performance (e.g., estimated per-capita infrastructure costs, jobs-housing balance, street connectivity, etc.) as well as their comparative resilience to environmental hazard scenarios (e.g., estimated physical damage, reconstruction costs, displaced households, etc.). While these spatial planning support systems are each valuable in their own right, this project makes the case that the combination of the separate tools might create unique opportunities to better learn about the consequences of GI alternatives and better frame the argument for GI interventions to meet multiple quality of life and community resilience objectives simultaneously.

Austin and Houston, two rapidly growing Texas cities with significant resilience challenges, serve as test-bed case studies for modeling two types of scenarios with the integrated analytical methods: (1) historical counterfactual scenarios, in which recent flooding events are revisited to retrospectively explore where opportunities for improving resilience with GI planning approaches were missed; and (2) exploratory scenarios, in which alternative GI/urbanization plans are tested across a range of plausible future environmental hazards to compare resilience outcomes. Following the scenario modeling, semi-structured interviews were conducted with practitioners and stakeholders in each case city to gather feedback on the perceived usefulness of the scenarios for drawing connections between GI and resilience objectives. Results of the research include both a discussion of the metrics produced by the integrated scenario analyses, as well as the qualitative feedback on the methodology’s utility from the perspective of local stakeholders.

These issues are critical to consider for a growing number of reasons. Considering the groundswell of support for GI in recent planning research, this project demonstrates the potential for improving community-based understanding about the opportunities for GI to further community resiliency by identifying important relationships during comprehensive or other functional planning efforts. In doing so, the project seeks to improve on popular scenario planning frameworks by integrating community sustainability metrics with disaster loss estimation models. With these improvements, scenario planning offers an opportunity to bridge traditionally separate disciplines in order to better identify GI approaches that are complementary to disaster resiliency and community sustainability goals alike.

References


Key Words:
Green Infrastructure, Disaster Resilience, Scenario Planning, Planning Support Systems, Sustainable Development
EXURBAN RESIDENTIAL DEVELOPMENT AND GROUNDWATER CONTAMINATION RISKS IN SOUTHEASTERN WISCONSIN: SPATIAL PATTERNS AND PROCESSES IN A CHANGING POLICY CONTEXT

Abstract ID: 391
Individual Paper Submission

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Advances in wastewater treatment systems have played a major role in transforming rural landscapes in the United States by reducing the influence of environmental constraints on exurban development patterns. Rural residential development has been driven, in part by improvements in on-site wastewater treatment systems (OWTS), which are designed to collect, treat, and release wastewater adjacent to where it is generated. Advances in OWTS technology have facilitated residential construction on sites where soil conditions previously inhibited unsewered development. OWTS can present environmental and public health risks by contaminating groundwater, surface water, and privately owned wells. These risks are most significant among OWTS that are near the end of their expected life spans, are not properly maintained, were installed when regulations were less stringent, or are located in densities that surpass the soil’s ability to safely treat wastewater effluent.

In this presentation, we examine major OWTS policy changes for the state of Wisconsin and characterize rural development patterns in one county over the past six decades. We used a geographic information system (GIS) to spatially analyze the distribution of OWTS in Ozaukee County, within the Milwaukee metropolitan area, and to identify locations with heightened risk of groundwater contamination. Our research integrates spatial data on private well-water quality, groundwater contamination vulnerability, land development patterns of unsewered rural residential subdivisions, and the type and age of OWTS installed on residential parcels. Our findings explain how OWTS density, age, and type are distributed spatially, and how these spatial patterns may influence groundwater quality under various hydrogeological settings.

This research has the potential to improve local land use policy and planning practice by providing a spatially-explicit approach to assessing groundwater risks from exurban land development. The study contributes to methodological advances in groundwater contamination risk assessments by linking the analysis of land use patterns with groundwater vulnerability using an overlaid multivariate GIS. This project is a pilot study for future research to assess regional water quality vulnerability and health risks using OWTS permit data, land use/cover data, and groundwater model overlays within highly developed exurban landscapes.

References


Key Words: environmental planning, land use policy, landscape change, groundwater vulnerability, geographic information systems

THE ENVIRONMENTAL OUTCOMES OF PUBLIC OPEN SPACE IN RESIDENTIAL SUBDIVISIONS
Abstract ID: 426
Individual Paper Submission

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Most local governments in the United States require that developers set aside open space when subdividing land for residential development. This strategy for creating public space in largely private suburban communities and has been common for nearly a century. A 1941 study of subdivision regulations found that 103 of 284 reviewed regulations addressed public open space in new subdivisions (Lautner 1941). Public open spaces are a part of much of the suburban landscape of the United States and account for thousands of acres of accessible green space in neighborhoods. Standards vary, but requirements are frequently set between 5% and 10% of the total subdivided area. Subdivision regulations also commonly include provisions intended to maximize the environmental and recreation benefits of the space, for example by encouraging developers to connect public open space to other local green spaces. But the impact of these types of regulations on on-the-ground open space characteristics and configurations is unclear. While residential public open space has significant potential for supporting the natural environment, there is little research on the contents of the regulations and the size, use, and connectivity of the resulting open spaces. This research seeks to understand the characteristics of residential open spaces created in Montgomery County, Pennsylvania over the past 60 years, their relation to the provisions of local subdivision regulations, and the degree to which they include and enforce characteristics that support the natural environment and green space connectivity.

The study begins with a review of municipal subdivision regulations in Pennsylvania. The review details the characteristics of select public open space requirements, with a particular emphasis on the strength of the requirement (e.g. mandatory or negotiated), amount of open space, use or management of open space, and provisions for connecting open space to nearby green spaces. Results show that many local governments mandate open space percentages, but recommendations are more common for characteristics like use, management, and connectivity.

The paper then examines the characteristics of existing residential public open spaces in Montgomery County, Pennsylvania. Montgomery County is within the Philadelphia metropolitan area and provides planning support for 52 municipalities. All but one of these communities has experienced significant subdivision and land conversion over the past 60 years. Using tax parcel data, satellite imagery, and site visits, I examine the size, use, management, and configuration of over 100 public open spaces across Montgomery County. The data elucidates the characteristics of residential open spaces in the county and the connection between each on-the-ground open space and its associated subdivision regulations.
Informal interviews with planners working in Montgomery County clarify the potential reasons for the observed outcomes.

Local subdivision regulations include a variety of recommendations associated with residential public open space, but this study finds that the provisions that are most supportive of the natural environment – use and connectivity regulations – are advisory and not strictly enforced. As the urban-rural fringe continues to develop, and natural systems are converted to development, individual open spaces have the potential to support important environmental services. When connected to other open spaces, they can have an even broader landscape-scale impact. This research suggests that public open spaces are often environmentally underutilized, but provide an opportunity for planners and decision-makers to support the natural environment in areas where functional systems and connectivity are in short supply.

References

Key Words:
Open space, Subdivision regulations, Connectivity, Green space

MOBILE SENSING OF AIR QUALITY ASSOCIATED WITH STREET TREES
Abstract ID: 427
Individual Paper Submission

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Street trees provide numerous human health, aesthetic and ecological benefits that support urban livability and environmental quality (Taylor et al. 2015, Burden 2008). Among this bundle of benefits is street trees’ contribution to mitigating air pollution or improving air quality (Burden 2008). Air quality affects health outcomes, and, globally, exposure to poor air quality is associated with up to 7 million annual early deaths (Nyhan et al. 2016).

Nonetheless, it is clear that the exact parameters of street trees’ contribution to both health and air quality at the urban street-level scale is yet to be fully documented. Even studies employing otherwise “big” data or explicit spatial locations (e.g. Amorim et al. 2013, Nyhan et al. 2016) employ models to estimate micro-scale air quality. Yet, the work of Taylor et al. (2015) illustrates the promise of findings based on micro-level observations.

Problem Statement
How can communities and practitioners obtain finer-grained air quality information useful in assessing street trees’ air quality contributions? One way forward to obtain finer-grained air quality data associated with street trees is to take advantage of advances in sensor and ‘smart-cities’ technologies and practices in crowdsourced and mobile data collection (c.f. Thakuriah et al. 2017).
The project presented here addresses several areas. The first, collection of micro-scale air quality data that can document air quality associated with presence or absence of street trees in the pedestrian environment. The second is the development and evaluation of a portable device that can sense and record air quality indicators. Finally, the visualization and presentation of this micro-scale data to the public. To this end, our paper addresses these questions:

1. Can we develop a reliable, extensible and usable mobile air quality sensor package that can accurately measure and record air quality parameters?

2. What differences in air quality are associated with the presence or absence of street trees in otherwise similar urban pedestrian environments?

3. How do we best analyze, summarize and display the results of this data collection?

Methods
The project team developed and built a Raspberry-PI based device that deploys the following sensors: barometric pressure, temperature, particulate matter, CO2, wind speed and direction, sunlight intensity and location (GPS). The device records observations on a SIM card or can alternatively to a wireless network.

The device will be deployed to study air quality over the summer of 2017 on streets that are similar in configuration and use, but dissimilar in the amounts of tree canopy present in the pedestrian realm. Data was (will be) collected twice daily (AM and PM) in the months of June and July 2017. Each collection cycle visits geocoded locations and collects the full suite of data, as well as any anomalies that may occur during the data collection cycle. This data will be compared with and benchmarked against stationary arrays of similar sensors deployed on streetlight poles within the study area.

Results
Spatial and statistical analyses and visualization of the data collected will test the hypothesis that increased street canopy has positive effects on local air quality. Results also assess the viability and reliability of the Raspberry-PI based sensor package. Results also include discussion of the project in terms of its feasibility for documenting outcomes, communicate this information to the public, and extend this mobile data collection method to the wider community.

References
A GREEN INFRASTRUCTURE SPATIAL PLANNING MODEL FOR EVALUATING ECOSYSTEM SERVICE TRADEOFFS AND SYNERGIES IN THREE COASTAL MEGACITIES

Abstract ID: 433
Pre-Organized Session: New approaches to planning multifunctional green infrastructure for urban resilience

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Green infrastructure refers to the network of natural or built vegetation in cities (e.g. parks, bioswales, rain gardens, street trees, etc.) that provides multiple social and environmental benefits including stormwater management, mitigation of the urban heat island effect and air pollution, improved mental and physical health for urban residents, and improved wildlife habitat (Tzoulas et al., 2007). A growing number of organizations and cities are investing in green infrastructure as a way to provide these various ecosystem services and to enhance urban resilience (Ahern, 2011). While green infrastructure is often promoted on the basis of its multifunctionality, in practice, most studies and plans focus on a single benefit, such as stormwater management (Keeley et al., 2013). This represents a missed opportunity to strategically site green infrastructure to leverage social and ecological co-benefits and a potential injustice, since many benefits are localized. Moreover, little research has examined potential synergies or tradeoffs between ecosystem services (Kremer et al., 2016).

This paper addresses this gap by presenting the Green Infrastructure Spatial Planning (GISP) model as stakeholder-informed tool for identifying spatial tradeoffs and synergistic ‘hotspots’ for multiple ecosystem services and applying it in three diverse coastal megacities: New York City, Los Angeles (United States) and Manila (Philippines). The model combines GIS-based multi-criteria evaluation and stakeholder-derived weights. The six model criteria represent commonly cited benefits of green infrastructure (managing stormwater, reducing social vulnerability, increasing access to green space, mitigating the urban heat island effect, improving air quality, and increasing landscape or habitat connectivity). These are combined and weighted based on local expert stakeholders’ planning priorities, as determined through surveys and workshops in each city. The GISP model was initially applied in Detroit, Michigan, demonstrating the value of the approach and interesting synergy and tradeoff patterns (Meerow and Newell, 2017). But as a legacy city with extensive vacant land, Detroit’s situation is not representative of many cities worldwide. Most megacities are rapidly growing and have limited open space. This paper tests the transferability of the GISP model to very different urban contexts and enables a broader comparison of spatial synergy and tradeoff patterns and green infrastructure planning priorities. Qualitative interviews with local decision-makers in each city help to further contextualize the models and provide a deeper understanding of local green infrastructure planning opportunities and challenges.
The results empirically illustrate the complexities of planning green infrastructure and urban resilience more generally. Priority areas for green infrastructure expansion clearly differ depending on decision criteria. Certain spatial synergy and tradeoff patterns are consistent across the three cities. The stormwater, urban heat island, and air quality benefit criteria are positively correlated, but results show there may be a tradeoff between these criteria and habitat connectivity. This suggests that even if stormwater is the focus of green infrastructure investments, it may still be strategically sited to capture urban heat island and air quality co-benefits. Stakeholders do indeed identify managing stormwater as an important goal in all three cities. In contrast, the relative importance of improving air quality or reducing social vulnerability differs across the cities. This variation confirms the importance of evaluating community preferences and integrating them as part of a strategic green infrastructure planning process.

References

Key Words:
green infrastructure, urban resilience, ecosystem services, spatial planning, megacities

A CO-PRODUCTION FRAMEWORK FOR GREEN INFRASTRUCTURE PROJECTS: OPPORTUNITIES AND BARRIERS TO INFORM “DESIGNED EXPERIMENTS”

Abstract ID: 434
Pre-Organized Session: New approaches to planning multifunctional green infrastructure for urban resilience

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This study addresses knowledge gaps in operationalizing a type of collaborative participatory process known as co-production. Urban ecologists suggest co-production supports knowledge-to-action processes that result in better and more socially contextual green infrastructure outcomes. At the same time, city officials are increasingly interested in measuring the multiple benefits of their urban vegetated networks or green infrastructure. The co-production concept links these partners that include ecological scientists, planners/designers, city residents, and students to collaboratively generate 1) design documents, 2) maintenance practices, and 3) monitoring protocols for improved outcomes (Childers et al., 2015). Current green infrastructure planning practices attempt to incorporate the latest published science, yet a key disconnect is that urban ecologists creating those studies have typically not been actively involved with the planning, design, maintenance, and monitoring of these projects (Steiner, Simmons, Gallagher, Ranganathan, & Robertson, 2013). To address this key disconnect between
knowledge and action, Felson and Pickett (2005) proposed the concept of designed experiments or co-produced urban design projects as ecological tests. For this study, we use surveys and semi-structured interview instruments to develop a Co-Production Framework for green infrastructure designed experiment projects. The conceptual foundation of the Framework is the Childers and colleagues (2015) Urban Design-Ecology Nexus model. The Framework provides a testable model for our central question of how governance and institutions can support the design of equitable, sustainable, and resilient green infrastructure projects. To answer the question, our Framework has two components: 1) the design process phase and 2) maintenance/monitoring phase. Both components entail co-production. The integrated research elements in the monitoring phase are based on a Before-After-Control-Reference-Impact (BACRI) experimental design. Each portion of the Framework was created by integrating findings from the survey and semi-structured interview instruments. The surveys and interviews allowed us to map how existing long-term social and biophysical data could improve green infrastructure decision-making processes and project outcomes. We surveyed and conducted interviews with participants (i.e. ecological scientists, planners/designers, city residents, and students) involved with five green infrastructure designed experiment projects in the Phoenix, Arizona metropolitan area: 1) a low impact development (LID) campus master plan; 2) two LID streetscape projects; 3) a wildlife corridor preservation project; and 4) a sustainable landscape conversion project for a home owners’ association. Based on the surveys and interviews, we will discuss the opportunities and barriers to such an approach. The findings from this study begin to articulate how academic institutions may partner with governing organizations to collaboratively integrate the best science into green infrastructure project processes to achieve more equitable, sustainable, and resilient outcomes. We also discuss how co-production of maintenance and monitoring protocols can be integrated into existing city processes and how the protocols could be scaled-up and adapted to different neighborhoods as needed. This research may inform pathways to institutional transformations such as Larsen’s (2015) idea of creating public green infrastructure “utilities” as a way to manage and ensure equitable distribution of ecosystem service benefits. The Framework provides a model for creating better functioning and more responsive green infrastructure networks that increase their adaptive capacity by integrating on-going social and biophysical feedback mechanisms.

References


Key Words:
Green Infrastructure, Environmental Planning, Co-production, Ecosystem Services, Urban Resilience
DEVELOPING PLANNING TOOLS AND STRATEGIES TO USE GREEN INFRASTRUCTURE TO MAXIMIZE COMMUNITY, ECONOMIC, AND ENVIRONMENTAL BENEFITS, AND ENGAGE COMMUNITIES TO PROMOTE EQUITY

Abstract ID: 435
Pre-Organized Session: New approaches to planning multifunctional green infrastructure for urban resilience

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In Philadelphia, the Water Department has been coordinating with other city and private and non-profit stakeholders to install green infrastructure across the city as a means of addressing concerns about the city’s Combined Sewage Overflow (CSO) as well as promoting community, economic, and environmental ancillary benefits. Given that the city is heavily investing in green infrastructure, our research team is developing a community informed methodology to better connect the multiobjective decision model known as StormWise with community planning concerns (McGarity 2010; Hung et. al 2015). This paper describes the process of taking our Green Infrastructure Equity Index (Heckert and Rosan 2016) down to the neighborhood level by developing what we call, “Zones of Green Infrastructure” or ZIGIs. By bringing the planning process to the neighborhood level through our research partnership with the Village of Arts and Humanities, a community organization based in North Philadelphia, we offer strategies to use various Green Infrastructure practices to support community goals. For instance, at the neighborhood level, we are testing how well our model takes into account equity goals as well as concerns about the risks of “green gentrification” (Checker 2011). We are developing a set of modeling techniques, research protocols, and planning tools that combine citywide goals with neighborhood concerns; we argue that these tools can be adapted to local communities and used to help maximize the benefits of green infrastructure investment.

References

Key Words:
Green Infrastructure, Sustainability Planning, Modelling, Community Planning

PATHWAYS TO URBAN RESILIENCE THROUGH INTEGRATED GREEN INFRASTRUCTURE

Abstract ID: 436
Pre-Organized Session: New approaches to planning multifunctional green infrastructure for urban resilience
The process of successfully designing and planning urban centres is a complex one; it seeks to promote social and economic activities, whilst also addressing a range of challenges, uncertainties and risks. The recent rise of anthropogenic climate change has made this process ever more difficult, in particular the exponential increase in weather-related disruption that has challenged conventional risk-based methods of foresight. Notable events such as the effect of Hurricane Katrina in New Orleans, Super-storm Sandy upon New York and the cascading disasters following the Tohuku earthquake on the eastern seaboard of Japan, highlight the many threats posed to the contemporary city and their agglomeration of urban risk. It is within this context that the need for urban resilience emerges.

Concomitantly, there is a growing interest in the vital role that green infrastructure (GI) makes to the successful functioning of our society, as the “ecological framework for environmental, social and economic health.” More specifically, multifunctional, connected GI has been shown, through the provision of strategically planned green spaces, to offer a host of cross-cutting benefits to urban areas, including the combatting of flood risk, mitigating air pollution, and enhancing health and wellbeing. However, in a period of ‘austerity urbanism’, there is an ‘implementation gap’ between policies that promote the benefits of GI and evidence of successful practice on the ground.

This paper draws of empirical evidence from Birmingham in the UK to demonstrate how new models of green infrastructure delivery can be a vehicle for urban policy integration, end-user collaboration and innovative practice to address climate related risks. Further, urban GI offers the potential for mainstreaming resilient design and planning, providing the adaptive capacity to absorb and mitigate unforeseen events. By bringing together ideals of urban resilience and green infrastructure, we are seeing the advancement of holistic, design-based approaches that offer innovative and forward-thinking solutions to elevated risk and rising uncertainty, forging new relationships between the built environment and the natural environment, as well as an expanding range of urban governance practices.

References


Key Words:
green infrastructure, resilience, urban, governance, planning

INTEGRATED DECISION SUPPORT FOR VACANT LAND REUSE
Abstract ID: 437
Pre-Organized Session: New approaches to planning multifunctional green infrastructure for urban resilience
Post-industrial landscapes in the United States and elsewhere tend to have a preponderance of vacant land located in distressed communities. Associated with blight, disinvestment, filth and crime, vacant land is often considered a barrier to urban revitalization (Goldstein, Jensen, & Reiskin, 2001; Greenberg, Popper, & West, 1990). Thus, communities use a number of strategies including tax sale processes and infill development to manage problems associated with vacant land (Accordino & Johnson, 2000). However, post-industrial cities often face a multiplicity of additional challenges related to infrastructure age and post-industrial disinvestment – including combined sewer overflows, substandard housing, lack of parks and open space and soil contamination. Thus, stakeholders may view vacancy not only as a problem, but also as an opportunity to meet urban resilience goals through permanent interventions or temporary strategies that remedy the “unproductive” aspects of vacant land until other uses are designated through the marketplace. Given these broad sets of challenges, opportunities and pluralist values about how public investments should be allocated, multiple visions for vacant land – from market-rate housing to stormwater management – may exist. Moreover, certain interventions may be mutually exclusive while others allow for multi-functionality. There is a need to develop decision support frameworks which allow for transparency regarding criteria by which vacant land redevelopment opportunities are evaluated; flexibility for stakeholders to adjust criteria based on various value-based scenarios; and evaluation of tradeoffs and synergies among possible interventions. Here, we develop a holistic decision support system that addresses social, ecological and technical dimensions of promoting urban resilience through vacant land reuse in Buffalo, New York. Our approach integrates stormwater optimization modelling with an interactive geographic information systems-based suitability assessment framework that assesses opportunities for distributed green infrastructure, solar energy production and community engagement across sites. As results of suitability analyses are highly sensitive to assumptions regarding criteria and associated importance that stakeholders place on those criteria, our approach allows users to adjust assumptions and perform sensitivity and scenario analysis. We argue that this framework supports tradeoff and synergy analysis for multifunctional reuse strategies, as well as collaborative community planning. If vacant lands are structural phenomena; byproducts of regular boom/bust, decline/growth cycles inherent in capitalist economies (Németh & Langhorst, 2014), then planning practice needs routine decision-making tools for exploring broad ranges of multifunctional possibilities and pluralist values associated with vacant land reuse strategies.

References

Key Words:
Debates over the health of ocean and coastal areas internationally have resulted in calls for the creation of marine protected areas for conservation of species and habitats. At the same time the ocean renewable energy systems such as wave and wind power, have emerged as a new ocean user. Debates about the Blue Economy and the role of the ocean in sustainable development bring more attention to the incorporation of ocean and coastal areas in to our economic system. To address these multiplying claims on the ocean for many uses, coastal and marine spatial planning (CMSP) efforts have expanded internationally, seeking to manage conflict between uses, and to administer rights for access and use (UNESCO 2009).

Central to CMSP is a focus on increasing public participation and engaging in science based planning. These two thrusts for increasing engagement and rationalizing environmental planning create a tension in claims on common spaces and goods (Cortner and Moote 1999). The role of public participation has been understood to have a series of possible relationships with planning and decision making, from instrumental arguments to secure agreement to substantive arguments based in learning from the public (Fiorino 1990). CMSP efforts have largely started from this substantive perspective, with a goal to better understand who uses the ocean and how these uses interact. This sits in tension with the other drive for CMSP, to reduce impacts from human uses and to increase ecological considerations in planning through science based policy choices (Halpern et al. 2012). At the center of this tension sit state agencies and planners managing these claims on the ocean. CMSP thus represents a new engagement between the interest groups tied to the ocean, science, and efforts to define the public interest in management.

This paper discusses an example of this tension as it developed in a case study from the United States. The State of Oregon initiated a two year public participation initiative as a central component of a new CMSP program. Unique to this effort was the extensive use of public participatory geographical information systems (PPGIS). These systems were used to solicit and organize data on commercial and sport fishing effort. This spatial representation of interests on the ocean for fishing proved to structure how other interests engaged the policy process, including recreational users, local residents, and the emerging ocean renewable energy industry. Using content analysis of public meetings and agency work sessions, and semi-structured interviews with key stakeholders, this paper shares how the narratives of ocean use and public interest worked with the technology of PPGIS to create a particular set of coalitions around shared data creation, interpretation, and use. (Hajer 1995). These narratives are at the same time managed by public agencies charged with planning. Collecting, managing, and using these new PPGIS data becomes a public manager task that centers on crafting a particular set of "publics" that seek to represent resolve a larger public interest (Catlaw 2007). This case study shows how this crafting of the public runs into barriers as those that are being characterized in a public and rational system seek to control outcomes.

References
UNDERSTANDING THE POWER OF PLACE IN PREDICTING LOCAL GOVERNMENT SUSTAINABILITY POLICIES

Abstract ID: 443
Individual Paper Submission

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Models that seek to predict local government sustainability policymaking are largely “global” in nature; one regression model is used to describe the significance and values of predictors for all municipalities across the study region, which is often an entire state or the nation. Researchers try to control for spatial differences, but rarely do they investigate the ways that certain factors might differently predict outcomes in diverse places. This limits our understanding of sustainability policymaking as well as hampers more effective efforts by stakeholders to promote sustainability programs. We used a two-stage methodology to examine whether and how much place matters as well as to hypothesize about causation. First, we used data from a 2015 survey of U.S. municipalities’ sustainability policies in a geographically weighted regression, which allows for a more predictive and less biased model. The individual parameters in the model were tested using Monte Carlo randomization that reallocated the observations across spatial units and provided probabilities (in the form of p-values) indicating whether each variable should be treated as a global variable or a local one. We find that 18 out of 22 common predictors are local variables, meaning they are place dependent. Sometimes the differences are dramatic. For example, we find that median income, which is often a significant variable in global regression models, is in fact a negative predictor in some locations, positive in others, and not significant in many. Second, in clustering cities by indicator performance, regional patterns emerge that allow us to hypothesize about causation behind the correlations. For example, we find that in the western US, the sustainability policies of urban cores are driven by an increased number of environmentalists. However, in the northeastern U.S. country, the prevalence of environmentalists is not as important. The findings refine the role of global versus local modeling in urban studies and planning research; more accurately describe the predictors of sustainability policymaking among U.S. cities; and help planners and other officials seeking to influence policymaking better understand the potential effectiveness of particular programs. The paper is a joint effort of Binghamton University, Cornell University, and the U.S. Environmental Protection Agency.

References
Disaster debris management can be time-consuming and costly. Crowley (2017) found that counties that had pre-disaster debris management plans were more effective and efficient with debris management in recent disasters as compared to those without plans. There is growing interest in not just understanding disaster recovery (Kim & Olshansky, 2014), but also developing approaches to measuring and evaluating plan quality (Berke, Cooper, Aminto, Grabich, & Horney, 2014). In spite of the importance of debris management planning, there has been little research on the compliance, consistency, and agreement between local plans and federal policies. The Federal Emergency Management Agency (FEMA) has developed a Pilot Program for debris management to provide guidance and incentives for planning and management of debris following major disasters. The program took effect in 2007 and provided communities with debris management plan requirements (FEMA, 2007). FEMA-approved plans were eligible for an additional five-percent Federal cost share. The initial program ended in 2008, but a reformed Pilot Program took effect in 2013 with the enactment of the Sandy Recovery Improvement Act. The new program provides communities with a set of required plan components. Approved plans can receive a one-time incentive of a two-percent increased Federal cost share adjustment for the first ninety days of debris removal activities (FEMA, 2015). Applicants must send debris management plans to FEMA regional offices for review. FEMA staff will then check for required components such as establishing Debris Management Sites (DMS) for initial debris separation and reduction as well as setting up prequalified contracts for debris removal.

Based on a sample of 38 debris management plans, this study analyzes the extent to which debris management plans are in compliance with the guidance put forth by the FEMA 2013 Pilot Program requirements. The counties considered in this study received FEMA major disaster declarations between
2011 and 2016. Based on inferential statistics, the sample is representative of the larger population of counties that had disaster declarations and debris management plans in place before the disasters occurred. Plans were evaluated on a scale of 1 through 5 where 1 indicates that the component is not mentioned in the plan and 5 means the component is mentioned with substantial detail and examples. Spearman correlation tests show positive and strong correlations between evaluator scores. Correlation coefficients were statistically significant for each component. Scores for each component were combined to produce an overall score for each plan. These were ranked and divided into clusters in order to better understand the relationships between federal guidance and local debris management planning.

While the majority of plans mentioned most, if not all of the components, few included substantial detail and examples. Surprisingly, FEMA accepts any level of detail in its review of local plans. This study offers recommendations in terms of understanding local and federal priorities in debris management as well as suggestions for improving planning and the evaluation of debris management plans. The research was supported by the National Disaster Preparedness Training Center, based at the University of Hawaii.

References


Key Words:
plan evaluation, debris management, pre-disaster planning, disaster recovery

THE URBAN-AG DIVIDE: FILM AS A TOOL FOR SHARED UNDERSTANDING OF WATER RESOURCE PROTECTION
Abstract ID: 537
Pre-Organized Session: New Directions in Water Resource Planning

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Watershed health is a community endeavor, where the actions of each sector, and the people within each sector (e.g., residential, agricultural, industrial) influence the health of the entire system. Although some cities, urban residents, and farmers have responded to water quality issues by incorporating land use changes to reduce impacts from nonpoint source water runoff, water quality problems in the U.S. persist. Urban residents are generally aware of the impact of stormwater runoff on water quality and farmers understand that agricultural practices impact water quality, however some research has shown that each group tends also to place some amount of blame for the extent of water degradation on other people and sectors. Moreover, as agriculture has industrialized and intensified, public perception of farmers has changed from food providers to polluters. Meanwhile, farmers feel that they are stewards of the land who receive a disproportionate share of the water quality blame. There is an apparent disconnect
between efforts of cities and efforts of the agricultural community. This disconnect may contribute to a lack of understanding of each sector’s influence on water quality and watershed health, and subsequent dearth of motivation for individual action toward water quality improvement. Such a “blame game” is counter to sustainable food production, and watershed health and restoration efforts.

Collaborative watershed planning processes that engage a diversity of stakeholder groups is a popular approach to water resource management that has seen some success in the development of watershed plans toward increased environmental quality. Well-designed collaborative processes can foster social learning that increases shared understanding and watershed action and vision. However, with limited funds for collaborative watershed planning process, alternative methods of engagement are needed. The research presented here seeks to: 1) Explore the efficacy of storytelling through film as a low-cost, accessible avenue to foster a shared understanding of issues and solutions surrounding water resources; 2) Determine appropriate and effective methods and venues for dissemination of the film; and 3) Determine how the film diffuses through and beyond existing social networks.

In this talk, I will present a short film that highlights urban and agricultural best management practices in Northwest Indiana. The film was developed through a collaborative process with watershed groups, city officials, United States Department of Agriculture staff, farmers, and home owners. I will describe the process by which the film was developed and present initial findings. Preliminary results suggest that participants recognize (and are enthusiastic about) a need for improved understanding of water quality issues and solutions across sectors. In contrast to demonstration tours, field days, and major collaborative efforts, participants perceive film as a low-cost and efficient way to disseminate the region’s water story (both issues and successes). Participants were more willing to share the film through social media outlets than during meetings, events, or field days. Despite the ease of social media as a diffusion tool, in-person presentations offered a valuable opportunity for social learning – a more personal approach to learning than is seen through social media. Overall, this research suggests that film is an effective storytelling device and that the collaborative film development process broadened participants’ conceptualizations of watershed health and willingness to engage with other sectors in water quality awareness efforts. Future research will entail additional analysis of the film’s social diffusion, as well as the efficacy of the film toward behavior change.

References


Key Words:
watershed planning, water quality, best management practices, social diffusion

BROADENING THE WATERSHED PLANNING NETWORK: LEVERAGING CROP ADVISORS IN CONSERVATION INITIATIVES

Abstract ID: 538
Nonpoint source pollution from agricultural land uses continues to pose one of the most significant threats to water quality in the U.S., with measurable impacts across local, regional, and national scales. Farmers’ voluntary adoption of land use practices (conservation practices) that decrease nutrient loss and improve soil health is key to improved water quality and watershed health within the current regulatory framework. Decades of research points to the importance of multi-stakeholder collaboration for watershed management, in which the inclusion of a diversity of stakeholders from the outset of the project is a necessary component of increasing on-the-ground conservation. Traditionally, watershed collaborations that promote soil health and water quality improvements have involved government and non-government stakeholders working with farmers who have been previously identified as conservation leaders in a watershed. However, recent research highlights the importance of production-focused entities not traditionally associated with conservation – e.g., agricultural consultants, retailers, lenders/bankers, etc. (i.e., crop advisors) – as some of the most influential on farmers’ management decisions. Unfortunately, these non-traditional groups are generally not included in multi-stakeholder watershed initiatives. Hence, we know little, if anything, about crop advisors’ motivations to participate in watershed collaboration and their potential impact, if any, in promoting conservation practices.

Based on recent literature, it is hypothesized that it will be possible to reach new conservation farmers and influence their adoption of conservation practices (e.g., influencer marketing). While farmers consistently rank independent and retail-affiliated crop advisors as among the most trusted and influential sources for agronomic information, little is understood about whether they are willing to provide advice on the use of practices which conserve soil and water, and if so, whether they will be influential. We present survey (n=1,540) and interview (n=34) data from farmers and crop advisors in Michigan’s Saginaw Bay (Lake Huron) watershed to explore these questions. Results suggest that farmers do not expect crop advisors to integrate conservation advice into the services they currently provide, but are generally open to such a change and would find their advice to be credible and influential. Likewise, crop advisors see themselves as willing, if underutilized, conduits of information regarding conservation practices and programs. We discuss these results, along with perceived barriers and opportunities to crop advisors partnering with traditional conservation agencies to enhance the impact of voluntary conservation programs. We close with suggestions for what alternative agricultural conservation paradigms could look like.

References

Oregon’s Southern Willamette Valley Groundwater Management Area (GWMA) covers 230 square-miles between Eugene/Springfield in the south and Corvallis in the north. It was created in 2004 by the Oregon Department of Environmental Quality (DEQ) after groundwater testing revealed elevated nitrate levels that exceeded human health standards. The GWMA Committee has consisted of stakeholders representing farmers, rural landowners, business, agricultural business, cities, watershed councils and environmental groups. It has been working with the Oregon Department of Environmental Quality and other stakeholders to develop and implement a nitrate reduction strategy.

While membership of the group has been stable over its history, implementation efforts have faced challenges due to declining budgets and program cuts. However, some of the greatest complexities relate to the science, perception of risk and uncertainty related to groundwater contamination. First, the complex riverine geology associated with groundwater has made the mapping and interpretation of groundwater trends complex to interpret over time. Despite a number of ongoing monitoring efforts, scientific studies and data assessments, many of the trends are unclear and wells far exceeding standards are located near those with little contamination. Second, the lack of visibility of groundwater or understanding of wells creates challenges in raising the issue with the public. For example, outreach efforts have highlighted that many new rural property owners are not aware that they are serviced by well water and septic systems—let alone understanding the relevant maintenance issues associated with them. Finally, the complex data combined with the long travel time of groundwater makes it hard to communicate potential risk and concern.

While the literature on collaboration notes the challenges of science in the deliberation and agreement phase, there is less focus on the difficulties associated with implementation (Boesch, 2013; Failing, Gregory, & Harstone, 2007; Ozawa, 1991; Reed & McIlveen, 2006). This paper explores the challenges to communicating complex information about risk when traditional outreach approaches face challenges such as antipathy, concerns about privacy, and sensitivity about pollution sources. Based upon ten years of participation on the GWMA committee, along with a survey of landowners in residential “hot spots” across the region, this paper explores these challenges and the potential alternatives to raising awareness without raising alarm. The survey is being conducted by a team of graduate students in collaboration the Oregon DEQ and the GWMA, and will reach a cross section of residents to understand their awareness, their access to information, and their recommendations for how to share information.

References


Key Words:
Science communication, Risk perception

THE RE-EMERGENCE OF FARMER-LED WATERSHED COUNCILS
Abstract ID: 540
Pre-Organized Session: New Directions in Water Resource Planning

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Water quality planners in Wisconsin are increasingly returning to farmer-led approaches to reducing nutrient contributions to surface water and groundwater. Nutrients and associated contaminants running off of agricultural lands degrade and threaten water quality and aquatic ecosystems across Wisconsin and much of the United States, yet there are very few (if any) regulatory options available to address this challenge. Long term effectiveness for restoring and protecting these degraded systems depends on engaging farmers in developing and implementing nutrient reduction efforts.

Wisconsin has encouraged collaborative, farmer-led initiatives to improve conservation and nutrient reduction efforts in agricultural landscapes. State level agencies and organizations have collaborated to coordination and technical assistance as well as small seed grants for initial convening and planning activities of farmer-led councils. More than a dozen groups have formed within the past few years. While promising, the approach poses institutional challenges for regulatory environmental agencies and watershed planners. Namely, uncertain timelines and pace of change, the necessity of flexibility for farmers to experiment and determine performance measures, and the need to link changes on the landscape to reductions in nutrient loads and improvements in water quality. Some level of initial catalyst and coordination is necessary to start a farmer-led watershed council, but agencies face accountability challenges if they provide public funds without clear results in water quality. Those challenges become even more pronounced if downstream stakeholders call for strong and immediate action to protect drinking water supplies and significant recreational amenities.

This paper examines initial expectations and lessons learned in Wisconsin’s watershed councils including their potential roles for advancing local, state, and federal water quality goals. It highlights distinctions between this approach and more traditional agency-led watershed planning or restoration grant projects. Analysis is based on interview data, site visits, and document review from farmer-led watershed council projects in Wisconsin. Initial findings show high levels of engagement, experimentation, and conservation practice adoption. Substantial variations exist across watersheds in group formation, function, emphasis, preferred sources of information.

References

Key Words:
water quality, collaboration, planning roles, agriculture

ASSESSING THE ECONOMIC COSTS OF SEA-LEVEL RISE AND BENEFITS OF ADAPTATION: A SPATIOTEMPORAL APPROACH
Abstract ID: 569
Individual Paper Submission

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Introduction
At where land and ocean meets, the coast is on the frontier of natural and anthropogenic stressors. Climate change impacts, especially sea level rise (SLR), add another layer of intensity in these highly-exposed regions. Coastal planners are, therefore, now facing escalating challenges in safely and soundly accommodate existing and future development (King et al. 2016). After recognizing mitigation can only slow the rates of SLR, adaptation to its residual impacts has become inevitable and gained tremendous popularity. To assist adaptation planning in coastal areas, many vulnerability assessments have been conducted and numerous adaptation strategies have been identified. However, there exist numerous barriers that hinder adaptation decision making as well as implementation (Bierbaum et al. 2013). Uncertainties of future SLR projections and lack of practical tools to analyze SLR impacts, especially those estimating the economic losses of SLR and benefits of adaptation strategies, are major ones. This research aims to address these gaps by employing a spatiotemporal approach to analyze the economic losses due to SLR inundation and the cost-effectiveness of a necessary adaptation strategy (i.e. seawall or bulkhead) in mainland Miami-Dade County in Florida, a low-lying coastal metropolitan area highly vulnerable to SLR. Specifically, we try to answer the following research questions:

1. To what extent will future SLR impact the coastal communities through coastal flooding over space and time?
2. Whether is building seawall cost-effective?
3. What is optimal coastline protection ratio and where on the coastline should adaptation be prioritized?

Methodology
The method used in this research is essentially coupling spatial inundation modeling with SLR temporal projection scenarios. For spatial analysis, we employ the modified ‘bathtub’ model with high-resolution digital elevation model (DEM) to delineate potential SLR impact areas. Unlike many contemporary SLR studies that assume static SLR scenarios such as 0.5-meter SLR in 2080 (Shepard et al. 2012), we model the SLR impacts semi-continuously from 0 to 6 feet by 0.05-ft increments. Resulting maps will be overlaid with local parcel data with property appraisal information to estimate the total value of properties potentially at risk. Since existing uncertainties of future SLR are unavoidable, four locally
adopted SLR projection scenarios are chosen to link the time of occurrence for SLR scenarios with their respective inundation impacts. Similarly, to determine the optimal protection ratio and where adaptation should be prioritized, the coastline of the study area will be further separated into small coastline segments to be controlled for SLR spatiotemporal analysis. Finally, the costs of adaptation will be estimated and compared with the benefits to conduct a cost-benefit analysis for adaptation by considering both full coastline protection and optimal coastline protection.

Findings
This research presents and discusses a spatiotemporal model to assist adaptation planning. Our findings indicate that SLR inundation impacts are non-linear and adaptation to its impacts, while costly, can significantly reduce future potential losses. We also analyze each coastline segment to further determine where on the coastline are at greatest risk and should be prioritized for adaptation. Coastal planners and local decision makers who are concerned with SLR impacts might find this study useful in assisting local long-range adaptation planning.

References

Key Words:
Climate change, Sea level rise, Adaptation planning, GIS

HARNESSING THE OPPORTUNITIES AND UNDERSTANDING THE LIMITS OF AMERICA'S STATE-LEVEL CLIMATE ACTION PLANS
Abstract ID: 582
Individual Paper Submission

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Climate action planning offers an opportunity to innovatively respond to the causes and consequences of climate change, while simultaneously promoting community sustainability, equity and health. U.S. states have long tried to seize this opportunity by planning for climate change, irrespective of the federal government’s decision to take action or not. To date, 32 state governments have adopted Climate Action Plans (CAPs). The questions that this research addresses are: 1) Does state-level climate action have the potential to reduce greenhouse gas (GHG) emissions significantly?; and 2) What are the strengths and limitations of the current generation of state CAPs? To answer these questions, I analyzed all state CAPs, and assessed the relationships between CAPs, plan implementation and GHG emissions mitigation. My hypothesis was that CAPs result in GHG emissions mitigation beyond the trend.

This paper compares states with and without CAPs, before and after adoption of plans. The first phase of this research involved a content analysis of state-level CAPs and related documents focusing on four
major components: 1) CAP development procedure and foundations; 2) goal setting, policy coverage and regional coordination; 3) implementation provisions and conditions; and 4) implementation mechanisms and monitoring results. The content analysis assessment protocol was based on plan evaluation literature, refined through expert interviews and double-coding of four CAPs. The analysis shows six major types of CAPs, categorized based on the rigor of their targets and stringency of implementation. The second phase of the research quantitatively analyzes the relationships between CAP types and changes in GHG emissions using panel emissions data from 1990 to 2013 (obtained from the U.S. Energy Information Administration and Environmental Protection Agency datasets). The regression model controls for social, political and climatic context, industrial mix and change over time, urban form (compact vs. sprawl) and energy prices.

The research shows that CAPs do result in reductions in GHG emissions, although they are modest. Only a few CAPs set enforceable targets and provide strong evidence of implementation, monitoring and evaluation. Overall, progress towards goals is slow and near-term targets are low. Major strengths of state CAPs include a participatory consensus-building and fact-finding process, cross-state learning and collaboration, and consideration of co-benefits of taking action (e.g. energy independence, green jobs, etc.). The findings also suggest a role for planners in two key areas: transportation and land use. The analysis demonstrates that state-level CAPs call for low emissions reductions from transportation and land use changes, compared to these sectors’ contribution to total emissions. The regression, though, shows that urban compactness leads to transportation emissions reductions even when controlling for changes in income, energy prices and unemployment. Thus, transportation planning represents a large opportunity for future emissions reductions—particularly through integration with smart growth policies.

An effective response to climate change requires planners to balance the demands of an ever-changing political landscape and the constraints and opportunities presented by their communities. This evaluation of state-level CAPs helps planning scholars, practitioners and educators understand the potentials and constraints of America’s current generation of CAPs, and develop smarter tools and techniques to combat climate change.

References

Key Words:
climate action planning, planning evaluation, implementation, urban sprawl, land use and transportation

DETERMINANTS OF SOLAR PV ADOPTION
Abstract ID: 599
Aggressive adoption of renewable energy within the power sector is critical to curbing anthropogenic greenhouse gas emissions. Without strong federal climate mitigation policy, U.S. states have taken a leadership role. Over half of U.S. states have a Renewable Portfolio Standard and this is estimated to govern 56% of all U.S. retail electricity sales (LBNL, 2014). Hawaii is the first state to adopt a 100% target, by the year 2045. Within this context, Hawaii has become a global leader in solar photovoltaic (PV) adoption and integration. As of the end of 2016, 587 MW of non-utility scale solar PV has been installed across Honolulu, Maui, and Hawaii counties, 70% of which is located on Oahu (Hawaiian Electric Companies, 2017). Much of this has been through distributed (rooftop) PV systems, as nearly 17% of homes, and 32% of single-family homes on Oahu have PV (Trabish, 2016). This trend is driven by a combination of Hawaii’s high electricity prices, federal and state solar PV income tax credits, net-energy metering arrangements, and high solar irradiance (Coffman et al., 2016). Much of the research on distributed PV focuses on integration within the power system – addressing the so-called utility “duck curve” and “grid defection,” related to the customer cost of solar PV under varying policy mechanisms (Laws et al., 2017; Vimpari, J., Junnila, S., 2017). This study focuses on the question of who – which households are adopting solar PV? It employs spatial and econometric analyses of residential PV adoption, focusing on Oahu and Maui due to data availability, to better understand the demographic characteristics of households adopting PV systems. This provides insight into the income distribution of households adopting solar PV, potential barriers and opportunities for future uptake, and the spatial patterns of PV adoption that drive planning decisions around transmission and distribution upgrades.

Data for this study comes from four main sources: 1) City and County of Honolulu, 2) Maui Department of Public Works, 3) 2010 U.S. Census, and the 4) American Community Survey. The data are used for the purposes of 1) creating a spatial visualization of PV uptake from 2005 to 2016 and 2) econometrically estimating the relationship between PV adoption and demographic markers including median household income, owner occupancy, and population by zipcode. Early findings suggest that owner-occupancy is the most salient determinant of PV adoption; in context, where Hawaii has among the lowest rates of homeownership in the U.S.

References


Key Words:
Congress originally intended to encourage private property owners of all incomes to preserve natural and scenic resources with significant public benefit, using the federal tax deduction for the easements that meet specific but malleable criteria (i.e., in purpose, placed in perpetuity, and held by qualified easement holders). There is a small but growing body of research that has been examining private land conservation motives, particularly as conservation easements have been increasingly and ubiquitously used throughout the U.S. These studies are limited by small sample sizes (Ernst & Wallace, 2008; Farmer et al., 2011; Brenner et al., 2013) or by the conservation easement holder typology (Rissman et al., 2007). Their findings are disparate but suggest that the federal incentive has some impact (although it may not be the primary motivating factor) in the landowner’s decision to place a conservation easement. In central upstate New York, Brenner et al. (2013) found that the land uses on a property, particularly “recreation and wild food prospecting, are among the most powerful and significant predictors of landowners’ willingness to conserve conservation easements” (30), as well as owning a large parcel of land.

To continue contributing to the literature on private land conservation motives, our team tested the Brenner et al. (2013) findings and broadened their geographic scope by eight counties in four states, California, Colorado, Minnesota, and South Carolina. Using a fine-scale dataset of easements, their characteristics, their locations, and their underlying parcel values, we conducted a pre- and post-approach in ArcGIS on the conservation easements parcels (and adjacent ones, within a buffer for land use types) in these four counties over a decadal period (1997 – 2008, when data permitted). We determined the underlying land uses of the conservation easement parcels, as well as their size, both before and after the easement placement to ask if there is a consistent and statistically significant pattern/trend that emerges in conservation easement parcel size and underlying land uses, regardless of location or state. These results were also refined by analysis solely on donated easements, or easement holder type, where there was a sufficiently statistically significant sample size.

While our findings do not isolate individual motivations, which can only be ascertained through landowner surveys and/or interviews, they contribute to the growing body of private land conservation motivations by testing an existing finding in one geographic location. They also further distinguish spatial patterns in the conservation easement placement. The results can inform planning policy, particularly since planners can more directly influence the parcels and zoning within their jurisdictions than broader federal tax policy.
AIR POLLUTION HURTS THE CONSUMPTION VALUE OF CITIES: EVIDENCE FROM LEISURE ACTIVITIES IN BEIJING

Abstract ID: 632

Individual Paper Submission

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Over the last thirty years, China has experienced sharp economic growth and significant local environmental degradation. An active epidemiology literature has established that air pollution exposure has a direct effect on raising mortality and morbidity risk. Recent work by economists has documented that it also reduces workers’ productivity and lowers students’ test performance.

Air pollution also hurts the consumption value of cities. In this paper we focus on outdoor leisure activities. Such activities can bring enjoyment, promote social interaction, improve quality of life, which all contribute to the consumption value of cities. However, when it is polluted, people are less likely to go out, and those leisure activities will be dampened.

Taking advantage of the emerging location-based “big data” — the online reviews from Dianping.com and real-time location records from Tencent for Beijing, our study empirically find that people reduce the frequency of two typical outdoor leisure activities on highly polluted days, including dining-out and visiting open space. One standard deviation increase in PM$_{2.5}$ concentration is associated with a 0.07 standard deviation decrease in the amount of Dianping reviews. Besides, people not only respond to the PM$_{2.5}$ concentration, but also the government alerts. The heterogeneous effects across different neighborhoods are also examined. Overall, our empirical results indicate that air pollution will significantly reduce outdoor leisure activities, and thus hurt the consumption value of cities.

References


Key Words: conservation easements, land uses, federal tax policy, private conservation motivation
In recent years, the social inequalities in the distribution of flood risk have caught researchers’ attention as an environmental justice and climate justice issue (Walker and Burningham 2011). Research has demonstrated that vulnerable populations such as indigenous communities may live in areas that place them at higher exposure to risk of flooding (Chakraborty et al. 2014). Climate change may increase the consequences of such inequality. Especially, Alaska Native Villages are particularly vulnerable to flooding due to rapidly increasing temperatures, permafrost degradation, loss of sea ice, and unpredictable changes in weather. They also have vulnerability related to their remoteness, lack of economic wealth, and the lingering effects of colonization, which limit their control over lands, waters, and wildlife needed to maintain their traditional lifeways.

Despite the existing body of literature discussing the physical vulnerability of Arctic communities in light of climate change (e.g. Ford and Smit 2004) and social vulnerability related to colonization (e.g., Wilson 2014), there are limited empirical research in this area (Himes-Cornell and Kasperski 2015). With empirical data and an environmental justice lens, this study intends to investigate the varying degrees to which different communities in Alaska are exposed to flood risk that may be exacerbated by climate change. Using different social and environmental indicators, we first assess the social and physical vulnerability of Alaskan communities to flooding. Then cluster analysis is employed to identify significant vulnerability clusters. The results help to 1) reveal whether environmental injustice exist as socially vulnerable communities are more clustered in physically vulnerable areas 2) test whether communities with greater indigenous populations are more exposed to such flood risk 3) identify target communities that need prioritization of hazard mitigation and climate change adaptation policies. By exploring the interaction between social vulnerability and physical vulnerability, the case study could help to identify the crucial factors and weak links in existing disaster assistance policies and to better develop targeted vulnerability reduction policies.

References


Key Words:
flood risk, social vulnerability, environmental justice, indigenous communities

THE IMPACT OF URBANIZATION ON FLOOD DAMAGE
Abstract ID: 675
Poster

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Since 1940, when urbanization has progressed rapidly around the world, the frequency of floods in urban area has increased dramatically. This means cities have raised their technology to prepare for natural disasters, while the risk exposure has increased compared to the past. It is obvious that flood damages are expanded due to urbanization according to previous researches, the urban paradigm should be shifted to mitigate damages by preparing and adapting to natural disaster. However, previous quantitative researches about factors affecting urban flood did not thoroughly understood variable design mechanism such as casual relationship and moderating effects. Therefore, this study is to verify the theoretical relationship between urban flood damages determinants in Korea.

Through literature review, we set two hypotheses. First the relationship between urbanization and urban flood damages is not linear but exponential, so flood damages will increase rapidly as urbanization progresses. Second, social vulnerability factors such as vulnerable groups, local government’s finance will be moderating variables to increase or decrease damages when urban flood occurs.

This study analyzed panel data from 104 local governments in Korea, for 20 years. Since heteroskedasticity and autocorrelation problem are likely to inherent in panel data, a test was conducted. As a result of the test, since heteroskedasticity and autocorrelation problem occurred in our model, we used panel GLS(Generalized Least Square) model. In addition, we used the panel tobit model with the concern that the impact of the independent variables would be underestimated because the zero value ratio in flood losses exceeded 50%.

Urban flood damages increased by 29% as urbanization progress by 10% as a result of analysis. This result shows that urban flood damages increases rapidly, supporting first hypothesis. Social vulnerability was moderating variable to increase or decrease damages, as we assumed through second hypothesis. In addition, analysis result of predicted future urban flood damages based on climate change scenarios with
the impact of urbanization showed that urban flood damages are rapidly increasing in 2030. Based on the analysis results, this study proposes a policy implication to increase the permeable surface in urban area while reducing the urban sprawl.

Acknowledgments: This work is financially supported by Korea Ministry of Environment (MOE) as 「Graduate School specialized in Climate Change」.

References

Key Words:
Flood Damage, Urbanization, Climate Change, Panel GLS, Panel Tobit

URBAN HEAT ISLANDS AND URBAN HETEROGENEITY: FINDING HIGHLY DETERMINANT PHYSICAL LAND SURFACE CHARACTERISTICS AND SOCIOECONOMIC CHARACTERISTICS CONTRIBUTING TO THE FORMATION OF URBAN HEAT ISLANDS OF INDIANAPOLIS, IN
Abstract ID: 709
Individual Paper Submission

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Despite its commonly acknowledged importance as a major urban environmental issue, the Urban Heat Islands (UHIs) phenomenon has not been properly addressed by urban planners even as they have tried to become more environmentally conscious in both their thinking and practice (Eliasson 2000). The Indianapolis Metropolitan Statistical Area (MSA), which is the main subject of this study, is one of those U.S. cities where the UHIs have grown in largest numbers in recent years (Stone et al., 2012). However, both state and local government have yet to provide any concrete and effective policy solutions. According to Stone et al. (2012), most of climate action plans of large U.S. cities have largely failed to properly manage land-based drivers of warming.

This lack of attention and response to UHIs and its environmental and social causes and consequences can be at least partly attributed to a scarcity of good empirical research which provides urban planners the kind of data and ideas that they need and are able to utilize. This does not mean that no meaningful research exists on UHIs, but I find two major shortcomings in the existing research and intend to overcome them in this research; First, most of the researches that addressed the relationship between UHIs and urban physical characteristics relied heavily on remotely sensed surface characteristics of urban areas and seldom considered socioeconomic factors in their research (e.g., Weng and Yang, 2004;
Yuan and Bauer, 2007; Weng, 2009), and second, there are very few researches that focused on the integration of physical vulnerability and socioeconomic vulnerability of urban areas. It is partly because urban biophysical characteristics are more related to causes of UHIs formation and socioeconomic characteristics to consequences of UHIs. But in reality, these two are not clearly distinguishable. This study tried to fill this gap.

As UHIs are mainly caused by physical changes of the urban environment, previous UHI researches have traditionally focused on the causal relationships between physical land surface characteristics of urban areas such as land cover patterns, the vegetation indices and the formation and the magnitude of UHIs. However, in the eyes of urban planners, there are other physical factors of urban area that can define built-environmental vulnerability to UHIs such as vertical building characteristics, building density measures, and zoning ordinance, other than previously used remotely sensed physical characteristics of the urban area such as NDVI and proportion of impervious cover. Through intensive literature review, this research address major physical factors of the urban area that closely related heat related discomfortness. This research also include socioeconomic variables that are widely used in social vulnerability studies (e.g., Cutter et al., 2000; 2003; 2006).

As there is no theoretical support to model the relationship among biophysical and socioeconomic variables’ effect in the formation of UHIs, I believe nonparametric approaches such as machine learning approaches are most suitable methods to serve this purpose. With the application of machine learning based variable selection method, factors that are highly related to land surface temperature will be selected. Result of this research will be used to find planning zone specific determinants contributing to the formation of UHIs and will provide practical guidelines for urban planners to build effective mitigation strategies.

Result of this research will be used to find planning zone specific determinants contributing to the formation of UHIs and will provide practical guidelines for urban planners to build effective mitigation strategies.

References

Key Words:
Urban Heat Islands, biophysical vulnerability, socioeconomic vulnerability, machine learning, variable selection
THE IMPACT OF AIR POLLUTION ON PROPERTY VALUES: A CASE STUDY OF OZONE LEVEL IN HARRIS COUNTY, TEXAS

Abstract ID: 711
Individual Paper Submission

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Air pollution not only poses impact on public health, but also influences residential relocation decisions. Under the equilibrium market assumption, people are treated as rational individuals who make decisions based on market prices. Utilizing hedonic price model, air pollution can be measured as one of many property amendments to estimate its implicit market value. Therefore, it helps us to understand how air pollution could affect the residential relocation decision making. The Greater Houston region is the fourth largest metropolitan area with vast volumes of daily traffic, and also has a top national petroleum refinery industrial at the Gulf Coast region. Both industrial and traffic emission contribute to the degradation of regional air quality. Located in the southern Texas, Houston experiences relatively high temperatures over the year than most other cities do. It results in high level of Ozone concentration in urban areas, most of which is overlapping with the Harris County, the core county of the Greater Houston region. This study tends to reveal how much the Ozone level would impact property value within the Harris County using hedonic price model. And further to understand its impact on residential relocation movements. This study acquires air pollutant (Ozone) data from Texas Commission of Environmental Quality (TCEQ), property data from Harris County Appraisal District (HCAD), and demographic data from US Census. Ground level ozone concentration will be applied to several radius and the regression results will be compared. Besides of property structure amendments, economic demographic characters will also be included to further assess the impact of Ozone on low-income minority communities. The findings can help us better understand the potential effects of environmental degradation on housing demand, it’s especially important to those living in low-income minority neighborhoods.

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Key Words:
Air Pollution, Property Value, Ozone, Hedonic, Houston
EXPLAINING COMMUNITIES’ ADAPTATION STRATEGIES FOR COASTAL HAZARDS: VULNERABILITY AND INSTITUTIONAL FACTORS

Abstract ID: 734
Individual Paper Submission

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This paper addresses local governments’ climate change adaptation strategies, focusing on their approaches to hazards from coastal flooding and sea-level rise. In principle, local governments can access a range of strategies that have been categorized as "protect" (e.g., build seawalls), "accommodate" (e.g., elevate buildings), "retreat" (e.g., buy out coastal properties), and "avoid" (e.g., prohibit construction in undeveloped hazardous areas). In practice, however, they face numerous constraints and barriers that limit options and hinder action. While information sources related to sea-level rise and adaptation options are proliferating, relatively little is known about what types of strategies communities actually adopt, and why.

Recent studies suggest a number of factors that may shape municipal strategies. In the adaptation planning literature, the status of municipal adaptation appears to be influenced by political leadership, availability of financial and other resources, institutional context such as state-level policies, and competing planning agendas (e.g., Shi et al. 2015), with small communities facing different barriers than large cities (Hamin et al. 2014). This research has emphasized taking action, rather than the types of actions taken. At the same time, a well-established literature on municipal planning for natural hazards has focused on the plans themselves. Institutional factors such as local planning capacity, leadership, and state planning mandates have been found to be important influences on the quality of hazard mitigation plans and planning, considering such criteria as fact base, participation, monitoring, and coordination (e.g., Berke et al. 2015). While providing insights on variations in plan quality, this literature has yet to address variations in the actual strategies that communities adopt. Meanwhile, substantial research in natural hazards geography has applied indicator-based methods to characterize the physical and socio-economic vulnerability of communities, emphasizing that localities differ importantly in their propensity to suffer losses from hazards. Strategies to reduce risk should therefore be designed for the local hazard and vulnerability context, considering such factors as topography and locations of vulnerable populations (e.g., Wood et al. 2015). The degree to which local strategies do reflect local vulnerabilities remains an open empirical question.

This paper seeks to explain variations in communities’ adaptation strategies for coastal hazards, considering the influence of hazard vulnerability in relation to other factors. It focuses on 50 diverse coastal communities in British Columbia, Canada. British Columbia is interesting because subsequent to legislative changes in 2003, the authority for floodplain management has shifted to local governments; without provincial mandates, resources, or much guidance, communities have been free to pursue diverse approaches to flood risk reduction (Stevens and Hanschka 2014). The analytical approach consists of (1) characterizing the communities using vulnerability indicators, (2) characterizing their strategies for coastal flood risk reduction, and (3) conducting hypothesis testing and regression analysis to explain variations in strategy based on vulnerability. The suite of vulnerability indicators includes social, economic, natural environment, built environment, and institutional attributes. Data on strategies were obtained from each locality’s Official Community Plan and characterized as land-use planning (e.g., development permit areas), construction specifications (e.g., flood construction levels), and/or structural flood protection. Results indicate that similarly vulnerable communities do tend to adopt similar strategies. For instance, large urban areas with highly developed coastal zones rely heavily on structural protection, while smaller, more remote towns tend to adopt land-use regulations to manage risk. The findings demonstrate the importance of considering local hazard vulnerability context in examining municipal adaptation processes, and indicate the value of knowledge-sharing between
similarly vulnerable places. Vulnerability provides only a partial explanation, however, and further research is needed to disentangle the role of institutional variables such as resource availability and local government capacity.

References


Key Words:
climate change adaptation, natural hazards, coastal, local government, vulnerability

RISK MANAGEMENT OF COASTAL ROADWAY SOCIO-ECOLOGICAL SYSTEMS

Abstract ID: 735
Individual Paper Submission

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A framework for assessing and managing the risks and vulnerabilities of coastal highways and supporting socio-ecological systems is developed. Roadways are often the “leading edge of development” and need to be appropriately planned, especially in environmentally sensitive areas. Context sensitive roadway planning and design offer a unique opportunity to address tensions between promoting safety, protecting critical infrastructure, and preserving natural and community assets. Managing and governing risk entail reconciling diverse interests and competing approaches to risk reduction. With exposure to multiple hazards including erosion, storm surge, sea level rise and climate change, new approaches, methods, and integration of data and models are needed to improve the long-term planning, engineering, design, management and resilience of coastal roads. Resilience, a “national imperative” requires the development of local capacity and integration between natural, built, and human systems (Committee on Increasing National Resilience to Hazards and Disasters, 2012). The approach extends emergent practice on planning with complexity (Innes and Booher, 2010) seeking multi-party, interdisciplinary agreements between the scientific community, government, industry, landowners, residents and other stakeholders. Transportation is not only important because of its function connecting different sectors, but it is also a data rich topic. Using data and research on managing multi-hazard risks in Hawaii (Kim, Pant, Yamashita, 2015), we demonstrate methods for estimating likely future climate events and their impacts on transportation systems and coastal communities. We also consider alternatives for hazard mitigation, adaptation, and green infrastructure design involving traditional, gray approaches (hardening, using riprap, revetment, seawalls, and other
Structures), elevation of roadways, and relocation. Opportunities to introduce green design including the use of vegetation, buffers, natural drainage, and living shoreline strategies are also proposed. Initial assessment of costs and benefits is provided as well as considerations of public benefits and acceptance of long-range ecological approaches. The challenges and opportunities associated with deeper collaboration and engagement among planners, engineers, and designers are also described.

References

Key Words:
Risk Management, Complexity, Climate Change, Transportation

INFLUENCE OF NEIGHBORHOOD CHARACTERISTICS ON ENERGY USE IN MIXED-USE PROPERTY
Abstract ID: 739
Individual Paper Submission

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Excessive energy use in building property is believed to aggravate greenhouse gas emissions and climate change problems ultimately. Previous literature that examine energy consumption of the residential sector mainly focused on analyzing impact of different housing attributes and household characteristics on the energy consumption. However, there is an unmet need for understanding how neighborhood characteristics of the household affect the energy use. To bridge the gap between residential energy use studies and empirical evaluation of neighborhood effect, this study focuses attention on the role of neighborhood characteristics in residential energy use. One of the unique features of the residential building in Korea is a residential-commercial hybrid use in one building since various commercial uses and facilities are allowed to be located in the residential area. Typically stores are placed on the first floor and residential use on the second and third floors where landlords reside. To our knowledge, no study has examined the associations between neighborhood characteristics of the mixed-use property and the energy consumption. This study aims to examine how the gas and electricity energy consumption of the mixed-use property is influenced by the characteristics of the immediate surroundings of the building as well as the building attributes.

The main source of outcome is electricity and gas energy consumption data retrieved from the open system of building data (open.ea.go.kr). We collected data from November 2015 to October 2016 in Seoul. The dependent variables are four; annual electricity consumption, annual consumption, the increase of electricity consumption in August, and the increase of gas consumption in February. We assume that the increase of electricity consumption in August and gas consumption in February may represent the increase of cooling and heating load in summer and winter, respectively. The independent
variables used in this study are classified into building and neighborhood characteristics. The building characteristics variables include the year built, the total floor area of the building, the square footage of building footprint, the shape index, the structure of the building, and the structure and slope of the building roof. The neighborhood characteristics include the presence of green and water bodies, the width of the access road, the size of the block, the shape index of the block, and the building density.

The results show that the neighborhood characteristics are more strongly associated with the annual electricity consumption and the increase of electricity consumption in summer than the gas consumption in general. The presence of green area and water body decreases annual electricity consumption while it does not affect gas consumption of the properties. The width of access road increases annual electricity consumption and cooling load in summer. The shape of buildings is associated with the increase of annual gas consumption and heating load in the winter while irregular shape of the block decrease annual electricity consumption and cooling load of the properties.

Although theoretical frameworks for explaining the results of the study are not sufficiently available, it seems manifest that neighborhood characteristics have a distinctly different impact on the use of electrical energy in mixed buildings than on the use of gas energy. This is because electrical energy is mainly used as cooling energy while gas energy is used as heating energy. In the study discussion, we derive the implications of the urban form that can reduce the energy consumption of mixed use property focusing on the influence of the neighborhood characteristics on the urban microclimate.

References

Key Words:
Neighborhood characteristics, energy use, residential sector

LANDOWNER REACTIONS TO COASTAL SALTWATER INTRUSION: CREATING A TYPOLOGY FOR MAPPING FUTURE VULNERABILITY
Abstract ID: 792
Individual Paper Submission

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Sea level rise will transform much of the outer edge of the Southern US coastal plain, an area that has already begun to experience hydrological and ecological changes. Saltwater intrusion, or the landward movement of salt water, presents a threat to many of the ecosystems and economic uses of land
throughout this region, and represents an already-occurring, “leading edge” of climate change (Herbert et al. 2015). In order to better understand this problem, we are developing a way of measuring the vulnerability of land to saltwater intrusion in order to assess how different areas of the peninsula may be impacted in the future. We call this the “saltwater intrusion vulnerability index.”

Saltwater intrusion is affected by many things, including how land is managed (Kaushal et al. 2005). Therefore, decisions that residents make regarding irrigation and drainage on their property can impact how salinity moves through the landscape. Roadside drainage canals and other features of the landscape also impact this movement of saltwater, so a simple analysis of streams and rivers in the area does not allow the full assessment of saltwater movement and associated saltwater intrusion vulnerability. A variety of actions -- including infrastructure investments and retreat -- taken in the intervening decades will determine resident vulnerability to economic and environmental shocks from storm surges and saltwater intrusion (White and Kaplan 2017).

This talk explores findings of a drop-off/pick-up door to door survey of residents in the five counties encompassing North Carolina’s Albemarle-Pamlico Peninsula (February-May 2017; n=750), a low-lying peninsula with many freshwater sources and freshwater-dependent uses, such as agriculture and timber production. The region also has an extensive network of irrigation and drainage infrastructure that has allowed salt water to move further inland from the coast, particularly during storms. Using responses about attitudes, opinions, and future plans in the face of various saltwater intrusion scenarios, we create a landowner typology to focus geo-spatial scenarios describing changes in future saltwater intrusion vulnerability (BenDor et al. 2014).

Through a combination of physical measurements, including water salinity, soil analysis, and plant species counts, as well as measurements of residents’ attitudes and experiences with flooding and saltwater intrusion, our research team plans to develop a series of tools and future management scenarios to better understand how the Albemarle-Pamlico Peninsula can be protected in the future. These scenarios, along with our improving understanding of saltwater intrusion vulnerability, will help residents and communities decide of the best land management options that meet their goals and needs.

References

Key Words:
Sea Level Rise, Saltwater Intrusion, Coastal Infrastructure, Coastal Hazards, Community Resilience

THE MICROCLIMATIC EFFECTS OF URBAN TREE SHADE IN COLD CLIMATE CITIES
Abstract ID: 796
A critical function of urban trees is shading and microclimate regulation. Direct shading from urban tree canopy physically obscures incident solar radiation, preventing it from directly striking buildings. This moderates surface temperatures while increasing latent heat exchange for the evapotranspiration process (Oke 1988). There is scientific consensus that shade from urban tree canopies (UTC) can significantly mitigate urban heat and reduce building energy use (Wang and Akbari, 2016), yet the bulk of the existing research into these effects, focuses on cities dominated by warm seasonal temperatures (Wang et al., 2015). Further, only a few studies have directly modeled tree shade affecting individual buildings as it relates to electricity consumption data (Pandit and Laband 2010; Donovan and Butry 2009). This study addresses the question: Is UTC shading an effective resiliency strategy for conserving summertime electricity use, in cities with colder climates? It does so through two components. The first explores the relationship between residential summer electricity consumption and tree shade using data from a large sample of single-family residences, in a city dominated by cold seasonal temperatures: South Burlington, Vermont. The second component uses thermal imagery to measure the heat stored in residential structures after sunset and relates it to tree shade.

Modeling the physical relationships between buildings and the surrounding outdoor environment (specifically UTC), were critical to this inquiry. The 3D inputs of local surface features were obtained using Light Detection and Ranging (LiDAR) data. Geographic information systems (GIS) were used to simulate and quantify each building’s specified diurnal UTC shade coverage. An information-theoretic approach was used to evaluate the degree to which tree shade reduces the summer electricity consumption of individual homes. Regressions were run between an aggregate measure of daytime and electricity consumption, controlling for size of structure, amount of non-tree shade and other variables.

The empirical results demonstrate an inverse relationship between the measured quantities UTC shade incident with residences, and the amount of electricity they consume during the day. The quantity and statistical significance of the electricity conserved by South Burlington single-family residences is consistent with its climate and geographic location relative to cities previously researched. The data collection on building heat storage is ongoing, but preliminary results suggest tree shade does mitigate stored building heat. This research has significant implications for urban tree planting campaigns and suggests the importance of locating new plantings with building shading in mind.

References


Key Words:

tree shade, microclimate regulation, LiDAR, GIS, remote sensing
SPATIALLY EVALUATING A NETWORK OF PLANS AND FLOOD VULNERABILITY USING A PLAN INTEGRATION FOR RESILIENCE SCORECARD: A CASE STUDY IN FEIJENOORD DISTRICT, ROTTERDAM, THE NETHERLANDS

Abstract ID: 810
Individual Paper Submission

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Damages and costs associated with flood events are mounting as a result of a changing climate, an increasingly urbanized and coastal populace, and local land use and development decisions. National and international governmental organizations have responded with calls for innovative research on resilience—plan integration and the ‘mainstreaming’ of resilience policy are seen as particularly important. A network of plans that lacks coordination with respect to flood vulnerability is less effective in addressing flood risk, and may even exacerbate it in parts of the community.

In 2015, Berke and colleagues developed and tested a method for creating a Plan Integration for Resilience Scorecard to help U.S. communities better understand the coordination and efficacy of their policy responses to flood hazards. The scorecard process involves the spatial evaluation of a community’s flood exposure, physical and social vulnerability, and network of plans, all carried out at the scale of the neighborhood (or census block group). Although their initial proof-of-concept was successful, Berke et al. did not explore the method’s external validity beyond an initial test case. By way of expanding and validating the scorecard approach – testing its generalizability outside the United States – this study applies a contextually modified version to a vulnerable district in central Rotterdam, the Netherlands. An internationally recognized leader in both resilience and urban planning, Rotterdam is nevertheless increasingly vulnerable to flooding in a changing climate.

Findings demonstrate that even a place as proactive in resilience policy as Rotterdam can benefit from the perspective gained using the Plan Integration for Resilience Scorecard method. Although physical and social vulnerability vary across the study area, resilience is generally supported throughout the district. Incongruities exist, however, with respect to the network of plans and the ways flood vulnerability is addressed in different neighborhoods; in some plans and in some places, insufficient attention is paid to flood risk. The scorecard also reveals unexpected issues related to flood safety responsibility in unembanked parts of the city.

The Plan Integration for Resilience Scorecard offers planners and researchers a new way of simultaneously evaluating community vulnerability, policy response, and plan integration. The method holds great potential for advancing planning practice and the scientific understanding of community resilience by allowing planners to more effectively recognize areas of policy discord, ‘hot spots’ of vulnerability, and their spatial associations. Areas of the community demonstrating vulnerability–policy discrepancies or inter-plan conflict can be targeted by policymakers.

References


Key Words:
Plan integration, Flood resilience, Network of plans, Land use planning, Rotterdam, the Netherlands

CLIMATE JUSTICE, RISK COMMUNICATION, AND PLANNING: A CASE FOR MICHIGAN’S HURON RIVER WATERSHED
Abstract ID: 814
Individual Paper Submission

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Climate change adaptation planning has become a common practice in coping with climate change, particularly for socially vulnerable groups. Communicating climate risks and adaptation plays an important role in engaging the public to achieve climate planning goals (Moser, 2014). To investigate adaptive capacity for addressing climate justice and planning, this study built upon the inquiry of how climate risk information along with social and individual factors influence risk perceptions and subsequent adaptation actions (Adger et al., 2009) from local residents in the watershed. Three cities in Michigan’s Huron River watershed—Ann Arbor, Ypsilanti, and Wixom—were identified as having the greatest potential for climate injustice in the next five decades based on an empirical study examining spatial disparity of green infrastructure for mitigating future climate change-induced flooding and associated water quality environmental hazards among socially vulnerable communities (Cheng, 2016). Our study answers the following questions: 1) how well are the residents aware of their climate risks and injustice? 2) to what degree does climate risk information affect residents’ perception and adaptation behaviors? We hypothesized the communication of risk information would help to increase people’s awareness of climate associated hazards and their willingness to support adaptation planning, especially in climate injustice communities.

An online survey in 2016 was conducted using a convenience sample (N= 149). Participants living in the Huron River watershed were recruited through the Huron River Watershed Council. Data was analyzed through ANOVA t-tests to compare responses between two groups—climate injustice (n=76) and non-climate justice (n=73) residents. Questionnaires measured via a five-point Likert scale included how well people were prepared for the past climate associated hazard experiences and their perceived likelihood to future risks and preparedness to disasters before and after viewing the provided future climate risk information (i.e., a map of the climate injustice hotspots derived from the previous study highlighting the three cities). Results showed that risk information has a significant effect in changing perceptions of people who live in climate injustice communities on their increased vulnerability and decreased preparedness for future climate risks. Even though they perceived higher likelihood to future climate risks than people who live in non-climate justice communities, both groups perceived less
likelyhood of encountering climate associated hazards in the next ten years after reading the future climate risk information. Furthermore, a separate analysis of a series of questions in the same survey found out there was no difference between the two groups in their willingness to install green infrastructure on their properties even after they read the future climate risk information.

The study revealed challenges in communicating vulnerability assessment and climate change planning. An optimism bias exists when the future threats in the hazard-prone areas of the watershed are not perceived the same way as an immediate threat to personal risks (Taylor et al., 2014). Therefore, social and individual factors such as values, norms, risk perceptions, and ethics need to be taken into consideration in the construct of social vulnerability to be integrated into place-based vulnerability assessment and measures. Moreover, there exist a disconnection between perceived high vulnerability and strong willingness to act upon. Risk communication could be improved through providing multiple effective formats and material to illustrate both acute and chronic climate associated hazards and the effectiveness of various adaptation instruments to better reflect social and individual factors. To address climate justice and enhance adaptive capacity of the community, planners play an important role in understanding and minimizing the gap between people’s perception and behavior. This study supports the importance of integrating risk communication with residents to inform urban planning decision-making to ensure social-ecological resilience and social sustainability of communities.

References


Key Words:
climate change planning, risk communication, climate risk perception, climate justice, Michigan

LIFE, LIBERTY, AND THE PURSUIT OF HAPPINESS: PLANNING A SUSTAINABLE, JUST, AND FLOURISHING SOCIETY AMERICAN STYLE
Abstract ID: 822
Individual Paper Submission

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In this paper I present a critique of contemporary theorizing on sustainability, especially when conceived as the need to advance a singular, generalizable vision of sustainability science through a conventional array of institutional arrangements. Gaining and deploying robust knowledge of how environmental and social systems respond to perturbations, especially anthropogenic perturbations, is necessary but not sufficient. Similarly, insight on how and why humans act individually and collectively, both within their environments and in response to environmental change, requires something more than a simplified
individualistic and mechanistic explanation. Rather, efforts to promote sustainability need to be engaged in cultural and place-specific context, through the deployment and integration of both knowledge and values within evolving institutions. Moreover, sustainability itself—lest it be taken to mean everything and thus nothing—needs to be conceptualized in the context of other societal goals and values. The American context can be used to explain and justify these assertions. Doing so can help to explain and justify, in turn, the assertion that sustainability—properly conceived—is and ought to be a fundamental American priority.

The paper begins with a set of initial propositions regarding the relationships between facts and values within the planning context, noting that planning as argumentation necessarily requires integrating facts about the world (e.g., climate change is happening) with value statements about what obligation if any society has to mitigate or adapt. The key point here is that value statements about what society should do, why, and how are culturally dependent (i.e., the ways Americans might find appropriate to specify and approach these obligations differ from the ways Europeans might do so). The paper then reviews common frameworks for conceptualizing sustainable development and promoting it as a social goal (e.g., Campbell, 1996; Roseland, 1998; Gunderson and Holling, 2002), and critiques those approaches.

In brief, some approach sustainability by attempting to scientifically describe and universalize human-nature relationships as a way to identify leverage points for change. This approach, however, provides little insight into how to connect norms with facts within a decision-making process itself, or how efforts and the outcomes from them might vary across cultural context. Others focus on decision-making processes but in doing so tend to mix means with ends. The economy, for example, is an institutional means to an end; it should not be conceptualized as an end unto itself. Finally, sustainable development has become too all encompassing as a unitary end, rather than one end better understood in relation to other vital social goals (e.g., freedom from tyrannical government). In making these critiques, I also address briefly the attributes of conventional approaches to policy analysis processes (see, e.g., Jenkins-Smith, 1990), along with well-developed critiques of those approaches (e.g., Ackerman et al., 1997), and discuss how those conventional processes have helped to shape a now-conventional approach to sustainable development.

Responding to all this critique, I suggest a framework for re-thinking sustainability that re-conceptualizes relationships between institutional means to ends—governments, markets, associations, and religions—and desirable ends themselves in the American context, using life, liberty, and the pursuit of happiness as guiding principles or core American social goals. I present key attributes of this framework, discuss challenges to be overcome, and offer next steps. I suggest key questions that we should be asking (What society are we trying to sustain, why should we sustain it, and how should we get there?) and I argue both that we ought to be planning for a sustainable, just, and flourishing society, and that doing so is indeed an American endeavor—not an assault on the American way of life.

References

COOLING THE CITY: INTEGRATING GROUND-BASED MEASUREMENTS WITH MODELING SCENARIOS TO ADDRESS URBAN HEAT STRESS AMONG VULNERABLE POPULATIONS.
Abstract ID: 853
Individual Paper Submission

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The mounting evidence about the impacts of climate change on human health presents an urgent need to understand the implication of rising temperatures on the inhabitants of cities, where the majority of people now live. Acute increases in the magnitude, intensity, and duration of extreme weather events has the potential for causing major disruptions in commerce, social process, and human fatalities, especially among vulnerable populations (e.g. older adults, pre-existing health conditions, those with limited coping capacity). One such event is extreme heat, which causes more deaths across the globe per year than all other natural disasters combined. While numerous studies confirm and describe the creation of and processes that mediate urban heat islands (UHIs), few examine the opportunities for mediating microclimate through alternative physical design of the built environment. In this study, we ask two research questions: (1) what built environment characteristics help to explain the presence of UHIs? and (2) to what extent do alternative physical designs help to reduce ambient temperatures in UHIs? We address these questions by assessing the UHIs in the City of Portland, Oregon (USA) through a five stage research process. First, we conducted a series of vehicle-based temperature traverses to identify UHIs where vulnerability populations currently live. Second, we divided the city into 100m grid cells, and conducted a clustering analysis -- normal mixture modeling -- to define the built environment factors that help to explain the presence of UHIs in the study area. The land cover in the grid cells were further divided into seven distinct types of urban morphology. Third, using a computational fluid dynamic (CFD) model, ENVI-met, and a local weather station for calibration, we simulated the spatial distribution of temperature in all of the land cover categories. Fourth, we assessed, the extent to which modifications to the physical designs of the built environment, including land cover characteristics in the select sites would reduce temperatures. Finally, using the seven distinct types of urban morphology, we applied the promising modifications that provided the greatest reduction in ambient temperatures to rest of the city.

We found that six variables helped to predict over 90% of local variation in urban heat: percent canopy, percent vegetation, biomass density, mean building height, total building volume, building height standard deviation. While the canopy, vegetation, and biomass were negatively associated to heat intensity, and the building variables provided a net increase in local UHIs. We note that the seven types of urban morphologies encompass approximately 62% of the city -- the remaining 38% were a mix of multiple types. By exploring several modifications to the built environment, the ENVI-Met model demonstrated that the average temperature of study site can be decreased from 0.5 to 8.5oC by altering the ratios of green and grey infrastructure, and selectively changing reflectivity of building surfaces. The individual sites offer 'scaling up' options to the entire city, where we describe highly promising options that increase density of housing, while strategically introducing green infrastructure to development sites. In addition, by extending specific scenarios to the whole city we describe a patterns of
development that can simultaneously reduce temperatures, while supporting the meeting many (although not all) development pressures.

References


Key Words:
Urban Heat, Climate Sensitive Design, Modeling

MEASURING FRAGMENTATION OF WATER GOVERNANCE IN US CITIES: THEORY AND EVIDENCE EXAMINED

Abstract ID: 854
Individual Paper Submission

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The governance of urban water is complex like other activities related to planning. An array of agents works, typically independently and in a fragmented fashion, to achieve disparate goals in water management across multiple jurisdictions. The delegation of authority among several local organizations creates fragmentation in functions in water management. Evidence from public administration and policy suggests that this functional fragmentation influences both policy learning and policy creation (Park and Feiock, 2006). Indeed, how local agents work to perform state and federally mandated water tasks and how they communicate about this work adds additional complexity to functional fragmentation problems (Feiock, 2009). Where water is a key factor shaping how and where cities grow, this paper represents the start of a multi-phased project investigating urban water governance issues and how policy-making and policy learning occur around it. Previous research has utilized network analysis to develop insight and understanding into how social relations influence learning and policy processes in sustainability (Henry & Vollan, 2014). The objective of this paper is to utilize network analysis and measure functional fragmentation within urban water governance. As a result, this paper addresses the research questions: 1) what is the extent of functional fragmentation within urban water governance structures within and across four cities within two different climate regions? And 2) to what extent do functional fragmentation levels in urban water governance align with theory and evidence from other fields of study?

Using documental sources, public data and generated data, network analyses were performed in 4 regions in 2 states: Miami metropolitan region and Fort Lauderdale region in Florida; and Phoenix metropolitan area and Tucson region in Arizona. The network analyses and measurement of functional fragmentation are important first steps that will permit the testing of various hypotheses related to water
governance in metropolitan regions, such as patterns of collaboration, cooperation, organizational learning, and innovation of water management. Preliminary results suggest significant variation in fragmentation levels across and within states and cities. These results have important implications for how planners engage with water organizations in the planning process. They also provide a base from which to test future hypotheses and will be used to develop an understanding of how innovative water policy is adopted, how policy-makers learn about and implement water sustainability practices, and how obstacles to policy-learning can be removed.

References

Key Words:
Water governance, fragmentation, urban growth, environmental planning

3 YEARS FOLLOWING TYPHOON YOLANDA: TRACING GOVERNMENTS’ REBUILDING DECISIONS, ACTIONS AND COMMUNITY REBUILDING STATUS
Abstract ID: 860
Individual Paper Submission

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Community recovery takes a long time, sometimes a decade or even two. Recovery plans and processes greatly affect rebuilding of communities, yet little systematic knowledge is available about post-disaster procedures to create better communities (Johnson & Olshansky, 2016). In the recovery process, planners and policy makers face numerous challenges and tensions, including various uncertainties about funding, politics, and resources to drive rebuilding (e.g.Nelson, Ehrenfeucht, & Laska, 2007). Complexities always exist, as recovery is a process that involves compression of developmental activities into a short time period, while surrounding factors affecting recovery decisions transform over the long time span needed for recovery (e.g.Johnson & Olshansky, 2016). Recovery processes are often obscured, especially in regions with hastened developmental pressure (Fordham, 2007). Tracing recovery processes and outcomes over an extended time sheds light on key elements driving recovery; however, constraints on conducting recovery research make it challenging to analyze recovery from such an angle.

Tacloban City, devastated by 2013 Typhoon Yolanda, made urgent decisions to relocate coastal communities to safer locations in the city’s north, in a hope to minimize future storm surge threats. Within four months, a “no-build zone” ordinance was adopted to forbid rebuilding in coastal areas, and the city’s northern agricultural areas, approved for development in the 1990s to boost the regional economy, were targeted to accommodate relocating residents. Relocation was planned to take place in two steps; first into temporary and then to permanent housing (Iuchi & Maly, 2016). While the City quickly started to implement their relocation, the central government led the design of national rebuilding strategies to support the 171 affected localities. The National Economic Development
Authority (NEDA) published Reconstruction Assistance on Yolanda (RAY) to set the stage for rebuilding, and a recovery support office, OPARR, debuted in the Presidential Office to support planning activities for recovery. The Office for Presidential Assistant for Rehabilitation and Recovery (OPARR), however, was short-lived – the office dissolved 1.5 years later and their role was transferred to NEDA. The presidency also changed in 2016, after 2.5 years of recovery efforts since Yolanda.

This paper shows how changes of governmental decisions and actions over time influenced community rebuilding, by observing planning decisions, management and implementation over a three-year period. Coastal communities required to relocate are our observation target, to understand the impact of decisions and actions by the national and local governments. We use narratives as tools to explain relationships of governmental motivations and their impact on communities (e.g. Flyvbjerg, 1998). This research is based on multiple fieldworks carried out after March 2014, and multiple interviews conducted with national and local government officials, local leaders and coastal community members. Publicly available and official information, as well as news articles augment the narrative.

We observed a significant transformation of recovery decisions by the central government dealing with Tacloban City during the study period. At an early stage, the central government referenced Tacloban and its vicinity as key recovery areas. Support from the central government to Tacloban City became more limited during the second period between the early and latter stages of the first three years. The dissolution of OPARR and the passage of time contributed to the sluggish rebuilding speed, represented by the development speed in relocation sites. In the third year, however, the change in the presidency brought a turnaround, speeding up overall site constructions. While the lack of central support during the second period obstructed the City in their advancement of the relocation plan, they nurtured a process that values communities and relevant stakeholders for better rebuilding. Strong central support in the end changed the structure of recovery governance, which sped up to double the number of housing units completed in a mere three months, yet disrupted the City’s intent to preserve community for residents’ long-term wellbeing.

References


Key Words:
Rebuilding decisions, Government actions, Community rebuilding, Community relocation

LINKING COMMUNITY ENGAGEMENT AND PLAN QUALITY FOR IMPROVED DECENTRALIZED STORMWATER IMPLEMENTATION
Abstract ID: 877
Individual Paper Submission

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Traditional systems of moving stormwater away from development can mitigate flooding, but not without creating unintended consequences. The rapid conveyance of urban stormwater through networks of pipes can transport large volumes of untreated stormwater into receiving waters, which poses a threat to current environmental standards and the health and safety of downstream communities. Some jurisdictions are augmenting this traditional approach with parcel level stormwater management practices that utilize green infrastructure. Green infrastructure seeks to reduce and treat stormwater at its source and includes stormwater control measures such as rain gardens, cisterns, green roofs, permeable pavers, bioswales, and wetlands.

However, the effective and efficient implementation of green infrastructure in an urban setting necessitates the placement of stormwater control measures on private property, and thus, requires significant community buy-in. This study investigates the role of community engagement in the successful implementation of green infrastructure on private property. The overarching question guiding this research is: does the quality of planning inputs and the magnitude and type of community engagement help explain variation in the implementation of green infrastructure projects on private property?

Public participation within planning processes is associated with benefits such as the cultivation of social networks and social capacity, increased trust among government, institutions, and community members, and higher rates of plan and policy implementation (R. Burby, 2003; Innes, 1996; Laurian & Shaw, 2008). However, recent work by Kinzer interrogates the connection between public participation and plan implementation citing the limited body of empirical evidence explicitly linking the two concepts (2016). Kinzer states that the extensive body of literature on public participation and the growing body of research on plan implementation rarely interact calling into question the impact of participation on implementation. This paper explores the community engagement techniques associated with successful and unsuccessful implementation of decentralized stormwater management practices.

We rely on data from two neighboring jurisdictions in North Carolina, both of which contain impaired urban watersheds with highly varied land use patterns and sociodemographic compositions: the Bolin Creek watershed in Chapel Hill and the Ellerbe Creek watershed in Durham. The Bolin Creek transitions from undeveloped to highly urbanized with both commercial areas with a mixture of high, middle, and low-income residents. The Ellerbe Creek watershed has the highest population density of any watershed in Durham and also contains a mixture of higher income households, commercial areas, and middle to low-income areas with significant numbers of renters.

We address our research question by integrating plan quality analysis with interviews using a case study research design. First, we content analyzed the network of plans governing stormwater management including the comprehensive plans, development management ordinances, and the watershed restoration activities of nonprofit entities. We use this data to compare the formal and informal plans against established best practices for high quality plans. Next, we conduct interviews of community and government stakeholders to explore specific information about the depth of engagement activities and their effectiveness in avoiding the pitfalls of unilateral communication.
This project joins on-going local efforts between community stakeholders and decision makers on displacement, environmental quality, and community engagement. As a pilot study, this paper takes a case study approach, which limits its generalizability in the short term. However, it is a part of a larger multi-year study investigating nutrient impairment within the Jordan Lake watershed in North Carolina, and future efforts can expand and test its conclusions. As a contribution to the planning literature, the project explores the role of community engagement and awareness of stormwater management tools on the implementation of stormwater control measures, and how alternative engagement strategies can enable community residents to participate more fully in the decision-making around the use of stormwater control measures within their community. More broadly, this paper contributes to the literature connecting community engagement and implementation and helps to test the assumption that public participation impacts implementation.

References

Key Words:
community engagement, plan quality, stormwater control measures, green infrastructure, implementation

BUILDING WATER EFFICIENT CITIES: A COMPARATIVE ANALYSIS OF HOW THE BUILT ENVIRONMENT INFLUENCES WATER USE IN FOUR WESTERN U.S. CITIES

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Clean and reliable water supplies are essential to support growing populations and economic activity, yet population growth and changing climatic conditions are stressing existing water resources. This paper and presentation seek to clarify the ways in which characteristics of the built environment, such as housing density, lot size, and land cover influence water use in four different cities in the Western U.S. Years of research have established that urban water use is influenced by a combination of factors including demographics, climatic conditions, and socio-economic factors (House-Peters et. al 2010). However, there is increasing evidence that characteristics of the built environment (Fox et al. 2009), as
well as zoning and public policy (Shandas and Parandvash 2010) have a substantial influence as well. While individual case studies have identified some of the major drivers of residential water use there have been only a few studies that compare the drivers of water use across multiple cities (e.g. Maidment and Miaou 1986, Breyer et al. 2012). To our knowledge, none of these multi-city analyses have focused exclusively on how the built environment influences water use.

The data for this study were water utility records for nearly 500,000 single family residential properties in four cities: Portland, Oregon, Austin, Texas, Salt Lake City, Utah, and Phoenix, Arizona. Census data, tax assessor’s records and remotely sensed measures of land cover provided measures of the built environment. From this database, we estimated elasticities that indicated the extent of how changes to the built environment increased or decreased water use. Our findings pointed to the importance of characteristics such as vegetated land cover, housing density, and property lot size. The results indicated that even small changes to the design and permitting of single-family residential properties could produce substantial cumulative water savings for cities. For example, if the next 5,000 single family residential properties that a city builds were built on lots that were 10% smaller than average, and had 10% less vegetated cover, over 23 million gallons of water could be saved each year.

Based on the findings, we propose planning and design strategies to help growing cities use water more efficiently. One strategy to achieve reductions in lot sizes would be to change residential zoning ordinances. Zoning ordinances are a common tool for urban planners to shape the built environment, but have rarely been applied for the specific purpose of water conservation. A zoning ordinance written for the purpose of reducing water consumption should specify smaller lot sizes than are typical in the city, perhaps 10% smaller than existing lot sizes in the vicinity. Specific “water saving” classes or districts of zoning can be implemented in areas that are predicted to see an increase in construction of new single-family residential properties. If strategies such as these are to be implemented, there will have to be coordination among water managers, urban planners, city councils and builders. This research provides empirical evidence on how land use decisions may influence water use which can inform these collaborations.

References


Key Words:
Water Use, Built Environment

TOWARDS GREEN INFRASTRUCTURE PLANNING: LINKING PLANS AND LANDSCAPE PATTERNS
According to the United Nations (2014), the urban population of the United States reached 263 million in 2014, indicating approximately 82 percent of the population resides in urban. Due to the rapid urbanization, many localities, especially in more economically developed countries, are seeking for innovative approaches to expand and protect green spaces within their cities (Farrugia et al., 2013). To strategically plan, manage, and connect networks of landscapes, natural lands, and open spaces at the regional, neighborhood, and site scale, several local authorities have started to adopt and implement green infrastructure planning (Benedict and McMahon, 2006; Lynch, 2016). However, goals, policies, and action strategies should be developed by reflecting the key concepts of green infrastructure, which is to identify, conserve, and connect crucial ecological network. Local planners may apply proactive strategies using strategic green infrastructure plans for proper open space preservation and stormwater management and, through strategic implementation, green and built infrastructures can be effectively managed. Even though the existing plans are rich in addressing the importance of green infrastructure concepts, there is still little evidence demonstrating that the goals, objectives, and strategies of currently proposed plans are tactically established in light of highlighting the key principles of green infrastructure.

The specific research questions are as follows: 1) What is the quality of local green infrastructure plans? 2) Which policy tools are often used for achieving green infrastructure planning? 3) Do local jurisdictions that possess well organized green infrastructure plans have greater connected green spaces? To address these questions, this study seeks to address two main points. First, an empirical investigation was conducted through assessing the quality of local green infrastructure plans within the Chesapeake Bay Watershed region, where its estuary has been polluted significantly due to urban runoff. Content analysis method will be used to evaluate the overall plan quality, assess how many plans address specific green infrastructure indicators (breadth score), and determine the degree of detail towards a certain policy or strategy (depth score). Second, to identify the implementation effects of green infrastructure plans, a multiple regression analysis was used to identify the association between plan quality score and the connectivity of green infrastructures, while controlling other contextual factors (planning capacity, socio-economic status, environmental, and geographical variables). The connectivity of green infrastructures was measured by utilizing the FRAGSTATS, a computer software designed to calculate landscape patterns.

In short, the findings of this study are that 1) most local jurisdictions have weak green infrastructure plans by failing to incorporate key principles of green infrastructure planning; and 2) localities that possess relatively high quality plans are more likely to have better connectivity (network) of green spaces. Areas with highly connected green infrastructures will be beneficial in several aspects, including mitigating the rate and volume of stormwater runoff, connecting habitat corridors, and increasing the value of land properties (Kim and Park, 2016). The findings are anticipated to promote the awareness and provisions of green infrastructure plan and guide local planners, as well as decision-makers, where future developments should be strategically occurred or avoided to protect critical green hubs and corridors.

References
Planners, policymakers, and elected officials increasingly view investments in green infrastructure, parks and other green development as opportunities for spurring economic growth, increasing environmental quality, and providing social and recreational amenities in urban areas (Rouse and Bunster-Ossa, 2013). In this way, green projects are often framed as supportive of sustainability, livability, and justice goals of planning. Indeed, green urban projects may provide a host of environmental, economic, and social benefits to their cities, from public health improvements (Tzoulas et al, 2007), to climate adaptation (Gill, Handley, Ennos, and Pauleit, 2007), to local economic development opportunities (Daniels, 2008). Green infrastructure may also serve to increase social capital, contributing to the social fabric and organization of communities (Foster, 2006). Many of the outcomes supported by investments in green infrastructure are of particular importance in low-income, high-poverty neighborhoods, which often suffer from a lack of public investment.

The potential of green infrastructure to address environmental justice issues as well as provide access to environmental, economic, and social amenities and capital makes it an important investment as cities seek to address environmental and equity concerns, particularly in low-income neighborhoods suffering from disinvestment. However, as planners and city leaders focus on these impacts of green projects, research has proposed that equity concerns--such as access for low-income and marginalized groups, affordability, and displacement--are often not addressed, with wealthier residents moving into areas surrounding green projects, while low-income residents often cannot afford to stay in the neighborhoods or move into them (Agyeman, 2013, Anguelovski, 2016, Zavestoski and Agyeman, 2014). For these reasons, green development projects may increasingly be seen as locally unwanted land uses (LULUs) by existing residents in historically marginalized neighborhoods (Anguelovski, 2015).

Previous research has examined the potential for and challenges associated with green gentrification (Agyeman, 2013, Anguelovski, 2015, Zavestoski and Agyeman, 2014, Wolch, Byrne, and Newell, 2014), as well as its ability to support social capital (Foster, 2006). However, case research examining the drivers of policies mitigating negative outcomes associated with green development is limited. With this research, I seek to examine the mechanisms through which governance structures and social capital provide support for equitable outcomes for green development projects.

Research questions include:
How does social capital impact residents’ ability to affect policies, outcomes, and processes with regard to issues of gentrification and displacement surrounding green investments?

How do governance structures impact the ways in which low-income communities are able to impact outcomes with regard to gentrification, displacement, and affordability surrounding green investments?

Which types of connections between grassroots, advocacy, government, and private actors are most significant in institutionalizing discursive rights to the city with regard to issues of gentrification and displacement?

Do cities with more equitable policies surrounding affordability and displacement have common institutional or relational elements?

What lessons might communities draw from case cities with regard to the potential for supporting equitable outcomes surrounding green urbanism and development?

Research consists of in-depth individual interviews with planners, policymakers, and residents, document analysis of plans and policies, and observation of planning meetings for two case cities, Atlanta, GA, and Seattle, WA. Cases were selected which included combinations of high and low levels of social capital and high and low land and housing markets. Drawing from the social capital, collaborative planning, and empowerment planning literatures, I hypothesize that higher levels of connection and interaction between grassroots, advocacy, governmental, and private actors support more equitable outcomes in green infrastructure planning efforts with regard to issues of affordability, displacement, and project goals. The conceptual framework included here shows the proposed relationships between social capital, environment and health quality, and land and housing markets, and the impacts of these interactions on low-income communities.

The research provides insight for communities with regard to governmental structures that are supportive of equitable outcomes as communities invest in green infrastructure. Results include a discussion of data from interviews, observation, and document analysis, as well as implications for policy and planning.

References


Key Words:
green infrastructure, equitable development, social capital, gentrification, housing affordability

WHAT DRIVES SUSTAINABILITY ACTIONS BY US LOCAL GOVERNMENTS: DISASTER PLANNING OR SUSTAINABILITY GOALS?

Abstract ID: 927
Individual Paper Submission
As local governments continue to wrestle with sustainability planning and implementation, some scholars have suggested that disaster planning might be a stepping stone towards sustainability. To examine this contention, we modeled data from a national survey we conducted with the International City/County Management Association of all municipalities and counties in the United States in 2015. The survey measured the adoption of 80 different sustainability actions (water, energy, land use planning, transport, social equity, etc.) as well as barriers and motivators for sustainability action. 1899 counties and municipalities responded.

Using logit models, we explore the link between disaster planning (which is most common), sustainability planning, and sustainability actions (which show a wide range in level of adoption). Although places that have disaster experience are more likely to make disaster plans, this does not lead them to adopt a sustainability plan. Rural areas are more likely to have disaster plans, but this does not lead to more sustainability action. By contrast, having a sustainability plan does lead to more actions, and rural areas are more likely to have a sustainability plan, ceteris paribus.

From a multilevel governance perspective, we note that higher level government support has no significant effect on local planning or action, but local participation, task forces and staffing do. Local governments, which articulate sustainability goals regarding a triple bottom line (equity, environment, economy), pursue a higher level of sustainability actions. Cross departmental and regional coordination also motivate a higher level of sustainability action. Local initiative matters. Breaking down silos within local government agencies and across the region is key to addressing sustainability issues. Our study finds disaster response only takes you so far down the path towards sustainability; clear articulation of sustainability goals is required for action. By empirically test the relations between various incentives and local governments’ sustainability actions, this study provides important implications for environmental planning.

References


Key Words:
Disaster planning, Sustainability action, Sustainability plan, Multi-level governance
ENVIRONMENTAL SUSTAINABILITY, SOCIAL EQUITY AND REDISTRIBUTIVE JUSTICE: CAN LOCAL ENERGY INITIATIVES HAVE IT ALL?

Abstract ID: 949
Individual Paper Submission

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The advent of civil society in the traditionally state-sponsored and market-oriented energy sector carries a transformative potential, not only for sustainable outcomes but also to promote equity through redistributive justice. The importance of civil society in ongoing energy transitions is implicated in the adoption of renewable energy technologies (RET) like solar PV and thermal systems, which are inherently decentralized and distributed, and touted to constitute the future of the energy sector (Adil & Ko, 2016). Energy infrastructure provision based on decentralized energy systems (DES), such as distributed and microgrid-based residential solar PV and thermal installations, is still informal and governance models of new social organizations are in flux, with roles, responsibilities and positions of consumers as energy producers still open to negotiation, often in conflict with public and private utilities. A deeper understanding of these dynamics which unfold across institutional as well as geographical scales from locality to state and the nation are critical to enabling an energy future for all sections of society, especially those which remain disenfranchised in the current energy system.

To encourage further adoption of RET, much of the scholarship from social, technological and interdisciplinary sociotechnical perspectives takes ‘community’ as the unit of analysis as opposed to the individual consumer (Adil & Ko, 2016). Thus, a top-down approach to energy systems transformation through grant funding, tax breaks, subsidization for, say, community-scale microgrid demonstration projects, weatherization, energy audits, efficiency and conservation projects etc., can be broadly linked to encouraging sustainable lifestyles by influencing the ‘hearts and minds’ of whole communities (Walker, Evans, Devine-Wright, Hunter, & Fay, 2007). However, the socio-spatial disparities, particularly in RET diffusion across urban regions point not only to the differential support offered by state and local levels, but also to the disparate levels of home ownership, income and education attainment across the urban landscape (Kwan, 2012). In this regard, planners and policymakers play a vital part for offsetting uneven and counterproductive socio-economic gains in the roll-out of new energy technologies, thereby avoiding a sort of ‘digital divide’ from taking hold.

To assist communities, planners and local governments comprehend a just energy transition from the conventional energy system, this paper outlines an analytical framework based on a three dimensional continua (3dC), conveyed by three main axes: of rationality, materiality and regulation, oriented to assess the nature of social organization (hierarchical vs. collectivist), extent of decarbonization (carbon-intensive vs. low-carbon) and degree of state sponsorship (deregulated vs. regulated), respectively. By attending to these three continua simultaneously, I argue that it is possible to assess emerging energy transitions not only on the basis of environmental sustainability but social equity and redistributive justice as well.

On the basis of the 3dC framework, a grassroots network located in North Central Texas engaging in bulk purchasing, installations and advocacy of residential solar PV systems is analyzed using a narrative-networks approach based on Actor Network Theory. The results of the case are reported; the particular approach to local energy transition adopted by this community is located along the 3dC continua, drawing out critical lessons for social equity and redistributive justice. In so doing, the paper responds to calls for greater focus on local social practices around community-scale energy projects.
(Shove & Walker, 2007) as well as to overcome the relative lack of focus on ‘community energy’ scholarship in the US (Klein & Coffey, 2016).

References


Key Words:
Energy Transitions, Infrastructure, Social Equity, Redistributive Justice, Sustainability

ASSESSING IMPACT OF GREEN STORMWATER INFRASTRUCTURE ON HOUSING PRICE IN PHILADELPHIA, PA

Abstract ID: 972
Individual Paper Submission

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In 2011, Philadelphia Water Department (PWD) launched a 25-year initiative called Green Cities Clean Waters to reduce 85% of stormwater pollution from reaching their sewer lines and watersheds by installing green stormwater infrastructure throughout the city. To make this effort sustainable, the Philadelphia government wants a larger proportion of private sector developers to install green stormwater infrastructure in their new developments. To influence private sector implementation, demonstrating the monetary benefit of green stormwater infrastructure on housing prices in Philadelphia is of critical importance.

This study, funded by an Environmental Protection Agency Star Grant, used the hedonic model to estimate the impact of green stormwater infrastructure on housing prices in Philadelphia. Using the PWD Big Green Map (http://www.phillywatersheds.org/BigGreenMap) we located 500 sites with green stormwater infrastructure within a quarter of a mile in Philadelphia. We then collected housing price data from 2011-2017 to capture before and after market value of the home. The model controlled for a number of factors that affect housing price such as number of bedrooms, bathrooms, size of lot, square footage of home, distance from city center, etc. The findings of the study will help policy makers to make informed green infrastructure investment decisions. Moreover, it will enable policy makers in
Philadelphia to determine if private sector developers are likely to install green stormwater infrastructure in their new developments. The policy implications are applicable to rest of the country.

One limitation of the study is we could not pinpoint the exact installation date of each green stormwater infrastructure so we used house market values at the beginning of the initiative (2011) until present day (2017).

References

Key Words:
green infrastructure, stormwater management, hedonic model, property values

CLIMATE, WATER, AND THE BUILT ENVIRONMENT: UNDERSTANDING PATTERNS OF WATER USE ON AN URBAN PACIFIC ISLAND
Abstract ID: 974
Individual Paper Submission

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In many parts of the world, water availability is increasingly stressed by a combination of economic growth and depleted, reduced or increasingly variable water supply. At the same time, more communities appreciate ecological values of water, such as maintaining in-stream flows for fish and wildlife. In many regions, climate change may exacerbate these challenges.

While climate and weather are well known to influence water supply, these also matter for water demand. Climate is an especially important factor driving demand for irrigation. Changes in temperatures, humidity and/or rainfall can significantly influence evaporation, evapotranspiration and soil moisture, and thus demand for landscapes. Early research examining the relationship between water use and climate show that consumption patterns are sensitive to weather variability (Chang et al. 2014; House-Peters and Chang 2011). Results from studies in the Pacific Northwest and Southwest show that per-capita water consumption is significantly related to droughts, maximum temperatures, and monsoonal precipitation (Chang et al. 2014; Ballinger and Gober 2007). More recently, researchers and planners have gained interest in understanding the effect of property and neighborhood characteristics in their effort to integrate land use and water planning to accommodate future population growth (Gober et al 2013; Shandas and Parandvash 2010; Fox et al 2009). Most of these studies focus on single-family residential units and find lot size and landscaping to be significant. Ghavidelfar et al. (2016) explored determinants of water use among multi-housing developments in Auckland, New Zealand using panel
data set, and found household size as the most important determinant. Fewer studies examine the sensitivity of water consumption to weather across neighborhoods. Ballinger and Jones (2008) found variation in the climate signal across neighborhoods in Phoenix. Greater sensitivity occurred in neighborhoods with large lots, pools, and high proportion of irrigated landscape, and lower sensitivity in neighborhoods with large families and many Hispanics. No studies to our knowledge examine climate, land use, demographics and water use patterns in a tropical island context.

Oahu, the most urbanized island of Hawai`i, presents a unique environment to examine patterns of water consumption across a landscape with many heterogeneous microclimates, a variety of neighborhoods with different building types, vintages, population densities, and demographic characteristics, all served by single municipal water utility. Since the 1980s when sugarcane production and associated water use declined, per-capita consumption show a decrease in water use, although these estimates vary by urban area. Long-term records indicate that an increase in temperatures and a downward trend in precipitation throughout the state (Keener, Izuka, & Anthony, 2012). Precipitation amounts can vary greatly over time and from one island to another and from one side of an island to another due to steep volcanic geography. Aquifers levels have declined considerably in some key regions, due to historical agricultural pumping in excess of sustainable yield. While agricultural activities have subsided and head levels have stabilized, they show no sign of recovery.

This study is designed to test the following hypotheses: 1) water consumption is positively correlated with maximum air temperature and precipitation; 2) Lot characteristics, building age and demographics are significantly related to per-capita monthly water consumption; 3) Neighborhoods with the largest lots and highest temperatures consume the most water. We use billing records, downscaled climate data, and parcel-level data on the built environment to examine water use patterns. We document how per-capita water use differs by building type, vintage and microclimate, as well as demographic characteristics. We use these patterns to project how different kinds of prospective developments and their location are likely to influence overall water demand. We show how water use for different kinds of users response to extreme events, such as drought or extreme heat. Finally, we extrapolate from these patterns to consider how climate change could influence water demand. Estimates are compared to prospective demand currently anticipated by the Honolulu Board of Water Supply.

References


Key Words:
Water demand, Climate, Land use, Water resource planning
ADAPTIVE GSI MANAGEMENT AND CLIMATE CHANGE IN THE MIDWEST
Abstract ID: 987
Individual Paper Submission

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According to the US Global Change Research Program (2014), the impact of climate change in the Midwest is expected to include more frequent and higher intensity storms, heightening associated runoff in urban and rural areas alike. In urban areas particularly, impermeable surfaces increase the amount and ferocity of the runoff. Traditional approaches to stormwater mitigation have relied on efficient conveyance of water away from developed lands and into nearby waterways. However, “[i]ncreasing urbanization, higher runoff volumes, and corroding pipes have put a strain on these systems” (“Grey Infrastructure | Soil Science Society of America,” n.d.). While one response to the strain has been to repair, replace and expand grey infrastructure, some cities have instead incorporated green stormwater infrastructure. Green stormwater infrastructure “uses vegetation, soils, and other elements and practices to restore some of the natural processes required to manage water and create healthier urban environments” (US EPA, n.d.-b). Philadelphia, Chicago, and New York have each attempted to complement existing grey infrastructure with public and private programs to enhance the number and coverage of GSIs. However, GSI implementation is often complicated by overlapping regulatory considerations, costs, scientific and political uncertainties (Tryhorn, 2010; US EPA, n.d.-a). One approach has been to apply an adaptive management approach to the associated policy formulation, whereby “scientific and other types of knowledge [are integrated] into policies to advance the common interest in particular contexts through open decision-making structures.”(Brunner, 2005). Chaffin et al. (2016) provide a case assessment of such an approach in Cleveland Ohio, which points to some reluctance and lack of understanding about adaptive management approaches, and economic and public education shortcomings related to GSI specifically. However, there remains little institutional understanding of the extent to which such methods are being applied in the Midwest generally and the successes and challenges of the activities.

This study will examine the institutional and programmatic framework for adaptive GSI management in the east north central region of the Midwest (Ohio, Indiana, Illinois, Michigan and Wisconsin). The study population is the top 3 populated cities in each state (excluding Chicago as a population outlier at 2.7 million). Cities range from 104,057 (Green Bay, WI) to 820,445 (Indianapolis, IN). We will review the existing stormwater regulation or plan for inclusion of green stormwater infrastructure considerations and evidence of adaptive management efforts. We will then survey the key contacts as identified by the plans in these cities to understand the inclusion of adaptive management/green stormwater infrastructure elements in planning process, including activity receptiveness, confidence in outcomes, challenges faced, and climate change expectations (if any). A more in depth case comparison, including stakeholder interviews, will be made between Columbus, OH and Indianapolis, IN which are comparable cities in size, demographics, and standing (state capitals).

This study builds upon the findings of Chaffin et al.’s (2016) case study of Cleveland’s foray into adaptive stormwater management with green infrastructure. We anticipate the results of this study to provide additional key insights that may help to generalize both successes and challenges in order to inform best practices. We also believe the results will contribute to the still growing literature on adaptive stormwater management specifically, and planning under climate change uncertainties more generally.
References


Key Words:
Green stormwater infrastructure, Adaptive management, Climate change

THE GREEN MORPHOLOGY OF NEIGHBORHOODS: A SPATIOTEMPORAL ANALYSIS OF DISPARITIES IN URBAN GREEN SPACE ACCESS IN COLUMBUS, OHIO

Abstract ID: 993

Poster

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Urban green spaces, often defined as green infrastructure, provide a variety of socioenvironmental benefits that alleviate the negative by-products of urbanization, such as mitigation of urban heat islands and air pollution, reduction of surface run-off, provision of recreation and sporting fields, and physical and psychological health restoration (Liu et al., 2007).

While casual access to various types of urban green space provides many benefits to residents, studies have raised concerns about social disparities in the enjoyment of these amenities (Wolch et al., 2014). There is, however, contradictory evidence on the specific patterns of inequality. In some places, the tree canopy cover is positively associated with economic wealth (You, 2016). In other places, the disconnection between disadvantaged neighborhoods and greenery has weakened due to inner-city greening programs and migration of poverty to suburbia (Steenberg et al., 2015). This inconsistency may be due in part to the spatial and thematic definitions of urban green space. Previous studies mostly use large spatial units, allowing for only one or two categories of urban greenery.
Urban green space is thematically and functionally heterogeneous. For instance, small gardens and tree canopy around residences are beneficial for heat mediation and aesthetic enhancement, but may not have much value for ecosystem support. Urban green space consists of varying sized green lots and is mixed with impervious surfaces, as reflected by the high spectral and thematic variability of imagery data (Song et al., 2016). Large grid sizes and hard classification (i.e. vegetation or not) may obscure detailed but important differences in green space gradients and configuration. Many municipalities have recently implemented intra-urban neighborhood-scale urban greening initiatives to retrofit underutilized spaces, such as green alleys and conversion to community gardens. These efforts can only be captured at a finer spatial resolution and with thematic variability. There is also limited research on changes, such as recent trends of reurbanization and green gentrification. Environmental injustice in terms of access to green spaces needs to be explored through a spatiotemporal perspective.

This research examines the issue of social disparities in access to different types of urban green space in a new light and their changes over time, leveraging remotely-sensed data with enhanced resolutions combined with socioeconomic and public health data. Research questions include:

- Does greenness vary with neighborhood wealth?
- Is greenness associated with population health?
- What is the pattern of greenness in disadvantaged neighborhoods?
- Has this pattern changed during the last few decades?

We use color-infrared aerial imagery at 1ft resolution to derive fractional estimates of vegetation quantity and quality per pixel from Landsat 5 and 8 data for 1997 and 2016, and GIS layers of public and community parks, building footprint and parcel-level land uses over the city of Columbus, Ohio. These data are aggregated at the census tract level to calculate:

- The land shares of urban green space and specific greenery categories (forests, parks, sporting fields, gardens, grassland, roadside greenbelts, residual green space around residence, riverside green, etc.) and their per capita ratios;
- The mean slope gradients (%) of all vegetation covers;
- An index of the quality of vegetation covers;
- An entropy index of vegetation types;
- Network-distance-based accessibilities to urban parks and public green amenities;
- Landscape metrics for connectivity and diversity (e.g., Shannon's diversity, Dominance, Interspersion and Juxtaposition, and Mean Nearest-Neighbor Distance indices).

Correlation and regression analyses are used to analyze association and cause-effect relationships between the various greenness indicators and socioeconomic and health indicators. Spatial regression is used to control for spatial autocorrelation.

References


Key Words:
Urban green space, Neighborhood greenness, Social disparities, Spatiotemporal change

MODELING THE DISTRIBUTION GRID IMPACTS OF SOLAR PV ON RESIDENTIAL AND COMMERCIAL BUILDINGS
Abstract ID: 1005
Individual Paper Submission

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Solar energy has recently become the topic of vigorous policy debate in Virginia and many other states across the country. While supporters point to the variety of environmental and other benefits that solar energy can provide, opponents contend that increased use of solar energy – specifically distributed, net-metered solar photovoltaic (PV) systems – would pose costly technical challenges for electric utilities and ultimately lead to higher electricity prices for consumers. While these concerns do have conceptual merit, little is understood about the level of PV market penetration that could cause such problems, or about the various technical and policy-related solutions that could mitigate them.

This is the second in a series of papers from an interdisciplinary research project between the Urban and Regional Planning and Electrical and Computer Engineering programs at Virginia Commonwealth University. The goal of the project is to simulate the effects of varying levels of PV market penetration on a hypothetical electrical distribution network in Virginia, and to evaluate how those potential negative impacts could be mitigated. The first article in this series, presented at ACSP 2016, described how we used GIS and other planning tools to develop a database of building stock in the study area, estimate energy and power demands in those buildings (as per Andrews et. al., 2016), and calculate their solar power potential (as per Ko and Radke, 2014). Our engineering colleagues then used those inputs to model the impacts to the electrical distribution network that would result from different levels of PV installation on the study area buildings.

This conference paper will focus on how the distribution of PV installations among residential versus commercial buildings affects the impacts of PV on the electrical grid. Prior studies have noted advantages of locating PV in commercial districts, where daily demand patterns better sync with PV system production (Keyes & Rabago, 2013). The paper will also discuss the results in the context of existing literature on the relationships among zoning, urban form, and solar energy use (Niemasz et al., 2013; O’Brien et al., 2010).

References
Key Words:
Solar energy, energy policy, geo-spatial analysis, remote sensing, zoning

A SPATIAL HEDONIC ANALYSIS OF A SHRINKING LAKE MEAD
Abstract ID: 1035
Poster

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Persistent arid conditions and population growth in the Southwest have taken a toll on the Colorado River. This has led to substantial drawdowns of many water reservoirs around the Southwest, and especially of Lake Mead, which is Las Vegas’ main source of drinking water. Due to its importance, Lake Mead has received a great deal of media attention about its “bathtub ring” and the exposure of rock that used to be underwater (CBS, 2014; NPR, 2014). The recent drops in water levels have caused local marinas to close, thereby affecting the aesthetic and recreational value of Lake Mead, which is located in the country’s largest National Recreation Area (NRA), and surrounded by protected land.

Although a rich literature analyzes how water quality impacts real estate values, relatively few studies have examined how dropping water levels are capitalized in surrounding residential properties (Landsford and Jones, 1995; Loomis and Feldman, 2003). In this study, we aim to quantify how Lake Mead’s water level fluctuations are reflected in changes in local property values. Since Lake Mead is the primary attraction within its recreation area, we are also concerned with how this recreation area, which is a few miles southeast of Las Vegas, is capitalized in real estate values of the Las Vegas metropolitan area, since few valuation studies have examined how proximity to national parks influences residential property value (Gibbons, Murato, Resende, 2014; Peason, Tisdell, Lisle, 2002). We estimate spatial hedonic models of single family residences located within the Las Vegas Metropolitan Area to delineate the value of proximity to the Lake Mead NRA and to understand how this value changed with Lake Mead’s water levels. Our explanatory variables include common structural characteristics, fixed effects to account for unobserved locally constant characteristics, and specific variables such as distance to the Las Vegas strip and to downtown casinos. To guard against biased and inconsistent estimates resulting from heteroskedasticity, we estimate our models using generalized spatial two-stage least squares (GS2SLS) (Arraiz et al., 2010). Because the sharpest declines in Lake Mead water levels happened in 2010 (NASA, 2010) and winter 2016 saw an unexpected increases in water levels, we analyze home sales and variations in water levels from 2010 to the end of 2016.
This study will contribute to environmental hedonic studies in at least a couple of different ways. First, while most water related hedonic studies are concerned with water quality, this study will quantify the economic impacts of fluctuating water levels on regional property values. Second, our work will estimate the value of proximity to a large recreation area of national importance.

References


Key Words:
Hedonic, Water level, Lake Mead, National Park, Property Values

ASSESSING INTEGRATED APPROACHES TO REGIONAL RENEWABLE ENERGY INFRASTRUCTURE DEVELOPMENT AND RETIRED VEHICLE BATTERY MANAGEMENT: A CASE STUDY IN CALIFORNIA
Abstract ID: 1051
Individual Paper Submission

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Renewable Energy (RE), especially wind and solar photovoltaic power, has been increasingly adopted as a promising strategy to help enhance energy security and reduce emissions from fossil fuels (Carley and Lawrence, 2014). While RE infrastructure accounts for 8% of the total energy infrastructure capacity in the U.S., only 5.2% of the country’s total electricity is generated from RE. Compared to the system-wide capacity factors (the ratio of average energy produced to the rated peak power) of 50%, the RE infrastructure is currently lagging behind (i.e. 20%-30%) (EIA, 2017). Installing energy storage systems at RE plants can improve the generation efficiency by balancing the real-time supply and demand (Denholm et al. 2010).

One emerging energy storage solution is to repurpose second-hand batteries, including those from Electric Vehicles (EV) (Ahmadi et al. 2017). Managing retired EV batteries, which may also be an attractive strategy, involves unappreciated challenges due to underdeveloped recycling and re-manufacturing facilities and the batteries’ short lifespans, significant mass and volume, and substantial toxic material content (Richa et al. 2014; Sathre et al. 2015). Local and regional management of retired EV batteries can also help avoid long-distance hauling and mitigate transportation impacts. Planning for such integrated solutions promises to improve RE electricity generation from existing infrastructure and...
minimize potential hazards from retired EV batteries simultaneously, but efforts are hindered by a lack of region-specific data.

This study adopted a case study approach and focused on the State of California, which has been leading the nation in terms of EV adoption and progressively adopted RE. Quantitative analysis was developed at the county-level to assess the opportunities of regional implementation for such integrated solutions. Annual retired EV battery volume by county was estimated from 2010 to 2040 using a product flow analysis under various EV sales growth and EV battery lifespan scenarios. Then the location and capacity information of existing RE power plants were extracted from the U.S. Energy Information Administration’s Energy Mapping System database. Lastly, the retired EV battery volume was spatially matched to the RE power plants in terms of their energy storage demand.

The results showed that the storage capacity of retired EV battery (“supply”) in California, even in a conservative estimate scenario, would significantly exceed the “demand” from RE power plants as energy storage solutions in the short term. It demonstrated the promising feasibility of local and regional solutions for developing RE infrastructure and managing retired EV batteries as an integrated strategy. It also suggested that other potential solutions that prolong the lifespan of EV batteries (e.g., energy storage at residences) and that connect with the potential demand in neighboring states should be explored. The county-level spatial analysis also showed an uneven distribution of supply and demand within the State. While the retired batteries are clustered in Los Angeles County and the San Francisco Bay area, potential users are spread out along the Central Valley, as well as in southeastern California. As infrastructure necessitates long-term planning, regionally coordinated and centralized efforts that connect retired EV batteries and potential users will be needed.

References


Key Words:

QUANTIFYING THE CUMULATIVE IMPACTS OF HAZARDOUS LAND USES, SOCIAL VULNERABILITY, AND THE PROTECTIVE EFFECTS OF THE URBAN TREE CANOPY
ON MORTALITY RELATED TO PARTICULATE MATTER AIR POLLUTION IN METROPOLITAN DETROIT

Abstract ID: 1087
Individual Paper Submission

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In the United States, the Environmental Protection Agency (EPA) attempts to regulate air pollution by setting acceptable levels of six criteria pollutants (US EPA, n.d.). These pollutants include lead, ground-level ozone and photochemical oxidants, sulfur oxides, nitrogen oxides, carbon monoxide, and particulate matter. Unlike the first five criteria pollutants, particulate matter (PM) varies in both chemical composition and particle size. Public health research has found that smaller PM (less than 2.5 microns) may have greater health impacts as their smaller size permits absorption through the lungs into the cells (Xing, Xu, Shi, & Lian, 2016). As a result, individuals living adjacent to industrial areas and major roadways are more likely to be exposed to higher levels of harmful ultra-fine diesel PM. In general, PM is a recognized threat to cardiovascular health (Brook et al., 2004)(Brook & Rajagopalan, 2010). Estimating the health impacts of diesel PM on residents is a challenge as many residents who live in neighborhoods with higher levels of air pollutants also face other environmental pollutants or social vulnerabilities. In this research, we geocoded mortality data for Metropolitan Detroit (3,863,924 total residents and 171,006 deaths from 2008 and 2012). Death records included information on individual level risk factors such as age, gender, race/ethnicity, education, marital status, and tobacco use. Independent variables included indices of hazardous land use and facilities, social vulnerability, diesel PM exposures, and percentage of tree cover. The hazardous land uses and facilities index combined information on the locations of railroad facilities, ports, roads, airports, refineries, and intermodal transportation facilities with the locations of Toxic Release Inventory (TRI) sites, chrome platers, and hazardous waste sites. The social vulnerability index combined census tract information on percent of the population under 5, percent of the population over 60, percent of people of color (total non-White population/total population), percent of households living in poverty, mean median home value (reverse coded), percent of renter occupied homes, percent of population over 24 with less than high school education, and linguistic isolation (percent of residents who live in households where no adults speak English). We used the levels of diesel PM as the sole measure of air pollution based on the EPA’s National-Scale Air Toxics Assessment for Diesel Particulate Matter for 2011. The final independent variable was the percentage of tree cover in all residential areas and areas with facilities for sensitive populations. By using actual mortality data from the Detroit Metropolitan Area and holding the individual level risk factors constant, we were able to statistically investigate whether residents’ likelihood to die from cardiovascular disease (CVD) was influenced by neighborhood levels of 1) diesel PM, 2) proximity to hazardous land use and facilities, 3) social vulnerability, and 4) relative percentage of tree canopy. Consistent with the literature, residents of Metropolitan Detroit living in census tracts with the highest levels of social vulnerability were more likely to die from CVD relative to residents in census tracts with the lowest levels of social vulnerability. Relative to the census tracts in the lowest quintile, death was significantly more likely in census tracts with higher diesel PM scores (fourth and fifth quintile). However, when tree canopy was added to the analysis, diesel PM was no longer a significant predictor. Sharkey and Faber (2014) encouraged researchers to go beyond asking how do neighborhoods matter and investigate the where, when, why and for whom do residential contexts...
matter. This research affirms the importance of neighborhood conditions and explores how we can create cumulative measures of environmental threats.

References


Key Words:
air pollution, cumulative risk, neighborhood effects, environmental justice, tree canopy

ENVIRONMENTAL AGENCY: WHO CAN ACT ON THE ANTHROPOSPHERE?

Abstract ID: 1088
Individual Paper Submission

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So much of the literature on environmental issues is pessimistic and deterministic, implying that things are not going well and that this unhappy situation is due to forces beyond our personal control. This paper instead asks the more empowering question of who can act in the environmental arena, and with what consequences. There are still strong grounds for distress, but an “agency” perspective opens up promising routes for effective action.

Social scientists who pursue structural explanations for environmental problems have much evidence to support their claims that inequality reproduces itself, governing regimes persist, markets don’t naturally internalize externalities, firms operate within strict sectoral constraints, employees do what they are told, and consumers buy what is available (Scott 2013). Much natural science research reinforces this perception by correlating demographic, economic, and technological metrics and categories directly with environmental harms (Andrews 2001). Yet somehow, social safety nets emerge, regimes fall apart, legislatures enact environmental laws, sectoral norms shift, employees do the unexpected, and consumers find and buy greener products. Metrics such as SO$_2$ emissions and GDP become decoupled. À la Giddens, we explain outcomes better when we acknowledge that structure and agency interact. A multi-level perspective on change can clarify how progress occurs and who is involved (Geels et al 2016). In one variant, sustainability transition managers claim that the socio-technical landscape is disrupted when Kingdon-esque windows of opportunity open, innovations that have been carefully nurtured in protected niches scale up into mainstream use with help from entrepreneurial spirits, and
thereby the old sociotechnical regime is replaced by a new one (Schot & Geels 2008). This paper seeks more modestly to describe and explain before jumping into prescription. It maps and compares the sources of agency in two multi-level systems that illustrate that the potential for action is much greater than commonly assumed in environmental policymaking. These cases include (1) reducing per capita energy consumption, and (2) coping with summer heat waves within cities. For each case it asks the following questions:

• Individuals: At the micro level, what motivates individuals? Why do they create organizations and governments? Why do they consume, pollute, or stop polluting?
• Organizations: At the organizational level, what motivates individual enterprises? Which survival strategies do they employ? How do the organizations work? How do they transform materials and energy?
• Institutions: At the governmental, community and sector levels, what is the structure of each web of actors? How hard is it to change these structures? What actors are present and what are their roles?

Each case looks across space and time to characterize resource flows, scope for decision making, and evidence of change. The cases are empirically anchored in field research conducted in apartment buildings in urbanized New York City and northern New Jersey. The projects involved interviews on and monitoring of environmentally-relevant behaviors for samples of occupants in 6 apartment buildings, interviewing building managers and owners, creating building energy and indoor air quality simulation models of the buildings to explore operational and design-related what-ifs, and relying on archival data and policy analysis to characterize actions available to infrastructure providers, urban decision makers, and state and federal decision makers.

Key findings are that (1) individual building occupants have enormous scope for action to reduce household energy consumption, improve indoor air quality, and remain personally comfortable during heat waves; (2) building managers have capacity to act in ways that affect many more people, subject to constraints from below (occupant behavior) and above (owner’s budget, laws and regulations); and (3) this large scope for doubly-constrained action continues upward through levels of ownership, organizations, and institutions to yield many sources of potential agency in these multi-level systems. Encouraging action at each level requires knowledge, opportunity, and entrepreneurship, but of varying types. This research is funded by NSF grant AGS-1645786 and HUD grant NJHHU0019-13.

References


Key Words:
multi-level system, environmental policy, housing, planning theory
EQUITY IMPACTS OF SUSTAINABLE CITY INITIATIVES: ISSUES OF VOICE THROUGH CIVIC ENGAGEMENT AND DISPLACEMENT THROUGH GENTRIFICATION

Abstract ID: 1098
Individual Paper Submission

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Purpose
Increasingly, local governments are systematically promoting sustainability through the use of plans, policies and programs. These efforts purport to strengthen environmentally sound economic development that simultaneously promotes equity amongst city residents. As generally envisioned, increases in the sustainability of a city lead to improvements in the quality of life for all residents.

On its face, efforts to promote sustainability should be of particular value to the poor and marginalized within our cities. The environmental justice literature provides ample evidence of the disproportionate impact of environmental degradation facing these communities. However, recent examinations of sustainability initiatives have raised concerns of “green gentrification” by which sustainability initiatives improve livability which in turn leads to displacement of low-income residents.

This research contributes to our understanding of the impact of citywide sustainability initiatives on residents of low-income neighborhoods. The research focuses on two interacting questions: to what degree do sustainability initiatives lead to displacement of community residents through gentrification and to what degree do sustainability initiatives lead to increases in voice through processes of civic engagement? These processes work counter to each other: increases in gentrification dampen voice while increases in voice counters tendencies toward gentrification.

Method
The research employs a mixed method approach to answering these questions. Matched-paired cities are identified with similar demographics, land market and development profiles, in close geographic proximity, but differing in efforts to promote sustainability. Based on Portney’s research into the sustainability practices of US cities, cities with high commitment to sustainability are matched to cities with low commitment. The matched pairs identified include: Oakland/Long Beach; Denver/Colorado Springs; Santa Monica/Santa Barbara; Albuquerque/El Paso; Columbus OH/Pittsburgh; Charlotte/Virginia Beach; and Chattanooga TN/Lansing MI.

Using these pairs, spatial patterns of development and gentrification in low-income communities are examined over the past 25 years. Analysis at the tract level compares patterns in high-sustainability cities with comparable low-sustainability cities. Of particular concern is how land market dynamics (inflation rates of housing price relative to income) interact with sustainability initiatives.

Case studies of cities are then conducted to analyze historic patterns of sustainability initiatives and civic engagement and the impact of these patterns on the capacity of the city and region to engage in equitable sustainable development. Case methods include descriptive statistics, observation, interviews, archival research, and social network analysis.

Results
The paper will present the results of the spatial analysis of gentrification patterns between the city pairs,
as well as one of the case studies. As of April, the spatial analysis is incomplete. The Chattanooga case results include: Considered amongst the most sustainable of US cities, Chattanooga original focus on the urban core has expanded into neighborhoods and across the region. Chattanooga demonstrates the impact of civic engagement on moving beyond traditional sustainability goals (that emphasize environmental-economic values) to more holistic goals (that integrate equity concerns explicitly). The capacity of cities to engage more holistic goals emerges out of the civic capacity developed from earlier civic engagement efforts. Access to lower-income communities is iterative, with initial civic engagement providing the social capital needed to enter more difficult conversations about race and equity. The study explores processes by which growth in civic engagement occurs and implications for maintaining the social capital needed to promote sustainability initiatives in an equitable manner.

Relevance to Planning
Planning within many cities seeks to enhance quality of life for all residents through sustainability initiatives, and to do so in ways that counteract past inequities. This research examines whether these initiatives enhance the conditions of poor and marginalized communities and explores the mechanisms by which this occurs.

References

Key Words:
Sustainability, Green gentrification, Civic engagement, Social capital, Equitable development

ENERGY EFFICIENCY OR QUALITY OF LIFE: THE PARADOXICAL EFFECTS OF MEXICO'S GREEN MORTGAGE PROGRAM
Abstract ID: 1099
Individual Paper Submission

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The Green Mortgage Program (GMP) is the largest and fastest growing effort to increase residential energy-efficiency in low-income households in the world. Since its implementation in 2011, it has facilitated the incorporation of energy efficiency appliances into more than two and a half million dwellings in Mexico. The GMP has been presented as a win-win strategy to overcome barriers against the adoption of energy efficiency at the household level, namely up-front costs, lack of information, and availability of technologies among others (Hirst & Brown, 1990). It does so by incorporating the cost of
these devices into the mortgage debt. The Program is also presented as a mitigation strategy to reduce energy consumption and greenhouse gas emissions at the national level. Its apparent success has been well recognized but not robustly evaluated. Through a case study of the application and effects of the GMP in a desert city in Northern Mexico, I do a critical analysis of the GMP as a mitigation and adaptation strategy to address the challenges of climate change in urban areas.

In this analysis, I use a hierarchical linear model to compare electric utility bills in four GMP and traditional housing developments of similar characteristics. Then, I use a survey to understand environmental awareness and knowledge about energy efficiency concepts in households within these neighborhoods. The results show that GMP houses are using the same amount or, in some cases, more energy than traditional households of similar characteristics, and that the lifestyles of habitants in the two groups (GMP and control) are not different.

However, the GMP has been distinctively successful in changing the perception and acceptance of the concept of energy efficiency in Mexico, in accelerating the growth of a market for energy efficiency appliances, and in promoting the rapid creation of new standards and regulations to guide these changes. The paradoxical effects of the GMP lie in the fact that while it has provided ‘environmental public goods’ at the national level, it has done so by imposing a heavier burden on already burdened Mexican families. As proven by the results of this analysis, the GMP has been an abrupt failure in its main goals: reducing energy consumption and improving the quality of life of low-income households.

The results of this study provide valuable information to policymakers about the future creation, implementation, evaluation and support for housing, energy and climate change related policies. The results presented here also support previous research that highlights the clear understanding of residential energy consumption as a key necessity for effective energy policy and planning (Brounen et al., 2012; Estiri, 2014). This study also contributes to the transdisciplinary research on energy efficiency and housing provision reform, by exploring the incorporation of a financing component in support of the introduction of energy efficiency devices, and the role of governmental programs at facilitating their adoption. Building on existing research that argues that the conditions of the developing countries, namely market imperfections and insufficient technical innovation (Joskow, 1995, as cited in Friedmann & Sheinbaum, 1998) represent a barrier for the proliferation of energy efficiency, I argue that government intervention may be the appropriate means to promote change toward energy efficiency, especially in populations with low-income, low educational levels and lacking access to efficiency markets. This research also contributes to the ongoing discussion on the creation of adaptation and mitigation strategies to address the challenges of climate change at the urban level, specifically policies and programs targeting reductions in resource consumption and GHG emissions at the household level.

References


Key Words:
Energy efficiency, Climate change, Low-income households, Evaluation

SURVEY DESIGN ON POTABLE WATER REUSE: LESSONS LEARNED FROM FOCUS GROUPS IN ALBUQUERQUE, NEW MEXICO
Abstract ID: 1184
Individual Paper Submission

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In the face of increasing population, development pressures, and climate change, many regions around the world face freshwater shortages. Planned potable water reuse can improve sustainability and reliability of water supplies by generating high-quality drinking water from wastewater (USEPA, 2012), though it faces challenges associated with public acceptance and education (e.g., Dolnicar et al., 2010; Hurlimann and Dolnicar, 2010). Most potable reuse research has focused on large coastal communities; however, the US Department of Interior predicts that “hot spots” of conflict over water in the arid West are “highly likely” in numerous inland communities. Potable reuse options may be different in these two contexts, not only in terms of the technologies used, but also in the communities’ knowledge of and attitudes toward the required technologies (e.g., Ormerod and Scott, 2013). Significant knowledge gaps exist regarding these issues for the arid, inland context, making it difficult for inland water managers to understand the feasibility of potable reuse for their communities.

It is also unknown how educational strategies affect inland communities’ acceptance of planned potable reuse. Our overall study aims to fill these gaps by creating appropriate sets of educational materials to test, and then designing and conducting a large-scale survey (including focus groups, debriefing, and pretesting) to understand public acceptance of potable water reuse in an arid, inland community. The focus of this particular paper is on the design of educational materials and the focus group steps in the survey development process. We used Albuquerque, NM, as a case study and collaborated with the Albuquerque Bernalillo County Water Utility Authority.

Three sets of educational materials were created to test effects on public acceptance of planned potable reuse. The survey also included a fourth set of materials (no educational information), which served as a control. These educational materials were refined in eight 90-minute focus groups, which were conducted to identify attributes for inclusion in the survey and testing prototypes of survey questions. We recruited 5-10 participants for each focus group through local flyers, Craig’s List, various listservs, and neighborhood websites. Focus group participants received a $30 gift card plus a snack as an incentive for participation. The sessions were held in a variety of familiar and accessible locations to promote broad participation. We also compiled from the peer-reviewed and grey literature the types of additional information that should be included in a survey on public perception of and attitudes toward potable water reuse, including visual and factual information about the technologies used, flow diagrams of the treatment schemes, and cost differences among treatment options (Dolnicar et al., 2010; Macpherson and Slovic, 2011). In addition, we intended to ask questions about four different scenarios of potable reuse, as a previous study suggested. Our hypothesis was that the combination of these recommendations would create an ideal survey, which would be easy for the public to understand and capable of revealing public attitudes and preferences.

Our experience demonstrated that the previous recommendations for materials were too complicated and confusing for Albuquerque residents. Our focus group population had little-to-no experience with
potable water reuse. A survey typically asks participants about experiences with which they are familiar, but here we found we had to educate people first about a variety of complex issues and then ask them about their opinions and preferences. We found we had to dramatically simplify content and reduce the number of questions so that we could keep the survey to about 10 to 15 minutes long. Given the diverse focus group population we hoped to recruit, plus limitations related to IRB requirements and banking constraints, we learned additional lessons regarding the types of financial incentives that appeal to a wide variety of people.

Leading up to the full community survey of 4,000 Albuquerque residents, we just have completed a pretest on a sample of 200 people that mimics the actual, larger survey sample population. Our pretest response rate of 41% exceeded expectations.

References

Key Words:
Potable water reuse, water scarcity, public perception, focus groups, education

EXTREME HEAT MORTALITY MODEL VALIDATION OF HEAT VULNERABILITY MAPPING IN DALLAS, TEXAS
Abstract ID: 1197
Individual Paper Submission

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Extreme temperatures pose a significant risk to human health, and are projected to worsen in a warming climate with increased intensity, duration and frequency of heat waves in the coming decades. Urban residents are at higher risk of heat exposure due to the urban heat island, a phenomenon in which built materials absorb and retain heat from the sun and elevate urban temperatures. To mitigate heat exposure and protect sensitive populations, urban planners are increasingly using heat vulnerability indices (HVIs) to identify high priority areas for intervention and investment. HVIs aggregate vulnerability indicators into an overall score that accounts for heat exposure, population sensitivity, and adaptive capacity factors. Relative HVI scores help identify which areas are at greatest risk of heat-related morbidity and mortality. However, HVIs often capture only heat exposure indicators at the land surface level, not air temperatures that humans experience. While surface temperatures influence air
temperatures, they do not perfectly correlate and may be misleading as true heat vulnerability indicators. Furthermore, HVI s do not allow for scenario modeling, forecasting, or mortality estimates, thereby limiting the planner’s ability to rationally choose between intervention strategies that show the greatest benefit. The current gold standard to accomplish this is by running Weather Research & Forecasting (WRF) models to simulate air temperatures comprehensively over a city, coupled with a heat exposure-response function to estimate heat-related mortality. This is often beyond the capabilities of local planning departments due to limitations in funding or technical expertise. It is much easier to obtain remotely sensed surface characteristics and using GIS analysis techniques with which planners are commonly more familiar. Given these constraints, this study seeks to answer: to what extent do established HVI methods accessible to planners correlate with WRF-modeled mortality estimates? Furthermore, what factors, obtained purely from sources easily accessible to the urban planning practitioner, significantly explain these mortality estimates?

Data & Methods
This study validates HVI accuracy in Dallas, Texas using a WRF model of 2011 warm season temperatures (May-September). The WRF model temperatures were used to predict heat-related deaths using an exposure-response function. Heat vulnerability indicators identified in the literature were collected for Dallas at the census tract level from sources such as the National Landcover Database and the US Census. HVI accuracy is assessed using multiple regression to correlate the indicators with WRF modeled mortality estimates.

Results
The WRF modeled exposure-response function estimates that 112 Dallas residents died from heat-related causes in the summer of 2011. In simple bivariate regression, both impervious surface cover and lack of tree canopy were found to be poor indicators of heat-related mortality in isolation, with $R^2$ of 0.06 and 0.04 respectively. However, when run with other indicators of vulnerability, the adjusted $R^2$ climbs to 0.4. In this multivariate regression, population over 65, population density, and impervious surface cover emerge as significant predictors of heat-related mortality.

Significance
In a warming climate, it is increasingly important for cities to adopt strategic plans to protect our most vulnerable populations from heat-related morbidity and mortality. Extreme urban temperatures are a significant problem we are already facing today. Cities must begin to monitor local temperatures now as a first step toward creating a resilient urban environment and population. This information can help urban planners and public health officials improve their emergency response plans and communication strategies for heat mitigation in urban areas by specifically targeting short and long-term responses where there is greatest need. A statistically significant correlation between WRF-derived mortality and heat vulnerability indicators equips planners with a useful and accessible tool to protect vulnerable populations in urban areas effectively and efficiently with minimal public funds. A targeted approach can guide both greening policies for passive cooling as well as emergency heat response planning among sensitive populations. This research utilizes the latest scientific methods to meet contemporary climate change planning needs, and could significantly advance the policies we use to adapt to a changing climate.

References
Extreme heat poses a significant threat to human health, and is expected to worsen in a warming climate. Urban residents have a particularly high risk of extreme heat exposure due to a phenomenon known as the urban heat island (UHI). UHIs are caused by built materials with low reflectivity absorbing solar radiation and slowly emitting it as sensible heat. Decreased levels of vegetation also elevate temperatures through reduced shading and evapotranspiration. In order to mitigate the risks of heat, urban planners must be able to identify which neighborhoods have the highest risk of exposure. Conventionally, this analysis involves remotely sensed data such as land surface temperature (LST) to gain a comprehensive temperature dataset. But humans do not commonly experience LST. Rather, they experience air temperatures roughly 2 meters above the surface. While LST can influence air temperatures, they have been shown to have low direct correlation. The Tech Climate Network (TCN) was established to fill this knowledge gap and examine the relationship between land cover and air temperatures. The TCN consists of 34 air temperature and relative humidity sensors on the campus of the Georgia Institute of Technology and surrounding neighborhoods. The sensors have been placed in various built and vegetated environments. This study seeks to answer: what is the impact of impervious surface cover, surface-level vegetation, and overhead tree canopy on air temperatures?

**Data & Methods**
This study uses warm season air temperature data from the Tech Climate Network from May to September, 2016. Detailed surface-level land cover and overhead tree canopy data were provided by the Georgia Tech Center for GIS. Each monitoring site is characterized by surface-level impervious, surface vegetation, and overhead canopy within a 10-meter radius of the sensor. A multivariate regression was run for each site to examine the relationship between these parameters and warm season minimum, maximum, and average air temperatures over the warm season.
Results
In general, vegetated sites were found to have lower air temperatures than those in largely impervious environments, with differences in maximum temperatures up to 3.4 F. All heavily vegetated and canopied sites were found to have lower maximum and average temperatures than those in urban environments, such as Midtown Atlanta or a non-canopied parking lot. However, fully canopied areas were found to trap heat longer beneath the canopy, elevating minimum temperatures compared to non-canopied sites with similar ground-level vegetation by approximately 0.5 F.

Significance
In a warming climate, it is increasingly important for cities to adopt strategic plans to mitigate the urban heat island and protect our most vulnerable populations from heat-related morbidity and mortality. Cities must begin to monitor local temperatures now as a first step toward creating a resilient urban environment and population. This study is the first of its kind to use a dense network of air temperature sensors all within a single campus. This means all the sensors are within the same context of the greater regional UHI caused by the Atlanta Metropolitan Region, allowing for direct inter-comparison with minimal interference from regional temperature differences. This information can help urban planners and public health officials improve their emergency response plans and communication strategies for heat mitigation in urban areas by specifically targeting short and long-term responses where temperatures are most extreme. By characterizing the thermal properties of built and natural environments, this method allows urban planners to estimate local air temperatures without deploying a dense network of sensors across the entire city. This method utilizes remote sensing techniques with which planners are becoming increasingly familiar, thereby allowing planners to model air temperatures within their budget and technical capability. Understanding which neighborhoods are at greatest risk of extreme temperatures can help planners shape the policies necessary to combat the impacts of climate change tailored to their local context.

References

Key Words:
Urban Heat Island, Microclimates, Climate Change, Urban Climatology, Extreme Heat
ATTITUDES AND PREFERENCES FOR RESIDENTIAL STORMWATER BMPS: A COMPARATIVE CASE STUDY

Abstract ID: 1264
Individual Paper Submission

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Background:
With recent regulatory and financial pressures to improve stormwater quality, municipalities are confronted with a difficult set of economic, social, and environmental challenges (Water Science and Technology Board, 2009). These challenges have led to an array of different approaches to stormwater education, stormwater incentives, and watershed stewardship (Chanse et al., 2017; Genskow & Wood, 2011; U.S. Department of Agriculture, 2011) to address the issue of addressing urban stormwater runoff. In the United States, local municipalities are experimenting with various incentives, stormwater rebate programs and fee structures to encourage the implementation of residential-scale stormwater best management practices (BMPs). However, existing adoption levels of these practices are low (Newburn & Alberini, 2016).

Study Design:
This study developed a survey instrument to evaluate challenges and opportunities to implementing residential stormwater BMPs by assessing respondents’ attitudes and preferences for different types of BMPs such as rain gardens, rain barrels, permeable pavement, and downspout disconnect etc. The study surveyed residents (n=299) in two study areas that share similarities in terms of stormwater incentives and outreach yet differ in socioeconomic contexts in Maryland and the District of Columbia.

Methodology:
This study majorly uses statistical analysis plus econometrics analysis. Additionally, this study conducted four focus groups in the foregoing watersheds. The comfortable environment for the participants sharing deeply their impressions, attitudes, and motivations toward BMPs, which is very important in uncovering the underlying concerns and interests.

Results:
This study shows the main barrier to implementing stormwater rebate programs would be lacking the diffusion of knowledge about stormwater BMPs, therefore, it is necessary to improve residents’ awareness and knowledge base about stormwater management. Most residents, regardless of watershed, are unaware of the stormwater incentives and related stormwater rebate programs (66.7% for Wilde Lake and 86.1% for Watts Branch). Nevertheless, there is a strong preference for the widespread use of BMPs. Finally, this study found significant correlations among demographic information and their willings to implementing stormwater BMPs. This study could be also used to further estimate the cost-effectiveness of stormwater BMPs.

Contribution:
This study reflects the relationship between demographic information and residents' preferences on stormwater BMPs. The results also give the decision makers a reference how to better encourage the voluntary adoption of household-level BMPs.

References

Key Words:
stormwater BMP, Stormwater rebate, watershed

CAN TRANSPORTATION PLANNING PUT GREENHOUSE GAS REDUCTION IN THE EXPRESS LANE? EVIDENCE FROM CALIFORNIA’S SB 375 AND OREGON’S SB 1059

Abstract ID: 1322
Individual Paper Submission

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State and local efforts to reduce greenhouse gas (GHG) emissions have taken on new importance in the United States as the window of opportunity to forestall the worst impacts of climate change closes (Rogelj et al., 2016) and national-level efforts to deal with the problem stall. Pioneering laws in California and Oregon are the first statewide efforts in the country to reduce GHG emissions from automobiles using the transportation-planning process. California’s Sustainable Communities Act (SB 375) and the Oregon Sustainable Transportation Initiative (SB 1059) both require metropolitan planning organizations (MPOs) and the municipalities that comprise them to produce coordinated land-use and transportation development scenarios that result in lower per capita GHG emissions from automobiles. SB 375 and SB 1059 mark not only a new direction for climate action planning, but for regional planning in the U.S., which often has been marked by a lack of coordination between the plans produced by MPOs and municipalities.

The literature on plan quality suggests that higher quality plans are more likely to be implemented successfully, at least partially because they inspire greater acceptance of and commitment to the plan goals on the part of local planners (Berke & Godschalk, 2009; Burby & May, 1998). The existence of state-planning mandates such as SB 375 and SB 1059 is also correlated with higher quality plans (Berke, 1996; Bunnell & Jepson, 2011). This study seeks to answer two related questions:

1. Has the quality of regional transportation plans (RTPs) produced by MPOs and land-use plans produced by municipalities improved following the implementation of SB 375 and SB 1059?
2. Has coordination between MPOs and municipalities increased during the same period when it comes to efforts to reduce regional GHG emissions?
The inquiry proceeds in two steps. First, content analysis of RTPs and municipal plans evaluates the quality of plan sections related to climate change. Second, interviews with planners at MPOs and municipal planning agencies provide insights into the factors that shaped decisions about GHG emissions-reduction projects, policies, and programs outlined in the plans.

Preliminary findings show that the quality of sections of RTPs and municipal plans addressing climate change in California and Oregon has improved since the implementation of SB 375 and SB 1059. The degree of coordination between MPOs and municipalities has also improved in some regions; however, the improvements are uneven. Improvements in the quality of RTPs and municipal land-use plans do not always correlate with greater levels of coordination between MPOs and their constituent municipalities on climate action. Completion of the interview stage of the study is expected to shed more light on the reasons for this.

On a policy level, evaluating the degree to which state planning mandates in California and Oregon have improved plan quality informs the suitability of California’s SB 375 and Oregon’s SB 1059 to serve as a model for policy in other states, or at the national or international scale. Furthermore, tracing how plans influence decisions about coordinating on GHG emissions reduction efforts provides insight into the best way to structure state planning mandates for maximum effect.

References


Key Words:
climate change mitigation, transportation planning, metropolitan planning organizations, California, Oregon

ANALYZING THE EFFECTIVENESS OF DIFFERENT POLICY IMPLEMENTATION PROCESSES ON URBAN HEAT MITIGATION

Abstract ID: 1338
Individual Paper Submission

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In this research, I developed a method for analyzing the impacts of design and planning regulations (and their implementation processes) on urban heat mitigation. I conducted case study research to understand
how differences in zoning tools and design guidelines affect urban climate systems. I scrutinized the policies, contexts, and implementation procedures in two cities in the Denver metropolitan area. Both the Belmar (located in Lakewood, Colorado) and 29th Street Mall (located in Boulder, Colorado) projects were conventional indoor malls developed in the 1960s, that declined in the 1990s, and were redeveloped in the early 2000s to create mixed-use walkable urban centers. The zoning approaches (Belmar used Form-based code, 29th Street Mall used Euclidian), design guidelines, and local politics of these two projects were significantly different in a way that resulted in different built environments after redevelopment. My research aim is to explore how these differences can potentially impact urban climate systems with positive or negative influences on climate variables such as wind, ambient temperature and mean radiant temperature. My research answers two research questions: (1) to what extent are different zoning approaches (Euclidian and Form-based) capable of mitigating urban heat? (2) To what extent are planning contexts, including local politics, important in developing a climate responsive project?

Urban heat, as an environmental justice issue, affects public health (Harlan et al., 2006), impacts energy use (1°C increase in temperature, increases energy consumption by 10%. Akbari et al., 2005), and degrades social life in public spaces (EPA, 2008). Considering that average global temperature could increase by 4-6°C by the end of this century (IPCC, 2013), cities need to be prepared for longer and more intense heat waves. Addressing the urban heat problem is a main concern in preparing climate action plans. However, related strategies are not translated to the planning practice and regulations such as zoning and design guidelines. My research has addressed this gap through simulation of complex relationships among the policy making process, urban form, and microclimate variables in high density urban areas.

The research uses a hybrid method combining case study and experimental research designs. The first component of my research (presented at ACSP 2016) uses an advanced microclimate simulation to understand how built environment elements such as buildings, trees, and street form shape urban microclimate. The second component explores the variations of policies and their implementation processes to show how they generate different built forms. I conducted content analysis of news archives and regulation documents related to these two projects. Then, I interviewed (semi-structured) stakeholders of each project, including planning department employees, developers, consultants, planning/design review board members, and public activists.

I coded the interviews and archives to identify variables that played a meaningful role in affecting urban microclimate at each site. These variables include (1) flexibility of zoning as the basis of planning regulations, (2) specificity of codes and design guidelines, (3) history of planning and conflict in each context, (4) entrepreneurial approaches in the local governments, (5) expertise of design review board members, (6) expertise of developer and consultant team, (7) and ownership and financing logistics. Although many regulations did not intentionally address microclimate issues, elements that were considered for improving walkability contributed to heat mitigation as well. The simulation of policy and form variations showed that the built environment of Belmar has been more successful in mitigating urban heat. Conflicts and a complex planning history in Boulder led to a very slow and ineffective review process that created a less climate responsive built environment.

References

The quality and quantity of water resources is critically important to communities. A key characteristic of urbanization, imperviousness, has significant impacts on water resources. As imperviousness increases with conversions of natural land covers, the velocity and volume of surface runoff increase, and there is a corresponding decrease in infiltration, reducing groundwater recharge. The increases in runoff also result in increased severity of flooding and erosion in stream banks, and in nonpoint source pollution and habitat loss. Moreover, impervious surfaces can have detrimental impacts on communities during extreme weather events as they increase the chance of and the harmful impacts of flooding. Despite the importance of impervious surfaces to water resources and communities, our knowledge on the extent to which communities adopt impervious surface-related policies and the factors that play a role in impervious surface-related policy adoption is limited. This paper attempts to help build that limited literature.

Following other sustainability-related empirical work, we hypothesize that a community’s risk for water resources impairment or climate change as well as its capacity to plan and the priority it places on the environment are key factors in adopting policies for impervious surfaces.

In this paper, we investigate impervious surface policy adoption across the nation using data from the International City/County Management Association’s (ICMA) 2010 Sustainability Survey of 2,176 local governments. Accordingly, nationwide, almost one-third of the surveyed communities have set limits on impervious surface coverage on private properties. Using geospatial data from the U.S. Census Bureau, Federal Emergency Management Agency, U.S. Geological Survey, and ICMA, we find that a community’s risks related to climate change, its capacity to plan, and the priority it places on the environment are key factors in adopting policies on impervious surfaces. More specifically, our preliminary findings indicate that median household income of the community, community priority for the environment, and risks associated with lake- and sea-level rise as well as drought are significant factors in setting impervious surface limits on private property. Contrary to our expectations, risk of flooding or community priority for climate change did not appear to be significant in impervious policy adoption.
These findings point to the importance of policy-maker and public education of the impacts of impervious surfaces as well as the impact of our changing climate and natural hazards on the resilience of our communities. This research will likely influence policy and practice related to imperviousness across the nation.

References


Key Words:
impervious surfaces, sustainability, climate change, environmental policy and regulation
Track 4 - Gender and Diversity in Planning

PRE-ORGANIZED SESSION: EXAMINING THE CONTOURS OF RACIAL EQUITY AND PLANNING: WHERE MIGHT PLANNING PRACTICE INTERSECT MOVEMENTS SUCH AS BLACK LIVES MATTER (#BLM)?
Proposal ID 16: Abstracts 152, 153, 276

SHIRGAOKAR, Manish [University of Alberta] shirgaokar@ualberta.edu, organizer
LOWE, Jeffrey [Texas Southern University] lowejs@tsu.edu, proposed discussant

The appalling histories and persistence of violence towards minority groups in the United States resonate with scholars in various fields including planning. A growth of stories in social and mainstream media—and the ability to track these over time and space—have resulted in a surge in the national consciousness on this subject in our times. Though planning claims to be a practice-oriented discipline, it is yet to offer substantive contributions to growing movements such as Black Lives Matter. Particularly, even though equity remains a foundational notion in planning literature and pedagogy, scholars have said little about how planning practice might intersect with policing and race-related violence. Through three papers, this session explores the contours of racial equity and asks where urban planning could align with movements such as Black Lives Matter.

Objectives:
- Planning practice and policing

PRE-ORGANIZED SESSION: MAPPING THE UNMAPPED: RESISTANT PEDAGOGIES AND EPISTEMOLOGIES
Proposal ID 56: Abstracts 628, 629, 630, 856

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Clyde Woods and Katherine McKittrick lay out a challenge for urban planners to map unmapped and unknown black geographies, moving beyond essentialized black subjects that often dominate planning discourse, language, practice and pedagogy. Woods's critical texts on regional planning are being posthumously reissued this year, creating the opportunity to reconsider his argument about the claims made by black actors whose way of knowing about space and place can be described through a metaphor of the blues. How might we use these imaginaries to politicize demands on the state? What would urban planning paradigms look like if we could alter the course of our imaginaries about the city? Can planning shed its roots in expanding the white spatial imaginary and further the imaginaries and spaces of racial justice? Beyond activist and equity planning frameworks, what might this work look like?

Objectives:
- Race and Urban Development
ENTREPRENEURIAL EXPERTS: THE MOBILIZATION OF PROFESSIONAL DEVELOPMENT EXPERTISE IN THE EXCLUSIONARY RENAISSANCE OF DOWNTOWN AND MIDTOWN DETROIT

Abstract ID: 116
Poster

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In recent years, economic decline and structural collapse in Detroit have created conditions of austerity with regards to public services, and ultimately led to the city’s bankruptcy. From this context emerges a market for private development and city services, and with it, a group of development professionals lauded for their solutions to the city’s challenges. This work acknowledges the role of development expertise as it reifies power structures and reproduces inequality and technocracy. Discourse analysis will be used to understand semi-structured expert interviews and prominent development documents as artifacts of expert values. In the process of neoliberalism and its promotion of individualism, solutions to historical social injustices of the city are secondary to work of individual experts and their goals of economic revitalization. Through the entrepreneurial visions of such experts, the attraction of young, educated, professionals and investment take priority and are presented as common sense strategies for revitalizing the city. Finally, this paper argues that redevelopment strategies for Downtown and Midtown are predicated on the “othering” of the rest of the city through development documents that present it as pathological and irrelevant to the economic prosperity of Detroit.

References


Key Words:
Detroit, Expertise, Neoliberalism, Crisis, Redevelopment

TRACING THE GEOGRAPHY OF FATALITIES FROM POLICING IN THE UNITED STATES: WHAT DO TRANSPORTATION-RELATED INCIDENTS TELL US?

Abstract ID: 152
Pre-Organized Session: Examining the Contours of Racial Equity and Planning: Where might Planning Practice intersect Movements such as Black Lives Matter (#blm)?

SHIRGAOKAR, Manish [University of Alberta] shirgaokar@ualberta.ca, presenting author

Researchers argue that there is inherent racial bias in policing against minority groups in the United States. Fatalities from policing have recently gained primacy in policy discussions, with many people arguing for significant oversight of police departments. Systematic nationwide analyses of these
incidents, however, are lacking. Further, advocacy groups and researchers indicate that first contact between minorities and the police is often in the realm of transportation violations and ticketing. In this paper, I ask two questions with the aim to gain clarity into policing in the United States. What is the nationwide geography of all fatalities from policing? Do police actions leading to fatalities—where transportation-based interactions are involved—have a racial or geographic bias?

Using online data (n = 5,000), I focus on four years of records from 2013 to 2016, and examine the geo-spatial attributes of where policing has resulted in fatalities. I use spatial autocorrelation and conduct standard statistical tests to investigate and document the nature of the phenomenon, while relying on the census geography as a backdrop for the analysis. For the four years of overall data analyzed, 42% incidents involved a minority individual (African-American/Black, Asian/Pacific Islander, Hispanic/Latino, Middle-Eastern, or Native American/Alaskan), while 37% occurrences involved European-American/White individuals—the remaining 21% records did not have race attributes. For transportation-based instances 46% percent were minorities, while 33% involved European-American/White persons. Further, census tracts in Urbanized Areas (50,000 or more people) had higher concentrations of fatalities from policing than in other geographies. Census tracts with lower income and low levels of education had a higher likelihood of having police actions leading to fatalities.

Planning scholarship and practice is yet to confront the phenomenon of policing and fatalities. The findings from this paper suggest that this is an urban phenomenon with significant implications for minority individuals and low income locations.

References


Key Words: Fatalities, Minorities, Policing, Race, Transportation interactions

**PLANNING, POLICING, & PUBLIC POLICY**

Abstract ID: 153

Pre-Organized Session: Examining the Contours of Racial Equity and Planning: Where might Planning Practice intersect Movements such as Black Lives Matter (#blm)?

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Deadly encounters between police officers and African-American citizens pose arguably the single-most contentious social and political issue confronting public officials and law enforcement across the country and have given rise to the nascent Black Lives Matter Movement. Many of these fatal encounters, such as that of Samuel Dubose, Philando Castile, and Walter Scott, stem from a traffic stop, which is one of the most potentially volatile police-citizen encounters. To examine the problem of biased traffic enforcement, this paper discusses research that utilized a gravity model, a tool used by transportation planners, to measure racial disparities in traffic ticketing patterns in the city of Cleveland, Ohio and three surrounding suburban jurisdictions. This research, which found significant racial disparities in the two cities with sizeable black/minority driving and residential populations, was used to help establish a statewide bias-free policing standard that requires the collection of demographic data on all traffic stops and the introduction of comparable legislation in Cleveland.

References


Key Words:
Policing, Racial Profiling, Gravity Model, Black Lives Matter, Public Policy

SPACES OF ENCOUNTER AMONG NEWCOMER POPULATIONS: PLANNING MID-SIZED CITIES OF DIFFERENCE

Abstract ID: 184
Individual Paper Submission

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Globalization has increased the flow of transnational migrants into many European and North American cities. These shifting socio-demographic patterns have resulted in a reconceptualization of urban centres as a site of difference and a ‘cosmopolitan’ space of connection among diverse citizenry (Sandercock, 2003). Indeed, planning cities for increasing diversity and difference will remain, what Leonie Sandercock calls, ‘one of the greatest tasks for planners of the 21st century’ (Sandercock, 2004).

Accordingly urban scholars and planning theorists alike have begun interrogating the everyday interactions and encounters in urban areas (Valentine, 2013). While much of this work has focused on how everyday encounters produce more connected and inclusive societies, this positive view of encountering the other in diverse cities has been questioned by urban scholars (Valentine, 2013) and more recently problematized by political results in the United States and Britain.

Scholars have raised the possibility of planning spaces for positive interactions. Fincher and Iveson (2008) have explored avenues through which planners can incorporate difference, diversity and convivial encounters into their practice, and Amin (2002) has advocated for a focus on ‘micro-publics’
to create more inclusive and welcoming places for diverse populations. To date, there is still a dearth of research examining the process of encounter across diverse populations and in multiple settings. Further, the role of planning practitioners in producing spaces of encounter is still underdeveloped. This gap in knowledge and lack of practice guidelines pose challenges to the social inclusion and equity objectives of many cosmopolitan cities and, more importantly, threaten the settlements and integration outcomes of increasing immigrant populations.

Thus, this paper explores spaces of encounter among diverse immigrant populations in a cosmopolitan region in Ontario, Canada. This case study of the Region of Peel utilized focus groups with 60 immigrant youth and 55 immigrant adults to examine their early experiences of interaction, integration, settlement and inclusion. The Region of Peel is one of the fastest growing and most culturally diverse areas in Canada. The Region (population 1.4 million) is comprised of the suburban City of Brampton, rural Town of Caledon, and sub/urban City of Mississauga, and is home to the largest international airport in the nation. As a whole, the Region’s diversity is evidenced by 48.6% of population being foreign born, 50% with visible minority status, and 44.3% with mother tongue other than English or French. There is an uneven distribution of multicultural populations across the Region and many neighbourhoods in the two mid-sized cities are almost exclusively comprised of newcomers.

The results of this research highlight several spaces of everyday encounters between immigrants and long-term residents including public transit, shopping centres, and food outlets. Of note, was the significance of social and community programs (i.e., settlement agencies, public schools) for facilitating positive encounters between various groups of immigrants, which has been largely overlooked in existing research. The importance of interaction with other immigrants, particularly outside of one's ethnocultural group, was perceived as crucial for enhanced integration and sense of belonging in the Canadian context. There were substantial differences between the experiences of youth and adult participants and these varied across the three suburban, urban and rural areas in the region. This study advances the concept of encounter by examining not just interactions with the Other but also encountering each other, which required different spaces and processes of interacting. Moreover, the paper explicitly articulates the importance of everyday encounters with diverse populations for enhancing the settlement experience and facilitating the overall social integration and inclusion of immigrants in the study.

The paper concludes with a discussion of how planners can facilitate these important, though not exclusively positive, encounters between immigrant populations and long-term residents. Specifically, planners can contribute to cosmopolitan cities of difference through the advancement of Amin’s concept of ‘micro-publics’, and emphasis on immigrant social and community services planning. Areas of future research and policy implications are further discussed.

References

TRAFFIC CALMING AND PARTICIPATORY PLANNING IN MINORITY AND LOW-INCOME AREAS OF NEW YORK CITY: EXAMINING NEIGHBORHOOD SLOW ZONES

Abstract ID: 246
Individual Paper Submission

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Environmental Justice (EJ, minority and low-income) populations bear a disproportionate burden of the externalities of road transportation, including respiratory illnesses from air pollution and traffic injuries (Deka, 2004). Traffic calming has been shown to improve air quality and reduce traffic injuries (Elvik, Vaa, Erke, & Sorensen, 2009). New York City’s Neighborhood Slow Zones (NSZs) program is the first area-wide traffic calming program in the US. This paper examines the location of the NSZs with regards to EJ areas, and explores the implications of these findings for participatory planning. Under the NSZ program, neighborhood organizations request traffic-calmed zones from the New York City Department of Transportation (DOT). The DOT then selects zones for implementation based on the level of support for, and counts of crashes in, the zones. As such, the NSZ program was structured in a way that incorporated elements of both participatory and progressive planning (Clavel, 1986; Davidoff, 1965; Forester, 1999).

The paper uses qualitative and quantitative methods to answer the following three research questions:
1. Are Neighborhood Slow Zones equitably distributed with respect to EJ areas of New York City?
2. When considering risk exposure, and counts of traffic casualties, are EJ areas adequately represented in NSZ areas?
3. What are the implications for participatory planning and support for traffic calming in EJ areas?

The researcher uses qualitative methods to determine how the NSZ program is structured and how zones are selected for implementation. Qualitative data comes from interviews with key informants, and websites and presentations by the DOT. The researcher uses quantitative (spatial and statistical) methods to determine if the NSZs are equitably distributed in EJ areas, and if the zones are implemented at adequate rates in EJ areas when considering exposure and traffic injuries.

The analysis for the first research question shows that the NSZs are equitably distributed in terms of EJ census tracts. For the second research question, risk exposure and traffic casualty counts are similar in EJ and Non-EJ tracts that are in the Neighborhood Slow Zones. As such, the researcher concludes that the NSZs are distributed equitably in the city, and at adequate rates in EJ tracts. Regarding the third research question, the qualitative data revealed that the DOT used a combination of participatory and progressive planning approaches; it encouraged public participation, but also sought to further equity goals by prioritizing neighborhoods with high traffic casualty counts. The findings show that the participatory and progressive approaches used by the DOT were suitable for the equitable distribution of NSZs, and support traffic calming is strong in EJ areas.

This paper is relevant for practitioners because it shows that area-wide traffic calming has the potential to be implemented in EJ areas, and thereby improve traffic safety and air quality for these populations. The paper will also inform scholarship, providing the first analysis of a traffic calming program in EJ...
areas in the US, as well as furthering knowledge of participatory and progressive planning methods with minority and low-income populations.

References

Key Words:
Environmental Justice, Traffic Calming, Participatory Planning, Progressive Planning

NON-STATE POLICING AT ANCHOR INSTITUTIONS: RACE, DEVELOPMENT, AND MAPPING THE POLICE POWER WITH MOBILE TECHNOLOGY
Abstract ID: 276
Pre-Organiized Session: Examining the Contours of Racial Equity and Planning: Where might Planning Practice intersect Movements such as Black Lives Matter (#blm)?

SHERMAN, Stephen [University of Illinois at Urbana-Champaign] sashermn@illinois.edu, presenting author

Anchor institutions like universities and hospitals – which provide employment, innovation, and human capital benefits to regions – also invest heavily in real estate development and expanding their footprint. These institutions’ power to police remains an under-explored object of analysis within studies of university expansion into neighborhoods. Through their police forces, universities produce not only urban space but also urban safety; how the latter alters, complicates, and/or streamlines the former remains underexplored.

Drawing on a comparison of economically and racially varied Atlanta neighborhoods undergoing change at the hands of anchoring universities, this project uses geo-narrative (Kwan & Ding, 2008) – a methodological innovation involving GPS tracking, 3-D GIS, and interviews – to map previously unobservable policing activities and the impact of these activities on the planning and use of public space. By tying policing practices to the goals of development institutions, and mapping the impact of policing on the policed population, this research establishes the police power as a crucial and viable object of study within urban economic development.

While policing may not be a frequent unit of analysis within planning, policing theorists emphasize the police’s role as placemakers through order maintenance policing (Thacher, 2014). However, the connection between placemaking through policing, and placemaking through urban planning, has yet to be thoroughly analyzed. This omission is surprising, given the invocation of law enforcement and crime anxieties within urban planning practice. Furthermore, the fear that prompts these crime anxieties arises from racist/white supremacist subjectivities (Sampson & Raudenbush, 2004). To evaluate the
intersection of planning, race, and policing, one must observe on-the-ground police-citizen encounters, while accounting for race and its role in place-making (Shabazz, 2015).

Anchor institutions provide ideal sites for evaluating the racialized placemaking function of police. Anchor institutions – especially universities – vary considerably in their incorporation status and goals (e.g., research vs. teaching university; HBCU vs. PWI, etc.). This unobserved variation in university mission alters how the university develops its neighborhood, and the character of neighborhood change would vary according to neighborhood socio-demographics. Importantly, most universities have their own force of “real cops”: university police have the legal arrest powers (and guns) of municipal police. How policing processes lead to different spaces, according to each university’s organizational goals and socio-demographic neighborhood context, remains particularly under-examined.

To elucidate how anchors use the power to police, I am executing a comparative case study of policing and development at two universities within the city of Atlanta. My mixed methods approach centers on the application of a novel time-space GIS technique of geo-narrative (Kwan & Ding, 2008), which involves GPS-tracking participants with a custom app, and participants using mobile technologies to map their experiences with police and the feelings, emotions, and recollections that accompany these policed spaces. My comparative, two-case design centers on predominately White Georgia Institute of Technology and historically Black Morehouse College community members. These two cases are intended to maximize the potential variation of university mission, neighborhood socio-demographics and racial composition, policing processes, and policing outcomes within a single pair. Through tracing people’s movements and complementing these data with interviews on police encounters, the accumulated data will inform how anchoring universities rely upon the police for urban development, and how policing affects community members. At ACSP 2017 I will present on first-stage geo-narrative findings, analyzing how narratives of police encounters coincide with specific university development territories.

This project highlights the crucial role of the police power in university-driven development (see Dubber, 2005), and how the exercise of the police power through uniformed policing shapes universities’ neighborhoods. My research remedies planning’s longstanding neglect of the police power: it elaborates the different types of police within space and their diverse, potentially conflicting goals. By focusing on policing processes (and not outcomes), this research elucidates what police actually do in their day-to-day jobs to make places.

References

Crime and violence are part of daily urban life for some city dwellers but remain understudied in planning scholarship. Scholars in urban design have highlighted built environment elements associated with “defensible space” (Newman, 1973), particularly urban designs associated with minimizing opportunities for crime (Loukaitou-Sideris, 1999), and whether certain policy strategies may be associated with crime (Lens, 2013). Outside of planning research, there is a large literature on domestic/intimate partner and community violence (Moser, 2012), especially as it affects women and children. We focus in this analysis on women, especially Asian immigrant women, who work in sexually oriented massage parlors, building on previous research from the public health literature documenting violent and exploitative working conditions for women engaged in indoor sex work (Nemoto et al., 2004). We present a qualitative analysis of interviews with 54 workers in sexually oriented massage parlors in Los Angeles to clarify the form and manifestation of violence in these contexts. Though there has been local policy concern around sexually oriented massage parlors and national focus on sex trafficking of women and girls, scholars and practitioners have little knowledge about violence that sex workers experience in massage parlor settings. This qualitative analysis is used to develop a conceptual gendered model of violence that bridges existing notions of domestic/intimate partner and community violence, which highlights the gendered nature of violence and victimization and how regulation and enforcement might exacerbate risk. We conclude with recommendations for research and possibilities for risk reduction.

References

TRANSIT CRIME: GENDERED EFFECTS, EXPERIENCES, AND ATTITUDES IN COLOMBIA AND BOLIVIA

Abstract ID: 413
Individual Paper Submission

KASH, Gwen [UNC Chapel Hill] gwenkash@email.unc.edu, presenting author

This paper analyzes the effects of sexual assault and robbery on the experiences and travel behavior of female and male transit riders, as well as planners’ and users’ views of the subject. Transit crime is a persistent problem in many Latin American cities. Though efficient mass transit systems are a cornerstone of sustainable urban growth and social inclusion, the crowding that results from high occupancy levels increases the risk of sexual assault and robbery. Female transit riders are disproportionately affected by transit insecurity. However, literature on transit sexual assault is sparse, particularly in the context of Latin America. Through mixed-methods analysis of interview and survey data in two Latin American transit systems, I consider both the direct effects of victimization and spillover effects on transit users who have not been personally victimized. I find that, despite the high social costs of transit crime, many people, including many transit planners, hold beliefs that minimize the existence and severity of sexual assault. I explore the implications of these persistent beliefs for efforts to reduce sexual assault on transit.

I compare the world-renowned TransMilenio BRT system in Bogotá and Soacha, Colombia (Suzuki et al 2013) with informal transit in El Alto, Bolivia. Recently, TransMilenio has confronted problems with extreme crowding. I find that as a result, 37% of female TransMilenio users report experiencing sexual assault on transit. In contrast, El Alto’s transit system is widely regarded as dysfunctional (Pando Solares 2012), but the dominance of small vehicles where all passengers sit down has, by fortunate accident, resulted in a system with somewhat lower rates of sexual assault (22% of female transit users surveyed).

In both countries, passengers, particularly sexual assault victims, respond to the risk of crime by curtailing their mobility. Users reported traveling in groups for safety, avoiding night travel, abandoning transit for more expensive but safer modes, or simply avoiding some travel entirely. Additionally, some sexual assault survivors faced an added burden of anxiety, distress, and hypervigilance when taking transit, further affecting their quality of life.

Employing a gendered lens (Fainstein and Servon 2005) to analyze interviews, I find that gender strongly influences attitudes about sexual assault among both planners and transit users. Some male planners were broadly supportive of assault victims, including demonstrating a good understanding of the toll the experience can take on victims. Others, however, expressed problematic beliefs such as blaming assaults on women’s clothing choices, asserting that victims were often lying attention or revenge, or that some women enjoy being victimized. A third group fell in between, for example simultaneously believing assault is common but also that many women who report being victimized are misinterpreting innocent actions.

These findings reveal substantial barriers to ensuring addressing sexual assault is included on the policy agenda of transportation planners. However, they also suggest a method of obviating these barriers. Non-victims who were supportive of and understanding towards sexual assault victims overwhelmingly based their views on conversations they had had directly with victims. Advocates have suggested
organizing conversations directly between transportation planners and assault victims as a method of helping transit systems improve safety (Wekerle 2005), but the practice is relatively uncommon. This research provides empirical support for the idea by documenting the influence of such conversations on non-victims’ ability to empathize with victims and lasting their beliefs about sexual assault.

At a broader level, this research improves our understanding of people’s attitudes about socially complex planning issues, and the genesis of their views. It therefore provides guidance for planners as we navigate the often-fraught dialogues we must facilitate in order to make our cities more just and sustainable (Forester 1999).

References


Key Words:
gender, transportation, transit crime, latin america, developing countries

BLACK WOMEN, PERSONAL SAFETY, AND NEIGHBORHOOD CONDITIONS: POLICY PERSPECTIVES FROM THE ‘WOMEN OF NORTHEAST OKLAHOMA CITY PHOTOVOICE PROJECT’

Abstract ID: 421
Individual Paper Submission

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In January 2016 Daniel Holtzclaw, a white former Oklahoma City police officer was sentenced to 263 years in prison for multiple counts of sexual assault. His crimes were perpetrated against black women in NE Oklahoma City neighborhoods, the traditional African American enclave of the city. His crimes intersect with longstanding patterns of racial and gender oppression, but also with spatial patterns of urban neglect. Holtzclaw, often took his victims to abandoned schools, vacant lots, or other neglected and marginalized spaces throughout NE Oklahoma City to assault them. As a result, personal vulnerability interacted not only with longstanding social exclusion, but also legacies of state disinvestment and neglect of certain marginalized neighborhoods within the outlands of the urban fabric.
With this backdrop, researchers from the University of Oklahoma convened a photovoice project in the summer and fall of 2016 with 26 African American women to analyze neighborhood conditions in NE Oklahoma City from the perspective of women’s safety. Photovoice is a Community-Based Participatory Research method that emerges from feminist thought and critical pedagogy practices (Wang 1999). The method has three goals: 1) to record personal reflections about one’s community through individual photography; 2) to promote knowledge and critical dialog about important community issues through group discussion of the photos; and 3) to impact policy through the images and the stories associated with them. This paper analyzes the 13 emergent themes from the project. These themes connect the participants’ perception of their own safety to important long standing policy decisions in the region and suggests important changes for urban managers that will positively impact black women’s lives and their everyday enjoyment of their neighborhoods.

Black feminist thought has long recognized that women of color are impacted by the dangerous intersections of sexism, racism, and other interlocking oppressions that result in higher incident rates of gender based violence as well as less support from courts, police, governments, social services, and other institutions (Hill Collins 1990; Crenshaw 1991; Sokoloff and Dupont 2005). Further, women of color often live in neighborhoods that have longstanding legacies of disinvestment and neglect resulting in the creation of spaces in their neighborhoods that both reflect and reinforce their marginalization within American society. Urban planning policy does a poor job of recognizing and addressing these issues (Sweet and Escalante 2010; 2015). This paper seeks both to raise a critical voice for a planning audience as well as present important building blocks for policy redress.

References


Key Words:
gender, neighborhood planning, safety, black feminism, photovice

INSURING INEQUITY: AN ENVIRONMENTAL JUSTICE ANALYSIS OF THE NATIONAL FLOOD INSURANCE PROGRAM

Abstract ID: 544
Individual Paper Submission

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After Hurricane Katrina’s devastation of the United States’ Gulf Coast, conversations about flooding became focused on the interconnections between so-called ‘natural’ disasters, poverty, gender
and race (David & Enarson, 2012). Although research has long shown that women, people of color and low-income communities are more vulnerable to natural hazards, the disproportionate effects of Hurricane Katrina and subsequent federal and state disaster response efforts forced the national spotlight on the institutional and systemic nature of racism, classism and sexism. Since disaster policy has the potential to create and exacerbate inequalities, it is essential that we examine even supposedly neutral disaster-related programs and policies with a critical eye. This project is an analysis of one such neutral program, the National Flood Insurance Program (NFIP).

The NFIP is administered by the Federal Emergency Management Agency (FEMA) to provide subsidized flood insurance to businesses and households. Communities that apply to join the NFIP must complete a range of tasks related to floodplain management, such as requiring that new structures are elevated above the base flood level and strengthening building codes to decrease flood risk and damage. Only businesses and households located in communities that have joined the NFIP are eligible to purchase flood insurance at government-subsidized rates. While the NFIP does not have an explicit equity component, it affects the affordability of flood insurance, and hence, individuals’ and communities’ abilities to recover from flooding-related disasters. This analysis is made even more necessary as past research has suggested that the NFIP may mainly benefit richer communities (Holladay & Schwartz, 2013).

This project draws from and critiques three lenses commonly employed to understand disasters: technocratic disaster management, social vulnerability and environmental justice. Technocratic disaster management generally ignores race, class and gender and focuses on hazard exposure and physical vulnerability. Social vulnerability states that persons’ abilities to prepare for and recover from disasters are affected by their race, class, gender and other characteristics (Blaikie, Wisner, Cannon, & Davis, 2004). Environmental justice focuses on acts of commission and omission by planners and policy makers that, intentionally or unintentionally, result in persons of color being denied access to resources (Bullard, 1999). Focusing on how each lens considers (or does not consider) issues related to race, class and gender (the factors most commonly identified in scholarship on disasters and inequities), I model the relationships between jurisdictions’ participation in the NFIP and the race, class and gender compositions of their communities. I expect that this analysis will show that communities with higher proportions of people of color, people living in poverty and single female-headed households (as proxies for race, class and gender, respectively) are less likely to participate in the NFIP.

This study contributes to planning literature and practice by identifying potential equity issues in the administration of the NFIP and by creating an equity-focused framework for analyzing disaster policy.

References

Key Words:
race, class, gender, environmental justice, social vulnerability
OUT OF SIGHT, OUT OF MIND: FARMWORKER’S LABOR CAMP ISOLATION FOR ACCESS TO RESOURCES

Abstract ID: 545
Individual Paper Submission

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The agricultural industry in the US employs 3 to 12 million individuals (Winkelman, Chaney, & Bethel, 2013). North Carolina is one of six states that accounts for half of all contracted or hired farm work labor comprised largely of Latinos (Kandel, 2008) and the growth has been increased dramatically in recent years due to H-2A Visa program (Torress, Popke, & Hapke, 2006). Heavily relied on migrant and seasonal farmworkers, farmers offer housings for workers as part of compensation (Vallejos et al., 2011). However, the housing conditions are seriously substandard intensifying hardships to the farmworkers (Early et al., 2006; Gentry et al., 2007; Holden, 2002; HAC, 2001; Vallejos, Quandt, & Arcury, 2009).

A body of literature on marginalized groups’ housing is rich including a series of research led by Thomas Arcury in Wake Forest University Medical School. The research are diverse from farmworkers’ housing quality and health (Quandt et al., 2013) to housing conditions (Early et al., 2006), to regulation violations (Arcury et al., 2012), and to camp visibilities as an indicator of structural vulnerability (Summers et al., 2015). Our research takes a similar perspective of Summers et al. (2015) in the sense that we measure the visibility of camps as a key to understand the camp conditions. But we took an advance in methodology by the GIS visibility analysis and connected the geospatial characteristics to accessibility for resources. In this research, we aim to find 1) the visibility of farmworker camps differ by the conditions each camp deals with; and 2) the camp visibility is associated with their access to resources.

This research focused on the eastern North Carolina, where concentrations of farmworkers are found. We used the worker encounter data collected by the Kinston Community Health Center Outreach Office located in Lenoir County, NC to identify farmworker camp locations (n=273). The worker encounter data also provided the camp profile information such as workers’ documentation status, housing type (barrack, house, or trailer), female presence, and the number of workers at the camp. The camp visibility was measured using the satellite imageries and LiDAR data. Further, we created a list of available resources, which include groceries and Mexican stores (physiological needs), drug stores and health services (health & well-being needs), parks and churches (love & belonging needs), and libraries, law offices, and post offices (self-esteem needs). A series of statistical analyses will show the associations of the visibility with the camp characteristics and further with the access to resources.

As in Summers et al. (2015), we focused the geospatial relations of the campsite as an indicator of structural vulnerability that farmworkers face in eastern North Carolina. Although our research dealt with only one aspect related to workers’ access to resources, we could expect that the inadequate living conditions may bring bigger problems to workers such as mental health and the eating disorder. Further
research on housing-related health and well-being is needed.

References


Key Words: Farmworker, labor camp, visibility, access, Geographic Information System

A PROPOSED FRAMEWORK FOR DEMENTIA-SPECIFIC PLANNING SCHOLARSHIP AND PRACTICE

Abstract ID: 581
Individual Paper Submission

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BACKGROUND: Cases of dementia will increase from 47 to 115 million worldwide by 2050. Estimates show that over 65% of people with dementia (PWD) live in community as opposed to congregate living. While continuing to live in one’s neighbourhood is a reality to many, there is a dearth of research on the impact of the built environment (BE) on PWD, in particular from the perspective of planning scholarship.

RESEARCH QUESTION(S): Does planning scholarship and practice need a dementia-specific approach? If so, what would a conceptual research framework with this approach look like?

APPROACH: Using a relational planning lens, and understanding planning as a tool for procedural and outcome based justice, this paper reviews the limited literature on the relationship between PWD and the BE (from planning and other disciplines – of which there are no North American based studies) and examines if current policy attempts for inclusion (such as age-friendly cities, dementia-friendly cities, and universal design) are adequate for a dementia-specific approach to planning. To fill gaps in these literatures, disability studies is drawn upon to advance planning scholarship’s understanding of space, as well as the embodied experience by interrogating the role of stigma in experiencing space, examining the power of the personal as political, moving away from the medical model and the relationship between impairment/disability and space as a result of normative conceptions of the body. Based on this and an understanding of the potential role for planning practice and scholarship, a framework for future research is proposed.
FINDINGS: Literature suggests that physical and social aspects of the BE play a role in the wellbeing of PWD, however a more robust evidence base is needed (Keady et al., 2012), and the policy attempts were found to be insufficient for a dementia-specific approach to planning. Thus, this paper proposes a dementia-specific conceptual research framework for planning scholarship and practice that is relational, actively investigates power (Graham & Healy, 1999) and seeks to address some of the ways in which planning is manifested as social control – through land use policy and neighborhood design, controlling access to the planning process, and through the dominance of a single culture/experience (Yiftachel, 1998). Inspired by Bartlett & O’Connor’s (2010) multidisciplinary empowerment-oriented approach to intervention for PWD, highlighting four interactive levels (individual subjective experience, interpersonal relationships, community and sociopolitical structures), this framework hones in on the level that planning scholarship is best poised to address – community – with a relational understanding of the others. The three components of the framework are: building a context-dependent evidence base for land use and urban design; examining the potential of the planning process as furthering citizenship for PWD; and investigating the values of the planning profession and development industry, and how to change them.

RELEVANCE: There has been a recommendation to the United States government from scholars to expand the studying of PWD from health and social care to that of urban planning and community development (Lin & Lewis, 2015). PWD are marginalized due to broad socio-political factors like stigma, perceived ‘competence’, a research agenda that is often exclusionary, and persistent advocacy using ‘dementia as a tragedy’ discourse. In planning, the BE can exclude PWD by preventing them from continuing to participate in activities and social relations, the planning process can exclude PWD from (re)making their city as a citizen, and the attitudes and values of planners and development professionals can perpetuate these issues. This is why a dementia-specific approach is necessary, and this interactional framework is a good starting point. The process of engaging PWD in an examination of their neighborhood through their eyes is an opportunity to develop tools for future engagement projects for practitioners, as well as contributing to the creation of an evidence base. These projects could then develop into research about how to educate the planning profession and development industry, perhaps forming Lefebvre’s (1996) ideal iterative feedback loop between all three areas.

References

Key Words:
Dementia, Citizenship, Planning Research Framework, Planning Theory, Disability Studies
INDIGENOUS FEMINISMS: KEYWORDS IN THE MISSING AND MURDERED
INDIGENOUS WOMEN AND GIRLS CRISIS
Abstract ID: 625
Roundtable

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Sexual and gendered violence has been and continues to be, an integral component of settler colonialism. This violence has prompted international responses, both grassroots and from the academy, and as such, keywords provide insight into the grammars of MMIWG. Because the responding Indigenous anti-violence movements have prompted a significant degree of local action, composed of activists, scholars, and survivors from literally hundreds of Indigenous communities, the scope and focus of these movements are heterogeneous in nature. Key concepts at stake emerge from Indigenous feminisms, but the keywords are slippery and polyvalent, carrying a range of meanings. Drawing from work in Keywords in Native Studies that takes on similar polyvalent concepts of land and sovereignty, this roundtable will provide discussion on key terms such as felt knowledge, kinship, futurity, and decolonial love. These keywords comprise an Indigenous Feminist Analytic (or praxis), which challenges us to re-think relationships to land and obligations to our more-than-human kin, normative conceptions of time-space, to name a few. This panel will discuss keywords that are central to the MMIWG movement and an Indigenous Feminist Praxis.

References

Key Words:
Indigenous feminism, gender, kinship, Indigenous planning

HOW IT SLIPS AWAY/WE STILL HERE
Abstract ID: 628
Pre-Organized Session: Mapping the Unmapped: Resistant Pedagogies and Epistemologies

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Black Portland is often portrayed through metrics of disparity and deficiency, without reference to particular regional structures of opportunity and disenfranchisement, and without hearing the voices of
Black Portlanders themselves. The small African-American community in Portland has struggled to claim space in the city, as Black neighborhoods have shifted from redlined to gentrified. I use Clyde Woods’ framework of blues epistemology as Black ways of knowing geography in order to elucidate the place history and justice claims of Black Portland. This work includes data from participant observation, interviews, and focus groups, analyzed in light of Woods’ concepts for describing Black life. Black Portlanders’ experience is at once highly particular and universal in its blues narrative of enclosure, displacement, and the desecration of sacred spaces, expressed through stories of what artist Sharita Towne calls “joyful hardships.” I consider how an emancipatory planning process, the Portland People’s Plan, can shift from recognition--the blues story of what might have been but for racial oppression-- to reclamation. By asking Black Portlanders to imagine what it would look like if their city loved Black people, the planning creates a space for both a counter-narrative of community history and a collectively developed pathway towards a more just future.

References


Key Words:
race, gentrification

THE HOMEPLACE AESTHETIC: AFRICAN AMERICAN PRINCIPLES OF PLACE PRESERVATION IN DEEP EAST TEXAS’ VERNACULAR LANDSCAPES

Abstract ID: 629
Pre-Organized Session: Mapping the Unmapped: Resistant Pedagogies and Epistemologies

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In the late 1990s, scholars like Leonie Sandercock initiated a shift in planning scholarship by introducing alternative planning histories and epistemological critiques of historic preservation. Borrowing from critical race and feminist theory, this scholarship illuminated the history of grassroots responses to modern planning’s destructive interventions in and erasure of communities of color. Nearly a decade later, Angel Nieves’ “Memories of Africville: Urban Renewal, Reparations, and the Africadian Diaspora” published within the Black Geographies and the Politics of Place anthology, represents a project with similar, yet more specific political inflections. Nieves unpacks the devastating impact of urban renewal on an all-Black settlement called Africville. The city of Halifax razed the entire settlement for a water sewer project, resulting in the wholesale destruction of the community. Years later, Canadian historic preservation policy (and prevailing aesthetics) contested grassroots efforts to spatialize the site of memory (Nora) with building replicas. Noting the struggle for a diasporic approach to self-determinate preservation and reparation in Canada, he draws parallels to like struggles in the US.
Nieves uses the case study to issue a transnational challenge to practitioners: Advance work which goes “beyond the government guidelines,” and make way for grassroots, reparative preservation practice. Like Nieves’ essay, this paper contributes to the limited discursive space given Black diasporic, counterhegemonic practices, theories, and policy recommendations within planning and preservation. The author, through ethnographic and archival research on community-based planning and preservation practice within East Texas freedom colonies, documented grassroots approaches to conserving homesteads and related landscapes. Homesteads, which authenticate freedom colonies’ settlement patterns and sense of place, also serve as the most tangible remnants of former slaves’ placemaking practices in these disappearing, low population communities. This paper explicates the significance of grassroots approaches to preserving freedom colonies’ vernacular landscapes and homesteads (or farmsteads) in two settlements. In Shankleville settlement, a group of homestead owners leverage their communally-owned space to recreate a community core and catalyze heritage tourism. In Pleasantville (Farrsville), the owner of a homestead in a secluded, less populated area, uses the property (and surrounding forest) to sustain sovereignty, agency, and resilience even while threatened by periodic natural disasters. The author maintains that these unique, vernacular preservation practices can be explained by a “homeplace aesthetic.”

Borrowing from bell hooks’ conception of “homeplace” as a space of refuge from white supremacy (hooks), the author constructs the homeplace aesthetic based on the underlying principles of freedom colony property owners’ approaches to preservation of ancestral homesteads/farmsteads gleaned from interviews. Themes from the author’s constructivist analysis of interviews comprise the principles of the homeplace aesthetic including counterhegemonic operating assumptions about: community resilience, historic significance, building and repair in areas vulnerable to natural disasters, sovereignty, communal ownership, private versus public space, integrity versus the practice of “adding on” to original structures, the home being a vehicle for upward mobility, and rituals as preservation practice. The paper concludes with a discussion of how the paper’s findings and analysis, while relevant in a variety of contexts, is also a much-needed Black, rural intervention into urban-centric preservation policy, disaster recovery planning, and planning theory. She contends that planning theorists (and historians) should mine research from other disciplines on Black rurality and back-to-the-land movements for situated planning knowledges and create opportunities to foreground and validate identified planning practices and identities during policy making and planning processes. For example, disaster recovery rebuilding, repair, and relocation policies must acknowledge these grounded attachments and homeplace aesthetics. The author maintains that the research methodology for identifying the homeplace aesthetic might improve public planning and preservation agencies’ approaches to place enumeration (mapping), protection, and recognition of historic significance. Finally, the author asks readers to contemplate how the homeplace aesthetic, demonstrated by freedom colony homestead owners, might simultaneously inform a liberatory, Black, diasporic planning vision based on "real" or imagined Black collectivity and challenge operating assumptions undermining efforts to create equitable disaster and preservation planning practice and policies.

References

Key Words:
rural, preservation policy, african american women, disaster, land ownership

MAPPING THE UNMAPPED, SPACE AS COUNTER-FRAME: RE-PRESENTING THE TEMPORALITY OF BLACK MECCAS

Abstract ID: 630

Pre-Organized Session: Mapping the Unmapped: Resistant Pedagogies and Epistemologies

BRAND, Anna [University of New Orleans] abrand@uno.edu, presenting author

In their 2007 edited volume, Black Geographies and the Politics of Space, Clyde Woods and Katherine McKittrick lay out a challenge for urban planners to map the unmapped and unknown black geographies that are constructed through subaltern and counter conceptualizations of space, temporality and development. Similarly, McKittrick’s (2007) work in Demonic Grounds challenges us to imagine black geographies as valuable spaces that are not solely contoured by their relationships with white supremacist spatial structures and its ensuing practices of discrimination and dispossession. While many planning scholars have increasingly turned their attention to Woods and McKittrick’s work, the potential for black radical counter-frames has yet to substantially shift the neoliberal redevelopment paradigms that have preoccupied cities in the late 20th and early 21st centuries. In part, planning supports these paradigms by neglecting to fully counter how urban development solidifies and expands white privilege while dismantling the black urban sphere. In part, planning pedagogy supports these agendas by failing to incorporate counter-system analyses that unearth the institutional and structural elements of white supremacism as they are spatialized and respatialized over time. To map the unmapped, this research argues, we need deep historical analyses and ethnographic accounts of urban place making and counter-place making in order to better understand the liberatory potential of critical spatial counter-frames.

Post-Katrina New Orleans has exhibited both the impulse to remake the city to aid in capitalist expansion and the counter-frame to remake the city as a more deeply diverse and equal urban realm. It is a city of deep structural and spatial racism, as well as a city of vibrant, living subaltern geographies. As such, it provides an incredible context for mapping the unmapped possibilities of place and anti-racist development. In this research, I trace the evolution of Claiborne Avenue in Treme, New Orleans and ask how its manifestations and uses over time are linked both to the impulse of what George Lipsitz (2011) calls the white spatial imaginary as well as to the subaltern and counter-geographic restructuring of the black public sphere. How is the white racial frame (Feagin 2013) exerted spatially from this community’s roots in plantationism through the post-Katrina redevelopment landscape? How do urban planning and development shifts reflect the shifting yet hegemonic terrain of the white racial frame and when do they support anti-racist counter-frames through spatial imaginaries and development? How are counter-frames spatialized through community and cultural practices?

Tracing Claiborne both forward and backward in time through the lens of historical and contemporary black owned businesses and white driven capitalist expansion, I explore how Claiborne represents, at different moments of its history, the racial processes at work in the American South. This research draws on qualitative and sensory ethnographic methods, including archival research, interviews, observations, and visual research. My findings highlight the continued tensions between planning and redevelopment as tools of the white racial frame and the use of space as a counter-frame. Space is theorized as central to the calcification of racism, but also as central to liberatory conceptualizations of the future of a racially
equal society. This work then highlights how planning is bound up in white supremacist structures and argues that urban planning, through pedagogy and development action, can take a new lead in decolonizing and deplantationizing its work in urban landscapes.

References


Key Words:
Race, Urban Development, New Orleans
Planners are aware that effective neighborhood planning practices should engage a broad cross-section of individuals and stakeholders representing the full diversity of interests within a community. Yet they often rely on public meetings as their primary tool for engagement, even though such meetings rarely draw a broadly representative crowd. Planners then find themselves with an ethical and methodological dilemma: do they make decisions based on the input from those who participated in the formally sanctioned event or do they seek out broader input that includes a more diverse set of perspectives and a broader range of stakeholders? This paper considers the question: what is enough participation? It argues that robust engagement must include three dimensions: participation, inclusion, and voice.

This article uses a three year partnership between the Neighborhood Planning Division in the City of Des Moines and the Department of Community and Regional Planning at Iowa State University as a longitudinal case study to investigate the ethical issues and challenges surrounding outreach and engagement in low income urban neighborhoods. By creating a city/university partnership to work with local neighborhood associations and update their neighborhood revitalization plans, the city was able to increase their resources in terms of person hours and dramatically expand their outreach into disenfranchised communities. As a result, the final plans represented a diversity of neighborhood interests that expanded beyond neighborhood associations—the traditional body for representing a given neighborhood’s perspective—and generated unexpected outcomes for the communities. By shifting away from a traditional framework of public meetings to one of “Taking the meetings to the public,” planners can achieve multi-dimensional participation in neighborhood planning processes. The result is actionable plans that are deeply based in a particular place.

References

Key Words:
Public engagement, Neighborhood planning, Inclusion, Planning voice

CHICANAS RESTRUCTURING GENTRIFICATION: GENDER, RACE, AND POLITICS IN THE BARRIO
Abstract ID: 702
Individual Paper Submission

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The urban planning field has neglected the important role Chicana activists have played in reshaping and protecting their neighborhoods from cities’ redevelopment efforts (Cordova 1997). Chicanas have historically fought for issues of environmental justice, against gentrification, and ameliorating neighborhood inequality (Pulido 1996, 2006). Chicanas’ historical role as community change agents in protecting their barrios provides a lens into urban struggles over gender, race and politics in the contemporary city (Pardo 1990, 1995, 1998).

This article weaves the activist narrative stories of three Chicana leaders that have transformed redevelopment projects in their barrios in order to gain more community benefits. Chicanas pressured the city, redevelopment agency staff, politicians, and developers in order to transform market based redevelopment housing projects into affordable housing. These projects encouraged links to social and educational services, supported locally owned retail, and built Chicano/a culturally appropriate public spaces. The barrios examined in this study include The Fruitvale in Oakland, Boyle Heights in Los Angeles, and Barrio Logan in San Diego. These three barrios are historically important Mexican American neighborhoods experiencing pressures of gentrification.

We analyze how these Chicana activists were influenced by the Chicano/a movement; how they became involved in urban planning issues; and finally, how each transit oriented project changed to encompass more community benefits as these Chicanas pressured the city and developers. The projects include Fruitvale’s Transit Village, the Expansion of East LA’s Goldline, and the transformation of El Mercado Del Barrio redevelopment in San Diego. The narrative stories help to conceptually and empirically ground the larger structural barriers that create inequitable and racially segregated neighborhoods and demonstrate how Chicana activists challenged and pushed back against those structures to protect their barrios.

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Key Words:
Activist, Gender, Gentrification

RESIDENT IMMIGRANTS’ HAPPINESS AND URBAN ENVIRONMENTS IN SEOUL, KOREA: A STRUCTURAL EQUATION MODELING ANALYSIS
Abstract ID: 732
Poster

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Background
Urban planners have long pursued the improvement of citizen’s happiness as the ultimate goal. Previous urban studies pursuing the improvement of citizens’ lives and future prospects have concentrated on finding factors affecting citizen’s happiness. However, they did not significantly consider immigrants who actually act as members of society (Umemoto and Igarashi, 2009; Bartram, 2011). As the concept of Inclusive City has emerged as a normative urban vision to overcome the multidimensional and complex social exclusion, it is time to broaden our studies from limited citizens’ happiness to comprehensive citizens’ happiness (de Graauw and Vermeulen, 2016).

Objective and research hypotheses
This study aims to investigate the factors that affect the happiness of resident immigrants in Seoul, Korea. In detail, we seek to show the intricate relationship among life satisfaction, socioeconomic status, discrimination experience, urban environments, and happiness of resident immigrants. The main research hypotheses are as follows: (1) The higher the life satisfaction, the happier the citizens will be. (2) The higher the perceived socioeconomic status, the happier the citizens will be. (3) The lesser the discrimination experience, the happier the citizens will be. (4) The higher the environmental satisfaction in the residential city, the happier the citizens will be.

Method
Data were obtained from the foreign sector of the 2015 Seoul Survey, which data were collected from about 2,500 foreign residents of Seoul aged 20 or those who overstayed in the country for more than 91 days as of October 1, 2015. These data were obtained through face-to-face interviews. The sample was selected through stratified random assignment extraction. The Seoul Survey mainly consists of questions about detailed items of the concept rather than directly asking specific concepts. This study employs Structural Equation Modeling (SEM). Unlike the traditional research methods employed in prior works, SEM can impute relationships between unobserved constructs (latent variables) from observable variables.
Results
The results prove that four research hypotheses were correct. As shown in previous studies, resident immigrants tend to be happy because they are satisfied with their lives, enjoy high socioeconomic status, less discrimination, and high satisfaction with their urban environments. The most remarkable result is that satisfaction of urban environments exerts the most significant influence on the happiness of resident immigrants. This finding means that the efforts of urban planners to improve the satisfaction of resident immigrants of their urban environments could play a decisive role in the happiness of resident immigrants. In particular, the welfare environment of resident immigrants should be supported because the welfare environment (medical care and social security) is the biggest factor loading among the detailed items constituting satisfaction of urban environments.

Conclusion
This study has significant implications. First, this study suggests the necessity of urban planners to include resident immigrants in the scope of citizens when considering the concept of Inclusive City (Beall, 2000). Second, this study confirms the validity of the research hypotheses on the happiness of resident immigrants, which were raised in previous studies. Third, this study shows that urban planners play a decisive role in the happiness of resident immigrants.

References

Key Words:

TOILETS, LOCKER ROOMS, AND THE PUBLIC IMAGINATION: PLANNING FOR SAFE AND INCLUSIVE SPACES
Abstract ID: 740
Individual Paper Submission

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The recent spate of political posturing over public restrooms and locker room facilities has sharpened the debate over inclusion and public safety in these vulnerable spaces. The manipulation of the public imaginary about the lurking transgender menace in such spaces has certainly intensified some electoral politics and shifted the conversation about safety (Samek 2016). This paper seeks to integrate sound social science and design perspectives into this discussion by asking whose safety needs protecting.
While political rhetoric has suggested that women and especially young girls are in grave danger from the de-gendering of public toilets (Jeffreys 2014), no evidence is presented to document this perspective. On the contrary the greatest harm to linked to public toilets seems to be experienced by transgender and gender non-conforming individuals (Lucal 1999, Browne 2004, Herman 2013). This paper updates the work of Anthony and Dufresne (2007) and integrates more recent efforts to examine restrooms from a queer and inclusive perspective (Gershenson and Penner 2009, Cavanaugh 2010, and Molotch and Noren 2010, Greed 2015) in light of recent events in Houston and North Carolina that have politicized the issue of transgender inclusion in bathrooms.

References
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Key Words: public facilities, inclusion, safe space, transgender, LGBTQ

COMMUNITY IMMERSION, TRUST-BUILDING, AND RECRUITMENT AMONG HARD TO REACH POPULATIONS: A CASE STUDY OF MUSLIM WOMEN IN THE DETROIT METRO AREA
Abstract ID: 787
Individual Paper Submission

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Abstract
This paper describes steps taken for the pre-recruitment and recruitment process of an interview study focusing on Muslim women’s urban accessibility issues in South-East Michigan. In the Urban Planning literature, the homogenous term of women has overshadowed the diversity among women related to their racial, ethnic, and religious backgrounds. This study represents the extent to which considering the heterogeneity among women assists researchers in building trust and eases communication with minority groups. For this study, 78 Muslim women were interviewed. In this interview study, a two year and half community immersion process eased access data. This study proved that in a research team focusing on religious minorities, there is a strong need of having a scholar comes from the same religious background. Although the first author of this paper was born and raised among Muslims and fully communicated with Muslim women’s values, she believes that without her fellow Arab assistants,
she could not have a perspective close to an insider’s one. This paper presents the significance of community immersion as a must-to-take step in interview studies on religious minority women.

References


Key Words:
Community Immersion, Double Visioning, Religious Minority, Hard-to-Reach Population, Interview Study

BELONGING AND THE BUILT ENVIRONMENT: TRANSNATIONAL SOCIO-CULTURAL INFLUENCES AMONG FIRST AND SECOND-GENERATION MEXICAN IMMIGRANTS IN SOUTHERN CALIFORNIA

Abstract ID: 824
Individual Paper Submission

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Immigrants arriving in the U.S. not only come from different societies, but also from places with different physical characteristics. Studying how the built environment is socially and culturally shaped by the immigrant communities that inhabit them is important for U.S.-based urban planning and design practitioners concerned with creating successful active spaces that are well-used and inclusive community-building environments. This is of particular relevance for Mexican immigrants, as they are the largest immigrant group – and the most populous Latinx ethnicity – in the U.S (Motel and Patten 2012). Previously, scholars of migration have provided insights into immigrants' understanding of their lives and the way in which they perceive their new roles in American society according to citizenship, political incorporation, and economic mobility – often through a positivist lens (R. Smith 2006). But few empirical user-centered studies exist about the way in which immigrants’ previously familiar understanding of their sending community’s built environment has resulted in changes to their how they conduct their everyday lives in their U.S. receiving community. Is there a demonstrable connection in migration and place? Thirty interviews were conducted and coded with residents from East L.A. and Santa Ana – two highly populous inter-generational Mexican communities in southern California. This research demonstrates the growing tensions that result when planners and designers rely on elements of ‘Latino Urbanism’ (and its variants) to appease this population. It also suggests that the acculturation level of Mexican immigrants in southern California is mutable according to the original physical characteristics and scale of their sending community, length of time spent in the U.S., proximity to others from their home region in Mexico, and generational variation. I argue that for planning and design professionals to be truly inclusive of Mexican immigrants, they need to look beyond normative frameworks that often essentialize an otherwise heterogeneous population with competing built
environment needs. The paper further suggests that understanding the hybrid socio-spatial implications inextricably associated with their assimilation into American society must be central to future planning and design efforts in American cities.

References

Key Words:
Latinxs, Mexican immigrants, public space, urban design, transnational migration

TARIMAS: AN INTERDISCIPLINARY PLATFORM FOR SPACES OF RESISTANCE
Abstract ID: 856
Pre-Organized Session: Mapping the Unmapped: Resistant Pedagogies and Epistemologies

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Son jarocho is music from the black Mexican region in Southern Veracruz, Mexico. Its roots are African, Spanish and indigenous, and it represents a set of cultural practices that go back to before the Spanish conquest. This includes the fandango, a community celebration that brings together musicians, dancers, singers, and versadores (or those who make verses) around a wooden percussive platform called a tarima where participants take turns dancing.

As communities of color look to build resistant geographies under the threat of disintegration, separation, incarceration and death, son jarocho serves as an analytic source, providing an alternative to criminalization, removal, and violence. This interdisciplinary framework allows for music, dance, community and practice to map out geographies of resistance that range from a small, mobile, and temporary wooden tarima, to entire communities that are extensions of the African Diaspora throughout Mexico and the United States.

This paper traces the Black Diaspora as it travels through son jarocho and its music, verses and dance. From Veracruz, Mexico to cities in the United States, including Santa Ana, Los Angeles, and San Diego, California, and other states like Seattle, Washington, Milwaukee, Wisconsin, and Chicago, Illinois, communities of color practice fandangos. Time, rhythm, and sonics have the power to reverberate and transform through improvisation, capturing what it means to be jarocho, Black, Mexican, Chicanx, and immigrant, in different times and places, both urban and rural. In addition, the fandango serves as a transnational vehicle to make both temporary and permanent claims to space, connecting culture to political economy and presenting forms of organization that challenges existing labor and power models as well as our urban theories around “inclusivity”, “multiculturalism” and “integration.”
This paper concludes with recommendations for planners concerned with questions of equity and justice on how these practices can serve as a foundation for building power in communities on a broader scale. Recognizing the foundational, practical, and analytical value of son jarocho -- like the blues and hip hop -- can be part of a larger strategy to move away from the colorblind frameworks that are part of the subordination of black culture and people.

References

Key Words: resistance, son jarocho, immigrant, Black, Chicanx

A CHILD’S VIEW ON THE CITY: PLANNER’S DIAGNOSTICS
Abstract ID: 863
Individual Paper Submission

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The term “Child Friendly City” acquired much attention over the past decades (Chawla, 2016; Spencer and Blades, 2006). There is a wide agreement that the urban environment has an effect on the quality of life of children, on their development and future prospects (Gleeson and Sipe, 2006). However, the meaning of a built environment which is friendly towards its younger citizens is often hazy, and covers ideas and best practices relating both to governance (e.g. Riggio, 2002), and the physical environment (eg. Broberg, Kytta and Fagerholm, 2013).

Following Kytta, we present here another method to make the term “child friendly” concrete, as we attempt to understand which elements are needed in a child friendly environment. We start from the assumption that a child friendly environment supports child development, and using developmental- and learning theories, develop a typology of necessary urban elements.

Looking at how children make use of the physical environment (mobility, social encounters and active play) on the one hand, and at forms of learning and acting (structured, social and personal) on the other hand, the typology creates nine groups of elements in the urban environment that are used for different needs, in different ways. All activities, and all manners, are needed for healthy development. We therefore hypothesize a child friendly environment will include elements of all nine group. Conversely, an environment which lacks some of these element groups will be less supportive of children.

Using the typology to analyze the built environment at a neighborhood and sub-neighborhood level, we can diagnose how much it is suited to the needs of children, and what can be done to improve the built environment from their perspective. We end by diagnosing two locations, and suggesting possible improvements to make them more child-friendly.
THE GENDER GAP IN THE INFRASTRUCTURE INDUSTRY: AN EXAMINATION OF WOMEN IN SENIOR LEADERSHIP POSITIONS

Abstract ID: 908
Individual Paper Submission

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Examining the representation of women in senior leadership positions in the infrastructure sector is important for urban planners. Previous American research shows that infrastructure is a sector of planning that stands out for being largely male dominated (Johnson and Crum-Cano, 2011). This study extends the analysis to the global scale, by exploring the gender gap in senior leadership roles in the infrastructure sector worldwide. The research is based on a study of over 1,500 senior civil servants responsible for infrastructure planning departments and agencies, business executives in planning, construction, infrastructure investing firms, and professional services, and politicians leading the infrastructure file for their respective government. The study covers more than 75 countries on 6 continents, providing a global snapshot of the gender gap in the leadership of the infrastructure industry.

The results show that there is both a glass ceiling that is inhibiting women from attaining senior leadership roles in the infrastructure industry, and glass walls that are contributing to gender segregation by job type. Very few women hold the top job within their organization, either in the public or private sectors. Moreover, men dominate leadership positions in planning, finance, construction, engineering, and project management, roles that guide the strategic direction and implementation of infrastructure projects. Conversely women are more likely to be senior executives of human resources or legal departments that have greater responsibility for directing the internal functioning of the organization. Nevertheless there are regional variations, with Asia, North America and Europe having slightly higher shares of women involved in leadership roles in the infrastructure sector than Africa, South America or Australia.

Planners should be deeply concerned about who is running major infrastructure programs, and the gender gap in senior leadership roles (Sandercock and Forsyth, 1992; Fainstein and Servon, 2005). Theories of representative bureaucracy posit that policies that respond to the needs of women are most likely to be achieved when women are represented in positions of decision-making authority (Dolan, 2000). And over the next decade, cities will be transformed through trillions of dollars of investment in infrastructure globally, with implication on who will benefit from economic growth and job creation,
improved livability and social inclusion. The paper identifies reasons why a gender gap continues to persist in the infrastructure sector, and highlights strategies to reduce its prevalence.

References


Key Words:
Gender Gap, Infrastructure

SUBWAYS AND SOCCER MOMS: AN ANALYSIS OF GENDER AND COMMUTING IN THE NEW YORK METROPOLITAN AREA
Abstract ID: 937
Individual Paper Submission

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Women’s travel patterns are significantly affected by their household status. Women are still primarily responsible for household activities including childcare, shopping, and caring for the home (American Time Use Survey, 2015). And the majority of American women engage in work outside of the home, meaning that women’s journeys to work are often more complex than those of traditional male commuters. Women’s work trips are also shorter than men’s, their labor markets are smaller, and their employment opportunities are accordingly more limited (Crane, 2007; England, 1993). The explanation being that women’s traditional gender roles inhibit their labor market status by constraining their space-time budget. Women have less time to travel to and from work than men thereby reducing the quantity and quality of jobs to which they have access (Rapino & Cooke, 2011; Kwan, 1999).

This paper builds on previous research by incorporating the spatial structure of a woman’s community as an additional constraint to her mobility and employment options. Using a 2011 household travel study of the New York metropolitan area, this paper tests the impact of land use regulations on women’s commute time and distance. This expands on previous studies of women’s spatial entrapment by incorporating a dummy variable for single-family zoning. The inclusion of this variable is of particular importance to the study of gendered travel patterns because it acknowledges the power of land use regulations on gender roles. This paper also moves the discussion of gendered differences in planning from a theoretical discussion of the embeddedness of traditional family values in municipal zoning regulations to a testable hypothesis: that women living in lower density areas, or those regulated by single use zoning ordinances, will face different spatial constraints than their male counterparts; than women in different locations within the same metropolitan area; and that these differences will vary by age, race, and income.
This paper utilizes an existing household travel survey of the New York metropolitan region conducted in 2011 by the New York Metropolitan Transportation Council of Governments as its primary source of data. The final dataset contains information for 43,558 individuals in 18,965 households identified at the census tract level. Additional data for the regression analyses is pulled from the American Community Survey 5-year estimates. Preliminary results indicate that white, married women with children have significantly shorter commute time regardless of location within the metropolitan area (city or suburb), and black women had longer commute times than women of other races. Women with higher levels of educational attainment or income and those women with a reliance on public transportation have the longest commute times. After accounting for differences in individual and household level characteristics, single-family zoning is positively correlated with commute time for men and negatively for women. These findings demonstrate that women, especially married women, have shorter commutes because their traditional role as family caretaker results in more domestic responsibilities, lower labor market status, and consequently fewer transportation options.

References

Key Words:
gender, transportation, commuting, women, zoning

LATINX CITY: URBAN PLANNING POLITICS AND THE GRASSROOTS
Abstract ID: 956
Roundtable

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The recent book publication Latino City: Urban Planning, Politics, and the Grassroots by Erualdo R. González examines the new urbanism, creative class, and transit-oriented models of planning and their implementation in Santa Ana, California, one of the United States’ most Mexican communities. It provides an intimate analysis of how revitalization plans re-imagine and alienate a place, and how community-based participation approaches address the needs and aspirations of lower-income Latino urban areas undergoing revitalization.

This roundtable is a critical discussion of the main theoretical debates and key thinkers related to new urbanism, transit-oriented, and creative class models of urban revitalization and how it impacts Latino working class urban areas and communities of color. These efforts stir controversy over residential and
commercial gentrification of working class, ethnic and immigrant communities. This roundtable discussion aims to further discuss contemporary models of choice for revitalization of US cities from the point of view of a Latina/o-majority central city, and thus brings forward new lines of analysis and critique of models of revitalization in the current period of socio-economic and cultural change. This roundtable is a critical discussion of the main theoretical debates and key thinkers related to new urbanism, transit-oriented, and creative class models of urban revitalization and how it impacts Latino working class urban areas and communities of color. These efforts stir controversy over residential and commercial gentrification of working class, ethnic areas. This roundtable discussion aims to further examine contemporary models of choice for revitalization of US cities from the point of view of a Latina/o-majority central city, and thus discusses new lines of analysis and critique of models of revitalization in the current period of socio-economic and cultural change.

References


Key Words: grassroots, Latino, immigrant

FROM THE WOMEN’S MOVEMENT TO PLANNING SCHOLARSHIP: AN INTELLECTUAL HISTORY OF FEMINIST PLANNING
Abstract ID: 1009
Individual Paper Submission

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The rich legacy of feminism – from the Progressive Era to post-WWII labor activism to the women’s movement and beyond – is largely absent from planning’s intellectual history. Seeking to expand that narrative by documenting interactions between feminism and the planning field, this paper focuses on the period of lively engagement beginning in the 1970s as planning moved towards social policy and equity goals, and as women began to enter the planning academy in substantial numbers. As part of a larger dissertation project tracing the lineage of feminist thought and activism in the planning academy
to the present, I ask: How have ideas traveled between feminism and planning? Which actors, institutions, and practices have shaped the impacts of feminism in the planning academy? What long-term impacts did these connections make on the field?

I rely on a combination of experiential, institutional, and intellectual perspectives to narrate the history of ideas about gender in planning. I share findings from twenty interviews with feminist planning scholars, including some of the first women to obtain PhDs and faculty positions in the field. Supplemented by archival documents and published scholarship, these oral history accounts from the first generation of women in the planning academy document points of convergence such as interdisciplinary networks and formal organizations that shaped contemporary approaches to planning scholarship, theory, and education. I draw on institutional archives such as ACSP governing board meeting minutes, as well as documents from personal collections like programs from feminist conferences, historical documents from the formation of the Faculty Women’s Interest Group (FWIG) and syllabi from planning courses about gender. Overall, I look at why and how particular ideas emerged by attending to networks, strings of influence, and structural barriers and collective responses.

This combination of interview data, archival documents, and published scholarly works allows me to examine the intellectual trajectory of feminism in the field through practices of knowledge sharing and activism. Cross-disciplinary exchanges characterize early connections between feminism and planning, as semi-formal organizations like the Women’s School of Planning and Architecture (WSPA) convened educational meetings several times a year and as scholars published in interdisciplinary feminist journals. Within the planning discipline, women leveraged leadership positions in ACSP and FWIG to advocate for the advancement of women in the academy through professional development.

Finally, I offer a few ideas for what this period of engagement between second wave feminism and planning can tell us about the last several decades, and interrogate multiple and contested meanings of feminism in the discipline as a framework for understanding the diffusion of ideas about gender. I also look to the future by proposing ways that planners can learn from intellectual and practical encounters with feminism in order to mobilize the potential of planning to dismantle systemic and spatialized forms of oppression.

References


Key Words:
feminism, gender, intellectual history, planning theory, social movement
This paper examines how experiences of illegality and environmental injustice are embodied, or incorporated, within Latino immigrants and their communities. Emerging anthropological research reveals how the enforcement of immigration policies based on a construct of illegality impacts the daily, lived experience and health of Latino immigrants, and how the fear of deportation, persistent marginalization, and increased militarization of their communities adversely impacts their well-being, health, and social mobility (Abrego, 2016). The environmental justice literature indicates low-income, Latino immigrant communities are disproportionately located in hazardous transportation and industrial corridors and experience heightened exposure to environmental hazards and disproportionate rates of asthma, cancer, and other ailments (Pulido, 2004). Our literature review connects the illegality and environmental justice literatures to examine how constructs of illegality and the expansion of immigration policy enforcement compound environmental injustices and associated health effects within Latino immigrant communities.

To connect these literatures, we construct a framework that demonstrates how the embodied and situated experiences of illegality and abjectivity amplify and compound the environmental exposure and vulnerability of Latino immigrants by constraining the social, physical, and political spaces they occupy in the urban and public spheres. First, we trace how immigrants in the United States have historically been spatially subjugated and hyper-segregated into decaying and blighted areas of the city due to institutional racism, violence, exclusionary zoning practices, and uneven development patterns (Maantay, 2001; Pulido, 2004). Second, we review how more recent deportations, heightened levels of institutional hostility, and anti-immigrant laws and rhetoric have positioned Latino immigrants as “less than fully human,” further isolating and militarizing their communities, and hampering their ability to meaningfully engage with governmental agencies, planning processes, and environmental justice advocacy for healthy and safe communities (Gonzalez & Chavez, 2012). Third, we investigate how illegality and associated techniques of surveillance and discipline impact how Latino immigrants move and travel within the city, the daily spaces they occupy, and whether they decide to live in marginal neighborhoods disproportionately impacted by environmental hazards (Willens, 2007).

In conclusion, we discuss how Latino immigrant communities have responded to the discrimination, isolation, disruption, and state of fear imposed upon them by building a broad-based environmental and social justice movement, and how the planning profession can promote environmental justice for Latino immigrant communities in a period of hostility towards immigrants.

References

DEPORTABILITY & COMMUNITY ENGAGEMENT: LESSONS FROM LOS ANGELES AND ALBUQUERQUE
Abstract ID: 1095
Individual Paper Submission

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The consequences and risks of deportation are on the rise. Seldom addressed are the impacts of deportability on engagement in community activities by undocumented Americans and others of tenuous immigration statuses. This paper begins with a review of the consequences of illegality and deportability on everyday life for undocumented Americans and then presents a set of key lessons for planners, policy makers, and community leaders on the potential for community engagement among those at risk of deportation.

The risks of deportation have risen dramatically in recent decades. In 1990 one in one hundred undocumented peoples faced deportation, by 2013 this rose to nearly one in 25 (Passel & Cohn, 2011; Security, 2016). At the time of writing in the early days of the Trump Administration and Attorney General Jeff Sessions, this ratio threatens to further increase as deportation continue to be called for by these political leaders. These greater odds of deportability are matched with increases in the consequences of deportation. Deportation means family separation, loss of income, and increased difficulty of return. U.S. Government policing of international borders and ports of entry has resulted in individuals without legal status remaining in the United States for longer stretches, their lives becoming more deeply entwined with American culture and lifestyles, and the growth of mixed-status households as they have U.S. born children. The border build up that intended to keep undocumented migrants out has instead encouraged them, and their families, to settle permanently in the United States – the policy has “backfired” (Massey, Durand, & Pren, 2016). This settlement and growth of deep roots in the United States makes the rupture of deportation even more jarring. Individuals are no longer simply deported from a workplace, but increasingly deportation means separation from family members, investments, and communities.

Using data collected as part of a dissertation project on the political participation of Undocumented Americans in Los Angeles and Albuquerque, this paper presents key lessons on building engagement and empowerment within undocumented and immigrant communities considering deportability. These include a review of the following lessons: (1) local contexts shape immigrant experiences and opportunities and can be shaped by political, community, and co-ethnic leaders as well as geographies of fear and inequality; (2) institutional and place attachment may foster a sense of safety and belonging facilitating fuller participation in community activities through the provision of legitimacy and cover; and (3) fear of deportation can suppress engagement and participation but institutions may work to dampen these fears and facilitate community engagement.
Urban planners and policy makers should consider their ability to engage with and support empowerment of undocumented community members. Border build up, long term settlement, and family migrations mean that undocumented peoples are not just seasonal residents in the American state, but are community members, families with children in local schools, home mortgage holders, and people with political opinions, voices, and expanding American roots. Failure to recognize this accepts marginalization and legal violence these communities face.

References

Key Words: Deportability, Engagement, Participation, Undocumented Americans

TRANSPORTATION, HOUSING, AND FOOD EXPENDITURE SUBSTITUTION DURING THE GREAT RECESSION: WITH SPECIAL EMPHASIS ON FEMALE-HEADED HOUSEHOLDS
Abstract ID: 1119
Individual Paper Submission

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The capability of households to afford a decent life-style is of increasing concern to policy makers. Many households face constrained budgetary decisions almost every single day. These decisions may involve trade-offs and substitutions between different goods, products, and services. Aside from income, research has demonstrated that several factors can affect household budgets such as household composition, socio-demographic characteristics, and household location (Ferdous and Pinjari 2010). Other circumstances that can further influence family budget include anticipated shocks to income such as retirement and unexpected economic shocks such as the great recession (Aguiar, 2005). Even though the presence of gender differences in household budget allocation is argued in the literature (Owens, 2008), there is a need for more detailed research on that issue especially as it relates to transportation.

Budgetary decisions impact household activity participation and travel (Dane, 2015). This study compares household expenditures allocated to transportation, housing, and food during normal periods and during the great recession and specifically investigates how gender influences budget reallocation decisions under an external shock. Transportation, housing, and food are the three categories of expenditures that are considered because they are the main drivers of household budgets (Kaupilla, 2011). The main objective is to understand the economic coping strategies (economic trade-offs) that different households adopt during normal periods and during the last economic crisis and what these
meant to their transportation capabilities. Female-headed household with children is the subgroup of interest in this research.

The analysis uses repeated cross-sectional data from the Consumer Expenditure Survey (CEX) program of the US Bureau of Labor Statistics (collected by the U.S. Census Bureau), a quarterly survey of approximately 7,000 households, for the period 2005 to 2009. Each unique household is interviewed four times providing a year’s worth of expenditure data. Using econometric methods, I estimate different models for the share of transportation, housing, and food from total household expenditures as well as for the ratio of transportation to housing and food expenditures using similar covariates including a recession and female-headed with children dummies. The results suggest a possible substitution between transportation and food during the great recession. They also underline that female-headed households with children were likely to spend less on transportation and more on housing and food during all period.

The overarching goal of this analysis is to look at the household budget allocations from the gender equity and economic crisis standpoints. This can help us understand some of the unique constraints female-headed households with children experience during normal times and during times of external crisis such as the recession. It can also help device policy strategies to address these problems.

References

Key Words: transportation, food, housing, recession, female-headed households

DO MORE ACCESSIBLE AND WALKABLE BUILT ENVIRONMENTS PROMOTE GENDER EQUALITY IN HOUSEHOLD ACTIVITY SPACE BEHAVIORS?
Abstract ID: 1121
Individual Paper Submission

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Directing growth towards denser communities with mixed-use, accessible, and walkable neighborhood design has become an important strategy for promoting sustainability, but few studies have examined whether compact development strategies can help reduce gender disparities in household travel and activity patterns. Previous research suggests suburban sprawl could exasperate gender disparities in daily household responsibilities and travel because segregated and dispersed land uses separate private
and public realms and can constrain women to their immediate neighborhoods (Handy, 2006; Hayden, 2002). In contrast, New Urbanist neighborhood design could help counter the social isolation of women in suburbia by integrating pedestrian accessible mixes-use centers (Fagan and Trudeau, 2014), and compact communities with denser land use and better transit service could help reduce the disproportionate chauffeuring travel responsibilities of women (Boarnet and Hsu, 2015).

This study extends previous research by examining whether more accessible and walkable communities in Southern California are associated with greater equality in daily activity spaces between married partners in compact communities compared to partners in less compact areas. Activity space analysis provides a useful approximation of the geographic extent of an individual’s daily travel and activities and his or her associated accessibility to urban opportunities (Zenk et al., 2011). We hypothesize that more accessible and walkable built environments could potentially reduce the spatial isolation of women and reduce gender differences in daily mobility.

We examine differences in the activity space patterns of heterosexual married couples in Southern California based on the 2010-2012 California Household Travel Survey to examine how regional accessibility and walkability account for gender differences in daily activity space patterns. We find that more accessible and walkable areas are associated with smaller overall activity spaces for both men and women, and that couples living in more compact communities have greater equality in activity spaces compared to couples in less accessible and less walkable areas. That said, men and women had significantly different activity space behaviors regardless of their neighborhood type. Compared to women, men on average had larger activity spaces and located the geographic center of their activities farther from home. Our multivariate models account for residential selection and confirm that after controlling for individual and household factors, living in a more walkable and accessible area is associated with a smaller daily activity space and having activities centered closer to home. Compared to their male counterparts, women in more accessible environments had larger activity spaces. Our results inform sustainable planning practice by identifying how compact design could help alleviate gendered differences in travel and activity spaces and provide women with greater mobility and associated opportunities.

References

Key Words:
gender equality, activity space behavior, built environment, compact community design, Geographic Information System (GIS)
WHOSE RIGHT IN THE GENTRIFYING DOWNTOWN CENTRAL CITY?
Abstract ID: 1247
Individual Paper Submission

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A critical issue confronting local urban policy makers is determining the extent planning for and marketing to working class and immigrant communities should influence the future of central city downtowns, or should the interests of creative-class and middle-class consumers and residents take precedence. In many respects, this dichotomy is, in essence, encapsulated with two divergent urban orientations----“the right to the city” and “return to the city”, respectively. In more succinct terms, we can call this the gentrification debate. Increasingly, however, we see that city planners working to “revive” central city downtowns tend to chart growth and change away from the existing and majority community and toward an imagined community. Redevelopment trends in these areas suggest that new urbanism, creative cities, and transit-oriented development often combine to facilitate gentrification and displacement in these urban cores. As Holston argued, modern planning seeks to erase an unwanted present by focusing on the imagined future. Marcuse argues, however, there is room to extend our understanding of those whose rights are of concern in these “unwanted present” scenarios. That is, there is room to go beyond generalities. This, then, requires extending our understanding of those who are typically referred to as the gentrified in commercial revitalization. The first objective of this paper is to show whose rights are most deeply affected in such cases. The second objective is to examine downtown commercial changes. Using a case study, including archival research and a field survey, of the Southern California City of Santa Ana, I examine these objectives in the context of on-going downtown commercial redevelopment that embrace new urbanism, creative class, and transit-oriented principles. Santa Ana is a large city with 78% Latina/o population, about half immigrant, and with extreme urban deprivation. This case is particularly suitable for the paper's objectives when we consider that the said city embraces a “return to the city” rhetoric and practice in the downtown. We conclude by discussing lessons for a more nuanced understanding of the gentrified and commercial change.

References


Key Words:
Right to the City, Commercial Gentrification, Central City, Downtown Redevelopment

PREVALENCE, ATTRIBUTION, AND RESPONSE TO DISCRIMINATION IN THE NEIGHBORHOOD
Abstract ID: 1279
Individual Paper Submission

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Experiencing discrimination is known to act as a risk factor for both mental and physical health problems, although the effects of perceived discrimination depend on where the incident occurs, and how the individual discriminated against reacts to the event. Little is known about how often individuals experience discrimination in their neighborhoods, in what precise locations these events occur, how individuals understand why they experience discrimination, or what emotional and behavioral responses follow. In previous research on discrimination, neighborhoods have been conceptualized as moderators of the relationship between perceived discrimination and health, and as stratification variables that allow researchers to distinguish between the effects of discrimination that occurs within versus outside of respondents' neighborhoods. However, the impact of perceived discrimination on how individuals navigate their neighborhoods is poorly understood. This study examines experiences of within-neighborhood discrimination across nine low income neighborhoods in metropolitan Boston in order to characterize how, where, why, and how often residents are targeted in discriminatory events, and to characterize how residents respond to such events.

To collect data on resident experiences of discrimination, a team of academic researchers, urban planning and public health professionals, and community members used Participatory Action Research methods to develop a series of survey questions about 1) how residents experience discrimination, including, name calling, receiving poor service, or people acting afraid of their presence, among others; 2) how often each type of event occurs; 3) how residents understand these events, for example by attributing them to race/ethnicity, age, weight, sexual orientation, or other characteristics that may be targeted; 4) where within the neighborhood the events occur, and 5) how residents react emotionally and behaviorally. This study draws on survey data collected on roughly 350 residents collected in 2016, and an additional 350 responses that will be collected in 2017.

Findings will help planners understand which types of public and commercial spaces are most commonly associated with different forms of discrimination, which types of events cause residents to avoid particular locations within their neighborhoods, and which are associated with residents attempting to change the offender's behavior. We report on the emotional states, including humiliation, anger, hopelessness, and resignation, associated with different types of discrimination experiences. Understanding these emotional responses could help uncover whether and how discrimination contributes to undesirable planning outcomes including resident disengagement, conflict or violence in the neighborhood, and social isolation.

References

Key Words:
IS A DENSER NEIGHBORHOOD BETTER TO AGE IN PLACE?
Abstract ID: 1293
Poster

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Population aging is one of the most significant demographic trend throughout the world. In the U.S. both the percentage and absolute number of older adults continue to grow more than ever before as population age 65 and older, which was 13 percent in 2010, is projected to increase by 20 percent in 2050. With growing number of older adults in our societies, the majorities of older adults and Baby Boomers prefer staying in their home or communities as they get older (AARP, 2016; Golant, 2015). While most of the communities have not originally planned for older people, some communities experience the rising concentrations of older adults who age in place. Whether the built environments where those populations reside in is age-friendly to meet the needs of aging population has been less studied compared to the increasing notions of the importance of the issue. This study intends to broaden the understanding of the characteristics of built environment and the amenities to age in place by examining whether denser neighborhoods have better amenities to age in place.

The study will first identify the neighborhoods with high concentrations of older adults with the U.S. Census data and cluster those neighborhoods in terms of density. The amenities will be measured with AARP Livability Index provided by AARP Public Policy Institute with its seven categories, housing, neighborhood, transportation, environment, health, engagement, and opportunity. The quantitative analysis will be conducted with these variables to represent amenities for aging in place. It is expected that the results will address the different amenity needs according to neighborhood types and geographic regions and draw further discussions on appropriate policy interventions to support growing aging populations.

References

Key Words:
older adults, age in place, aging, neighborhood density

CONTENDING WITH RESEGREGATION ON DETROIT’S ROAD TO REVITALIZATION
Abstract ID: 1298
Individual Paper Submission
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Too often, urban planning and public policy’s mechanisms of engagement perpetuate inequalities based on race and class. This paper investigates the critiques and responses of Detroit residents who want to be engaged in planning their city, but not on racist and classist terms. My ethnographic research places me as a participant observer among “critical collectives” in Detroit. These grassroots groups seek to magnify the voices of longtime Detroitters, whose needs and interests have long been ignored in the public sphere.

After decades of severe disinvestment, Detroit is experiencing capital investments concentrating in a few pockets of the city, leaving large areas to suffer further extreme neglect. The first two neighborhoods targeted for redevelopment have already seen the shift from predominantly black to white faces, as longtime working/poor residents have been dramatically and quietly displaced. Similar revitalization strategies now target four additional Detroit neighborhoods. In response, residents are gathering to demand that Detroit be rebuilt on an equitable and just basis. Resident leaders, who see that the City’s strategy of capital investment is contributing to Detroit’s resegregation, argue that the “New Detroit” is essentially producing a “New Jim Crow”. In opposition, they demand that longtime residents may continue living in their homes; access basic services; experience opportunities for work and recreation; and have a say in land use decisions. Essentially, they demand that current residents’ unmet basic needs not be exacerbated by the new growth regime, and that their city’s redevelopment include liberty and justice for all.

This paper studies Detroitters’ attempts to realize these demands at the grassroots and in the public sphere, in particular, how critical collectives who are contending with this generation’s racist and elitist urban policies can both make a mark in urban planning theory and history, and offer lessons for people facing resegregationist policies across the United States and globally.

References


Key Words:
Detroit, Community development, Radical Planning, Insurgent Planning, Justice

4PLANNING BEYOND THE GENDER BINARY
Abstract ID: 1380
Roundtable

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This roundtable will address LGBTQIA issues in the planning academy and planning profession. We are very interested in how urban planners address the intersections of gender expression and sexual orientation with planning forums and discourse on public space, queer space, cultural competencies, community development, and feminist methods.

References


Key Words: LGBT, Queer studies, Gender expression, Planning theory, Public space

THE SOCIAL COST OF “URBAN RENAISSANCE”: THE SPATIAL AND SOCIAL TRANSFORMATION OF SEATTLE’S QUEER DISTRICT

Abstract ID: 1382  
Individual Paper Submission

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The back-to-the-city trend in recent decades has triggered an era of “urban renaissance” in many large and desirable cities across the nation, including Seattle. This has brought with it new investments and populations into city neighborhoods that had seen decades of disinvestment. Seattle has been relying on upzoning of such neighborhoods to increase density and affordability, as part of a strategy emphasizing Smart Growth and sustainability. But this has triggered a process of rapid gentrification that is impacting affordability and diversity of uses and populations in numerous neighborhoods. In this work I present the case of the Pike/Pine section of Seattle’s Capitol Hill neighborhood. Initially the city’s auto row, Pike/Pine became an affordable mixed-use district in the 1920s. Through the turn of the 21st century, it evolved into a predominantly “poor but sexy” gay neighborhood, home to numerous “grungy” retail establishments, social organizations, and affordable housing. The upzoning of the neighborhood in 2004 unleashed a spate of development projects that threatened to impact the neighborhood character, despite the slowdown of the Great Recession. In response, the city created a special conservation overlay zone (PPCOD) in 2009 with the goal of maintaining the neighborhood character as defined by its built form, uses and populations. The PPCOD has already been twice amended, but still has not been entirely successful in slowing the spatial and social transformation of the neighborhood. On the other, they lack equity initiatives, and can be read as promoting both heteronormativity—privileging heterosexuals’ experiences over those of queer people—and homonormativity—privileging the needs of a narrow section of the queer community (typically, White, cis-gender, affluent, gay-identified men) over all others. The result is a rapidly sanitizing, assimilationist neighborhood that may feel more comfortable to a wider range of the region’s residents and generates more revenue for the city, but which alienates many long-term residents who are most in need of a place they can feel safe and welcome in the city.
WHY DON’T LATINOS VISIT STATE PARKS IN MINNESOTA?

Abstract ID: 1424
Individual Paper Submission

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Scientific evidence shows the health and social benefits of park visits. At the same time, park space search has documented disparities between White and Latino populations in health and park visits. This research shows that there is a need to address the disparity issue in park visits since it can help Latino populations reap much-needed health and social benefits implicit in park visits and provide better access for underrepresented populations in Minnesota. Past studies have provided some understanding of the constraints to and perceived benefits of urban/community park use among Latino population. However, there is little information on the actual experience of Latinos’ park visits nor is there information on the needs Latinos may have during park visits. By on the gathering of qualitative data through 6 focus groups totaling more than sixty participants from Southeastern Minnesota we ask why Latinos don't visit state parks? Our findings show the constraints and experiences Latinos face when considering a visit to state parks. We demonstrate that Latinos face a number of challenges and barriers in accessing state parks. These include transportation access, adequate information, way finding, language barriers, and culturally relevant programming, transportation and access to disposable income. Additionally we show that fear of public exposure has emerged as a result of the past electoral process. We find that Minnesota state parks are planned with a culturally homogenous understanding of recreation, one which hinders the potential increase of visits by Latinos and other underrepresented populations.

References

Key Words:
Latinos, State Parks, Programming, Race
PRE-ORGANIZED SESSION: MIGRANTS' SPACES AND RIGHTS TO/IN THE CITY: ORGANIZED BY THE MELLON HUMANITIES + URBANISM + DESIGN INITIATIVE AT PENN
Proposal ID 6: Abstracts 87, 88, 90, 91, 502

AL, Stefan [University of Pennsylvania] stefanal@design.upenn.edu, organizer
IRAZABAL, Clara [University of Missouri, Kansas City] irazabalzuritac@umkc.edu, proposed discussant

The roundtable will take an interdisciplinary and international comparative perspectives on the topic of migrants’ spaces and rights to/in the city, drawing on research from the United States, China, Lebanon and Spain. A central question will be how the interdisciplinary study of migrants’ spaces can enrich research as well as policy recommendations. As each of the panelists presents work from their own disciplinary background, including urban studies, urban design, urban planning, social and cultural analysis, social history, and law, we expect new insights will be gained on the topic.

Objectives:
- How the interdisciplinary study of migrants’ spaces can enrich research as well as policy recommendations.

PRE-ORGANIZED SESSION: BUILDING INCLUSIVE CITIES: LESSONS FROM HOUSTON, CHICAGO, AND WASHINGTON DC
Proposal ID 8: Abstracts 494, 495, 496, 497

PENDALL, Rolf [The Urban Institute] rpendall@urban.org, organizer
KNAAP, Elijah [University of Maryland] eknaap@umd.edu, proposed discussant

Segregation by race and income harms people, neighborhoods, and cities. Mounting evidence shows that growing up in distressed neighborhoods results in worse life outcomes in mental and physical health, education, income, and other factors. Additional evidence links metropolitan-level segregation with lower incomes for African Americans, lower educational attainment for both whites and African Americans, and higher homicide rates. This session explores the future prospects for overcoming segregation in three strikingly different metropolitan areas: Houston, Chicago, and Washington, DC. An overview paper (Pendall) will provide the empirical and theoretical background for the panel, providing the rationale and current national context for efforts that might advance local inclusion in coming years. Papers on Houston (Fulton and Shelton), Chicago (Novara and Khare), and Washington (Lung-Amam) will provide metropolitan examples. Together, the four papers will provide those attending a good basis for conversation about how local, state, and national efforts can build more inclusive cities and regions.

Objectives:
- Provide attendees with knowledge and examples of inclusive planning and community development approaches.
- Contribute to theoretical development of how diversity might affect urban development through deliberate action and organizing.
PRE-ORGANIZED SESSION: PAST, PRESENT AND FUTURE: THE EVOLUTION OF PUBLIC HOUSING IN THE U.S.
Proposal ID 11: Abstracts 163, 164, 165, 166

ALLEN, Ryan [University of Minnesota] allen650@umn.edu, organizer
KLEIT, Rachel [The Ohio State University] kleit.1@osu.edu, proposed discussant

In the midst of the Great Depression the U.S. government sought to stimulate the economy and house tens of thousands of struggling households with the construction of public housing. By the 1990s, the U.S. had grown increasingly skeptical of the public housing program and demolished a significant proportion of public housing in the name of deconcentrating poverty. Looking to the future, private capital is poised to play an increasingly important role in the maintenance of public housing. The set of papers included in this panel chronicles the evolution of public housing policies in the U.S. In tracing the evolution of public housing policies, the papers reflect on how the intended recipients of public housing have changed over time; the shifting roles of public, private and non-profit institutional actors in governing the provision of public housing; and how public housing policies have reacted to times of fiscal austerity. Together the papers help to describe the historical and ongoing tension between the market and the state when it comes to the provision of shelter for low income households in the U.S.

Objectives:
- Describe the evolution of public housing policy in the U.S.

PRE-ORGANIZED: RENTAL HOUSING: NEW DYNAMICS IN THE MARKET AND HOW TO MODERNIZE FEDERAL PROGRAMS
Proposal ID 14: Abstracts 379, 380, 381, 382, 383

SANCHEZ-MOYANO, Rocio [University of California, Berkeley] rsanchezmoyano@berkeley.edu, organizer
REINA, Vincent [University of Pennsylvania] vreina@upenn.edu, proposed discussant

What processes drive renter decisions, and what are the outcomes of these decisions on a neighborhood or metro level? Recent shifts in rental housing, driven by new economic conditions and technologies are changing metro markets across the US. This panel will include 3 papers exploring renter decisions and market outcomes. A paper on single-family renters and another on AirBnB study the decision-making of renter households. The AirBnB paper and another focusing on Craigslist examine these websites' effects on metro rental markets. Dramatic changes are an opportunity to rethink the major federal housing programs. The remaining 2 papers will investigate programmatic issues within LIHTC and Housing Choice Vouchers and propose methods of improving these programs.

Objectives:
- To understand significant shifts to rental markets in recent years.
- To understand pitfalls in publicly funded housing programs and examine potential solutions to these problems.

PRE-ORGANIZED SESSION: TRAUMA AND LOSS WITH PLANNING IN THE CENTER
Proposal ID 23: Abstracts 247, 248, 249, 250, 251

EHRENFEUCHT, Renia [University of New Mexico] rehrenfeucht@unm.edu, organizer, proposed discussant

Experiencing trauma from social or environmental processes, and the accompanying loss and anger, are collective experiences. Gentrification, redevelopment, systematic violence or ‘natural’ disasters can displace communities and cause profound personal and collective loss. People place memorials in public spaces, and take action to illuminate injustice and mark events in the collective consciousness. People’s trauma intersects with planning, and planners interact with trauma in varied ways. And yet, planners rarely consider the ways people collectively grieve or the way they articulate injustice or demand alternatives. Instead, they might mistake residents’ responses as resistance to change or become frustrated with residents who respond angrily to a proposal, or draw on collective histories to explain their resistance to a project. This session will focus on how planning interacts with trauma and includes five papers that focus on public spaces, plans and processes. The papers examine contexts where loss and grief are central, including disasters, resilience planning, job loss, systematic violence against Indigenous women, and public memorials.

Objectives:
- Examine how planners professionally respond to traumatic events
- Examine how people bring experiences with trauma and accompanying loss to planning processes

PRE-ORGANIZED SESSION: PLANNING FOR AUTHENTICITIES
Proposal ID 27: Abstracts 224, 226, 227, 228, 230

SHANNON, Brettany [University of Southern California] brettany@gmail.com, co-organizer, proposed co-discussant
TATE, Laura [Laura Tate Associates] laura@lauratate.ca, co-organizer, proposed co-discussant

For over a generation, scholars have questioned the city’s authenticity. The 90s global cities were “generic” (Koolhaas 1995), comprising increasingly indistinguishable architectures and culture. Critics identified the simulacra-formed (Baudrillard 1994) town centers, Disneyfied (Sorkin 1992), democracy-lacking public spaces. Understandably, today’s tendency is to seek authentic connections--to the past, each other, and ourselves--wherever we can. Authenticity's multi-disciplinary scholarship demonstrates the intersecting and countervailing ways that we perceive, adjudicate, and replicate the “authentic.” Contemporary community development underscores this confusion around and yet dedication to authenticity. Planners confront the question, “what is authentic?” hoping to make more place-specific, inclusive communities. In this first part of a two-session discussion, panelists approach authenticity from a theoretical perspective, exploring concepts of authenticity in the urban context. Together, the sessions ask, is authenticity the enemy of planning? And if so, how might we repair the relationship?

Objectives:
- discuss concepts of authenticity in the urban context
- compare and contrast the intersecting and countervailing theories
- demonstrate a spectrum of attitudes around urban authenticity exists
PRE-ORGANIZED SESSION: PRESERVING HOUSING IN DETROIT'S WEAK MARKET CONDITIONS
Proposal ID 37: Abstracts 373, 374, 376, 971

DEWAR, Margaret [University of Michigan] medewar@umich.edu, organizer
VIDAL, Avis [Wayne State University] a.vidal@wayne.edu, proposed discussant

Housing policy tends implicitly to assume stronger market conditions than exist in many cities that have lost large shares of population and employment. Very low housing values, lack of mortgage lending, inability of city government to enforce codes, considerable numbers of exploitive investors, and shortage of public subsidies threaten remaining decent housing. A substantial low-income population endures high housing cost burdens. Loss of households and falling incomes have left a large deteriorating housing stock whose blight undermines neighborhoods; demolition is slow. Rising values in small areas of such cities strengthen some housing stock but further threaten affordability for some residents. Existing housing programs and policies often have little impact or unintended consequences in this context. This session examines these issues with respect to Detroit, an extreme case of these conditions.

Objectives:
- Gain familiarity with housing market institutions.
- Learn about housing dynamics in very weak markets.
- Gain insights into assessment of housing programs and policies.

PRE-ORGANIZED SESSION: LOCAL CAUSES AND CONSEQUENCES OF GENTRIFICATION
Proposal ID 49: Abstracts 507, 508, 509, 510

GREENLEE, Andrew [University of Illinois at Urbana-Champaign] agreen4@illinois.edu, organizer
MONKKONEN, Paavo [UCLA] paavo.monkkonen@ucla.edu, proposed discussant

As both a process and a phenomenon, gentrification has been studied extensively from multiple disciplinary perspectives, yet, there are still aspects that are lacking in conceptualization and analysis. This session draws upon local cases to examine the causes and outcomes from gentrification processes. These papers question how local institutions (e.g. schools, local governments, and capital-granting institutions), housing markets, and individual consumers mediate the gentrification process. Drawing from multiple local cases, this panel examines the evolving role of local actors in producing the conditions for gentrification, and also examines the consequences of these actions for local communities and especially for those individuals facing displacement as a result of gentrification. Taken together, our papers also engage with the broader question of linkages between mobility and neighborhood opportunity. How do gentrification processes both create and constrain economic opportunities? How do such processes influence longer-term prospects for those households facing displacement as a result of market-driven neighborhood change?

Objectives:
- Describe patterns of gentrification at the neighborhood level
- Provide insight on emerging tools for analyzing the impacts of gentrification
- Discuss local policy tools for addressing the consequences of gentrification for local populations
This panel considers the management of informality in housing and urban development. When laws fail to structure space as intended, planning often diagnoses a technical problem: inadequate policy design, poor enforcement, or a lack of state capacity. However, recent planning scholarship rethinks the relationships between the state, law and space. Informality is theorized as territorialized practices of power (Roy 2009) or a mode of peripheral urbanization (Caldeira 2016). While “high end informality” (Roy 2005, 149) is celebrated, the spatial practices of the poor are pathologized yet tacitly tolerated (Yiftachel 2009, 89). While these dynamics are often imagined as restricted to non-western cities, the US housing market is marked by “non-compliant, non-enforced and deregulated” dynamics (Durst and Wegmann 2017, 1). Examining an understudied dynamic in planning, our mixed-methods and ethnographic papers argue that both citizens and state actors utilize the condition of informality in strategic ways to accomplish goals, set limits, structure space, and manage conflict.

Objectives:
- Present new research on strategies for managing informality in housing and urban development
- Help planners understand how citizens and state actors alike utilize the condition of informality in strategic ways to accomplish goals, set limits, structure space, and manage conflict

This panel explores the establishment and ongoing practices of land banks and community land trusts operating in the post-recession climate. How do collective land ownership organizations address widespread abandonment, and the need for affordable housing in the context of fiscal austerity and entrepreneurial strategies of land development? Community Land Trusts (CLTs) and Land Banks are designed to produce public benefit through collective ownership and control of land. The recession of 2008 created strategic opportunities for such organizations. For CLTs it created the opportunity to acquire land at lower values, create permanently affordable housing and return foreclosed homes to occupancy (Gass, 2010; Temple, 2011). Land Banks have grown as owners of last resort (Alexander 2015). In conditions of heavy vacancy and abandonment land banks acquire, remediate maintain and hold properties until new uses can be found. Drawing on a wide variety geographic policy and economic climates, the papers presented on this panel explore the paradoxical coexistence of development pressure and abandonment.

Objectives:
- To learn about collective land ownership strategies in a variety of institutional, political, geographic and economic contexts.
This session brings together a collection of studies examining the ways in which racialized communities are contesting normalized planning processes. The authors bring together diverse perspectives on local planning conflict in communities of color that include issues of land use, climate change, migration and economic development in American regions ranging from the Northwest, California, and New York to the Southeast. Taken together the studies propose radical alternatives for future planning practices, as modeled by low-income and Latino, African American and Southeast Asian American residents who have been traditionally disenfranchised from the planning process.

Objectives:
- how to trouble shoot the traditional planning process to incorporate communities of color in a more radical way.
- how to center alternative or informal public engagement in the planning practice in vulnerable or low-income communities

The study of “place attachment” draws scholarly attention from a variety of fields, such as geography, sociology, and psychology, to the study of urban spaces and why people attach meaning to them. Many urban planning researchers have focused on how cultural practices build attachment to new places (Altman and Low 1992, Loukaitou-Sideris 2002, Loukaitou-Sideris and Ehrenreucht 2009, Main 2012, Pellow 1992), a useful perspective for understanding how immigrant populations settling in gateway communities create ethnic enclaves. More recent scholarly work has applied theories of place attachment to community development in order to understand how actions and interventions can influence an entire community’s sense of place attachment, leading to collective action and the development of social capital (Mihaylov and Perkins 2014). Yet, if place attachment is culturally created, how can we build place attachment in areas with multiple overlapping cultures?

Using a Los Angeles multi-ethnic district—Wilshire Center--as a case study, I seek to respond to this research question, by first examining how some multi-ethnic communities perceive of and experience shared urban spaces; to what aspects of their neighborhood they feel the strongest sense of place attachment; and whether this varies based upon their ethnic background. To do so, I employ 58 surveys and cognitive mapping exercises, as well as public space analyses and participant-observation over a period of approximately two years. With numerous overlapping and intersecting ethnic communities, Central Los Angeles is an ideal site to help us understand the intersection of place attachment and community development in multi-ethnic urban areas as it concentrates significant populations of
Koreans, Guatemalans, Oaxacans, Thais, and Bangladeshis within a five-mile radius. The residential populations, and their ethnic restaurants, bakeries, cafes, and specialty supermarkets highly overlap.

I find that particular places, namely ethnic markets and small businesses, are occupied or used by multiple ethnic populations with high frequency, and are considered important cultural assets for individuals of all backgrounds. In addition, I suggest new ways of interpreting spatialized cultural identities, and draw attention to the spaces of everyday life—the supermarket, corner store, the sidewalk—as important sites for social and cultural exchange. Lastly, these findings raise questions regarding how to interpret cognitive mapping exercises. While pioneers of this methodology (Lynch 1960) have argued that similarly drawn cognitive maps are indicative of an environment that is highly “imageable”, my research demonstrate the need to consider the different ways in which diverse groups of residents perceive and experience their neighborhood in terms of both geography and culture. How and where community stakeholder experience the culture of their community provides new insight into what components of the social and physical landscape should be supported by planners and community development practitioners.

References

Key Words:
place attachment, community development, ethnic enclave, cognitive mapping

HISTORIC PRESERVATION, COMMUNITY DEVELOPMENT, AND SCHOOL CLOSURES: A CASE STUDY OF A TEACHER'S VILLAGE IN CHICAGO
Abstract ID: 10
Individual Paper Submission

GARCIA ZAMBRANA, Ivis [University of Utah] ivis.garcia@gmail.com, presenting author

The objective of this paper is to examine a community planning approach to urban conservation and rehabilitation. In Chicago, like in many other cities across the U.S., there has been an unequal distribution of school closures in minority neighborhoods with higher than average poverty rates. The closure of school buildings, most with historical value, have destabilizing effects in communities including the loss of public assets, vacancies, and disinvestment. In neighborhoods experiencing rent increases, such as with Humboldt Park, historic properties can provide an opportunity to develop affordable housing and avoid displacement. This case study seeks to demonstrate how a grassroots organization in a gentrifying neighborhood created their own participatory planning process to obtain a surplus school building and re-use it as a “Teacher’s Village.” The re-use plan includes affordable housing targeted primarily to school teachers, office space dedicated to educational-community related uses, a café open to the public, and a number of other amenities. The overall development plan seeks to
make significant upgrades to allow the building to operate sustainably for years to come. The building is expected to be placed on the National Register of Historic Places and will require a unique and sensitive approach to creating an inspiring, collaborative, and community-oriented development. The methodology employed in this article is based on Participatory Action Research and includes field notes and interviews. The researcher engaged as a participant-observer and committee member for about 1.5 years with “Community As A Campus”—the initiative dedicated to envisioning and planning the redevelopment project.

References


Key Words:
Community Development, Gentrification, Historic Preservation, School closure, Affordable housing

BANK ADAPTATION TO NEIGHBORHOOD CHANGE: MORTGAGE LENDING AND THE COMMUNITY REINVESTMENT ACT

Abstract ID: 60
Individual Paper Submission

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The Community Reinvestment Act (CRA) was enacted to help promote credit flows to neighborhoods that had historically been disinvested, in that less credit was flowing into them relative to the level of deposits associated with their residents. The regulations that implement the CRA define locations that have historically been invested based in part upon whether their median incomes are low or moderate relative to the median income of the metropolitan area in which they are located. Because median income is measured using the decennial Census, these designations remain fixed for an entire decade. However, neighborhoods change over the course of a decade, with some improving and others remaining the same or falling behind relative to the metropolitan area. This mismatch raises an interesting behavioral question: do lending patterns among institutions covered by the CRA vary systematically across CRA-eligible locations, such that those doing better during the decade receive increasingly more credit? Further, if variation is observed, is there evidence that points to particular mechanisms as being particularly important drivers for the patterns?

This paper seeks to answer these questions. Using Home Mortgage Disclosure Act (HMDA) data files from 1995 to 2011 and Regression Discontinuity Design (RDD), we track how institutions vary their lending patterns as neighborhoods evolve over the decade. We place particular emphasis on “moving-up neighborhoods,” which we define as tracts identified as low- and moderate-income (LMI) in a
particular Census but not in the successive Census. These tracts represent neighborhoods that have experienced improvements during the decade. We explore whether either of two possible behavioral channels – adaptation and self-reinforcement – explains the patterns. Adaptation refers to the possibility that banking institutions observe the neighborhood changes as they are occurring and incorporate them into their loan decision process. This mechanism implies that lenders act to reduce default risk while complying with the CRA by monitoring the changes in neighborhood quality and then strategically shifting their lending to moving-up neighborhoods. Self-reinforcement could explain the selective lending patterns if previous loan origination patterns shape subsequent ones, either through information externalities or other ways, and if mortgage lending has positive impacts on neighborhoods. This mechanism requires no learning, adaptation, or strategic behavior on the part of banks.

Our results suggest that banking institutions adapt to local conditions to take advantage of changes in CRA-eligible neighborhoods that make them more attractive from a credit risk perspective. Specifically, we find that, even after controlling for individual and neighborhood characteristics, and even within a narrow range around the income threshold used under the CRA, loan applications in moving-up communities tend to have a greater probability of getting accepted by banks, particularly when the communities are located within the CRA assessment areas of banking institutions. This finding introduces further nuance into our understanding of the lending behavior of banking institutions and raises some important and difficult questions about how one should assess the success of the CRA in providing access to credit for underserved groups – questions that policymakers should consider as they contemplate revisions to the regulation.

References

Key Words:
Mortgage Lending, Bank Adaptation, Neighborhood Change, Community Reinvestment Act

CHINA'S MIGRANTS' SPACES: URBAN VILLAGES AND CITY DEVELOPMENT
Abstract ID: 87
Pre-O rganized Session: Migrants' Spaces and Rights to/in the City: Organized by the Mellon Humanities + Urbanism + Design Initiative at Penn

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Chinese urban villages, an informal form of urbanism, have created surprising pedestrian-oriented and mixed-use urban conditions — conditions that the formal city, restrained by dated zoning regulations that advantages vehicular transportation and mono-use, could not achieve.

The emergence and proliferation of these urban villages is a unique phenomenon of urban China that occurs in many regions and in different forms, as a consequence of the rapid urbanization that has resulted from land reform, the dual urban and rural land ownership and management system, and the large influx of an underprivileged migrant population. Literally “villages within the city,” or chengzhongcun, these are previously agricultural villages that have been engulfed by the city. These villages have too become “urban,” but in their own way, with buildings so close to another they are dubbed “handshake houses” – you can literally reach out from one building to reach over and shake hands with your neighbor. Although it is easy to misperceive these villages as slums, a closer look reveals that they offer a vital mixed-use, spatially diverse and pedestrian alternative to the prevailing car-oriented monotonous modernist-planning paradigm in China.

However, these countless villages wedged within urban areas and now being “redeveloped,” in what is the world’s largest urban demolition. But the poor condition of individual buildings in the urban village does not justify the eradication of the entire village area. As in any city, buildings come and go, but streets, open spaces, and everything else that gives long-term identity to a place can be sustained and even integrated into the future of the city. They could be treated like the older historical villages that some Western cities have been smart to incorporate in their greater urban fabric – places like Gràcia in Barcelona, or “the Village” in New York City. Their irregular and small grain of urban fabric provides a welcome variety to the larger homogeneous grid of the formal city, whereas the small lots provide opportunities to smaller businesses.

Finally, the Chinese government is presently undertaking urban design guideline reform that aims to correct the mistakes of the ubiquitous gated super-blocks in cities, and aspires to mixed-use, pedestrian-friendly environments. This paper argues for the value of urban villages as places and for their incorporation into cities rather than demolition, and suggests that there are lessons in the urban villages for the formation of China’s new urban design guidelines.

References

Key Words:
urban villages, informal settlements, urban design, migrants’ spaces

THE SANCTUARY CITY: SOCIAL MOVEMENTS, MIGRATION AND DEVELOPMENT, C.1979-PRESENT
Abstract ID: 88
Pre-Organized Session: Migrants' Spaces and Rights to/in the City: Organized by the Mellon Humanities + Urbanism + Design Initiative at Penn

VITIELLO, Domenic [University of Pennsylvania] vitiello@design.upenn.edu, presenting author
This paper and presentation will trace the variety of social movements and civil society institutions that coalesced in the Sanctuary Movements of the 1980s and today, examining their roles in and relationships with local and transnational community and economic development. Focusing on Philadelphia and its links to other regions in the U.S., Mexico, and Central America, the paper and presentation will compare the sanctuary movements and sanctuary city policies and debates of the two eras. The paper and presentation will explore the diverse meanings of "sanctuary" in recent decades, an idea and ideal that has variously meant: local law enforcement non-cooperation in immigration detention and deportation; city services for people in the U.S. illegally; churches and synagogues sheltering those people; more generally, a decent place to live with personal and economic security; for Central American refugees of the 1980s, a place from which to work for peace at home; and then and now, various visions and initiatives for human rights and justice. In both eras, the paper and presentation will examine the ways in which these ideas and the work of Sanctuary and Solidarity and Central Americans' own movements intersected with debates and visions of urban revitalization in the U.S. and urban and rural development in Mexico and Central America.

This paper and presentation are drawn from the first and last chapters of the book I am presently writing, titled _The Sanctuary City_, which also examines Southeast Asian, Liberian, and Arab communities in the Philadelphia region. It is part of a larger literature in urban and planning history, community development, and allied social sciences that is theorizing and tracing the relationships between migration, urbanization, and development at multiple scales (local, regional, transnational, etc.).

References
- Maria Cristina Garcia, Seeking Refuge: Central American Migration to Mexico, the United States, and Canada (Berkeley: University of California Press, 2006).

Key Words: immigration, community development, transnational, sanctuary

IMMIGRANT INCLUSIVE COMMUNITIES
Abstract ID: 90
Pre-Organized Session: Migrants' Spaces and Rights to/in the City: Organized by the Mellon Humanities + Urbanism + Design Initiative at Penn

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As ever larger numbers of people live outside the country of their birth and the world is increasingly urbanized, cities across the globe are being reshaped by immigrants. The increasing share of foreign born residents presents opportunities for local governments, and also challenges of social and political incorporation. Urban uprisings in and around London, Paris, Stockholm, Singapore and elsewhere in the past decade have brought international media attention to the challenges of immigrant integration, while anti-immigrant riots in Moscow, Johannesburg, Calais, Tel Aviv, Rome, and other cities have highlighted resistance by urban residents to the arrival of the foreign born. The increasing heterogeneity of cities has the potential to exacerbate urban fragmentation and entrench categorical inequalities based
on race, religion, or national origin. Nevertheless, cities have long been comparatively more diverse and inclusive than their respective nation-states, spaces where marginalized groups have created spaces of refuge and of empowerment. How can urban policymakers ensure that even in times of economic uncertainty and rapid demographic change cities can become both more inclusive and more just for all, not more unequal and divided?

This paper presents research on two fundamental questions regarding cities and immigrants: What policies can cities enact to include immigrants in local social, economic, and political life? And what distinguishes those cities that adopt inclusionary policies from those that enact exclusionary ones?

The research is based on a decade of interviews and participant observation in two small inclusionary cities in the Rustbelt and the Midwest together with quantitative analysis of an original dataset of cities nationwide that enacted local policies intended to support and include immigrant residents.

Cities across the country have implemented policies intended to facilitate immigrant incorporation, including a wave of new policies in the past year. The most well-known policies are “sanctuary” policies assuring immigrants that local government employees will not inquire about immigration status or report unauthorized immigrants to the Department of Homeland Security unless they are accused of a crime, encouraging immigrants to make the most of city services and to report crimes (Ridgley 2008). A variety of other policies exist as well, including local identification cards to encourage access to municipal resources, non-citizen voting in local elections, laws making wage theft a local crime and encouraging local police to investigate reports of non-payment of wages, funding for local immigration commissions to support immigrant integration, and a host of other policies related to language access, healthcare access, and more (De Grauw 2011; Gleeson 2009; Harwood 2005; Sandoval 2014). Together this patchwork of local policies confer meaningful social, economic, and political rights for immigrant residents, facilitate equal incorporation, and improve access to opportunity.

The cities that have enacted these policies are diverse, but differ in significant ways from those cities that enacted exclusionary policies or no policies at all. Cities that are larger, have a higher proportion of residents who are college graduates, and a lower share of voters who voted for the Republican party are more likely to enact inclusionary policies than other cities. Interestingly, cities that experienced larger increases in unemployment are also more likely to adopt inclusionary policies than other cities. The findings of the qualitative research suggests that local leaders in cities experiencing rapid immigration can help create a supportive climate for immigrant incorporation by 1) fostering the creation of a local collective identity rooted in shared, inclusive values; 2) supporting local institutions such as schools, hospitals, and police departments in setting community-wide inclusionary norms; and 3) recognizing the significant role of both new and established non-profits in developing immigrant leaders and creating a bridge between immigrant and native-born communities.

References

Popular media, gray reports, and academic research alike typically conceptualize of refugees as a relatively monolithic group of destitute, powerless and passive aid recipients. Many of these writings depict refugees as mere victims of external pressures that have forcefully displaced them and exposed them to the violence of host communities, often predicting the looming threat of explosive conditions. In these representations, refugees endure their reality; they rarely participate in its making. In contrast, I argue on the basis of case-studies conducted across several neighborhoods of Beirut (Lebanon) since the outbreak of the war in Syria in 2012 that the majority of refugees in this urban context have developed an impressive competence at learning, negotiating, and transforming the city. Indeed, Syrian refugees in Beirut have accessed shelter, work and other basic ingredients of everyday life through market channels (e.g. employment, entrepreneurial initiatives, housing markets), by navigating shared transportation systems, and more generally, by integrated the largely informal urbanity rather than through reliance on relief agencies. In securing ingredients of livelihood, I further show that refugees have relied on networks of social solidarity that often span across the typically divisive categories of refugee/host community to connect groups of Syrian refugees with members of various vulnerable social and religious communities including foreign migrant workers.

In light of the reality of protracted refugee conditions which UNHCR estimates to extend to the majority of the 65 million global refugee population, most of whom reside in urban conditions, these findings are significant because they contribute to the growing recognition that a critical ingredient of successful refugee responses is their ability to build on the capacities and know-how of refugees and to extend and protect the informal institutions on which refugees rely. To this end, there is a lot to learn from research in planning theory, particularly theorizations of the informal economy that have recognized and capitalized on the value of informal norms and institutions in both housing and labor markets.

References
HOME TIES: THE EFFECTS AND CONSEQUENCES OF ETHNIC NEIGHBORHOODS AND RESOURCES ON HOUSING CHOICE
Abstract ID: 106
Individual Paper Submission

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As cities and suburbs become more diverse, they remain racially segregated. Racial segregation influences homeowner access to various opportunities, including employment, education, and public amenities. Homeownership is also important to examine because it is the largest asset for most families, particularly racial minorities (Kuebler & Rugh, 2013). Previous studies have also found that homes in minority neighborhoods have lower home values than comparable white neighborhoods (for example, see Flippen, 2004). Foundational theories have also described ethnic neighborhoods as either an intermediary step to whiter neighborhoods with improved opportunities or economically deficient (Massey & Denton, 1988; Wilson, 1987).

Thus, planners and researchers oftentimes discuss the deleterious effects of segregation. However, these theories do not explain why minorities live in segregated neighborhoods as they improve their socioeconomic status and experience fewer discriminatory practices. Large metropolitan areas have seen the rise of upper- and middle-class Latino and Asian neighborhoods, or “resurgent neighborhoods.”

Resurgent neighborhoods exist because racial minorities have an in-group preference that is separate from prejudice against another group or preserving their group status (Wen et al., 2009). In other words, racial minorities may have the economic means to live in a white neighborhood, but instead choose to live with co-racial members. Resurgent neighborhoods are also growing because new immigrants learn about ethnic neighborhoods from family and can afford housing in suburban, more expensive areas. Furthermore, these neighborhoods offer residents a reprieve from white discrimination. Lastly, previous studies have found that resurgent neighborhoods offer educational and health benefits.

I ask, do resurgent neighborhoods provide resources when residents experience housing difficulties? This paper is the second part of a multiple method project. The first part used multivariate logit regression models, and found that Los Angeles homeowners in Asian resurgent neighborhoods were statistically less likely to default or foreclose than homeowners in integrated neighborhoods. This study expands on the first part, and uses interviews with Los Angeles Latinos and Asian Americans who live in neighboring resurgent and white neighborhoods to understand how homeowners decide where to live. The interviewees also described what resources they have used when experiencing housing challenges, including social networks and family.

The findings illuminate multiple factors that help to explain the persistence of segregation patterns and the implications for wealth. The study also demonstrates the importance of disentangling class and racial segregation in neighborhood choice. While neighborhood segregation has historically been associated with negative housing outcomes, it depends on the class and background of the neighborhood. By using a more comprehensive analysis of the intersections between race and class, planners can work to develop cities that are inclusive, support wealth-building, and access to socioeconomic resources.
DOES VACANT LAND ENCOURAGE GENTRIFICATION? THE CHARACTERISTICS OF VACANT LAND IN GENTRIFYING NEIGHBORHOODS.

Abstract ID: 113
Individual Paper Submission

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While a growing amount of research has been conducted on why vacant land can emerge in urban areas on a municipal scale, the long-term effects of vacant properties on neighborhoods are still not fully understood. Traditional views on urban vacancies have been concerned primarily with the negative influences on safety, property values, and health issues; more recent views attempt to shed light on the potential for greening and stabilizing vacant properties in an effort to better manage urban decline. The conventional negative view on vacant lots is not always true as they can also be thought of as opportunities for growing cities. However, certain types of vacant lands (e.g. green space and treated brownfields) can have the potential to encourage neighborhood gentrification (Eckerd 2010, Curran & Hamilton 2012). Marcuse (1985) posits that abandonment is the opposite of gentrification, while Morckel (2013) suggests that a certain amount of neighborhood abandonment is actually required to catalyze gentrification. This study examines these opposing views and attempts to answer if the repurposing of vacant land can be an opportunity for disadvantaged neighborhoods, or if certain types of vacant land tend to encourage gentrification.

This study hypothesizes that significant clusters of vacant properties are positively associated with neighborhood gentrification. To examine this hypothesis, Minneapolis, MN was chosen as a study area, examining the period between 2010 and 2015. The analytical strategy includes two different phases: 1) examination of how the clusters of vacant land are associated with the degree of gentrification in a neighborhood and 2) examination of what characteristics of gentrifying neighborhood induce clustering of certain vacancy types.
The accumulation of neighborhood vacant land is measured by the degree of clustering driven from Getis-ord Gi* statistics. Vacant lands are classified based on ownership, land use, and parcel size characteristics. Gentrification is operationally measured using the average education and professional levels by occupying neighborhood populations (Eckerd 2010) to gauge the influx of middle-class. The spillover effect of gentrification on nearby areas is measured with spatially lagged terms in the models. Also, to control other catalysts of gentrification, driving forces of gentrification such as proximity to jobs, amenity, and roads are included in the models. A spatial model is used for the first part to capture the spillover effect on not only gentrification but amenities of nearby areas. Then, the odds of a neighborhood to have significantly clustered vacant lots and is measured using Logit models constructed for each type of vacancy.

Preliminary results suggest that, clustered vacant lands tend to be found in low-income minority neighborhoods showing potential to gentrify. When the type of vacancy was specified, privately tax-paying vacant parcels tended to have shorter turnover, promoting more development activities. This study extends vacant land research into the issues of social equity including the potential future displacement that disadvantaged neighborhoods may incur the existence of prevailing types of vacant properties. When local governments choose to demolish or green an abandoned property, the potential impact on existing and remaining neighborhood populations need to be taken into deeper consideration.

References


Key Words:
Urban vacant land, Gentrification, Neighborhood change

THE COMPLEXITY OF AFFORDABLE HOUSING STIGMA: A FACTOR ANALYSIS APPROACH
Abstract ID: 120
Individual Paper Submission

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The term "affordable housing" has many stigmas attached to it and to its residents (Belden and Russonello, 2003; Tighe, 2010, 2012). Although research shows that these stigmas are false (Nguyen, 2005), not-in-my-back-yard (NIMBY) activists still use them to try to keep affordable housing out of their neighborhood (Galster, Tatian, Santiago, Pettit, & Smith, 2003). This study sought to develop a measure of affordable housing stigma and to establish its factor structure and psychometric properties.
We developed a 28-item questionnaire around the seven stigmas of affordable housing (maintenance, crime, property values, aesthetics, residents, physical structure, and the program as a giveaway). 295 U.S. homeowners (113 men, 175 women, and 7 did not indicate their gender) completed the on-line questionnaire. We first ran a confirmatory factor analysis, which confirmed the seven-factor structure in the literature, but pointed to the complexity and interconnectedness of affordable housing stigma. We then ran an exploratory factor analysis, which suggested a 4-factor structure with strong internal consistency. The results suggest that housing design may alleviate affordable housing stigma as we found it associated with perceived property value, maintenance, and crime. These findings provide developers, planners, and advocates with a more holistic view about affordable housing stigma, thereby allowing them to use this information to help create more inclusive communities.

References


Key Words:
low-income housing, factor analysis, opposition, NIMBY

SPATIAL CLUSTERING OF HOUSING ABANDONMENT AND DEMOLITION IN SHRINKING CITIES: A CASE STUDY IN BUFFALO, NEW YORK
Abstract ID: 144
Individual Paper Submission

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Problem Statement:
Building on existing research on housing abandonment and spatial statistics, this study will identify spatial patterns of abandonment and demolition using an integrative framework including visualization and spatial statistics on cluster locations, magnitudes and shapes. In addition, we examine and demonstrate how the clusters emerged, spread, persisted, or changed in the city of Buffalo in space and time: over the 10-year period from 2004 to 2013. The results help to understand 1) the influence of abandoned homes on future abandonment and whether abandonment begets abandonment; and 2) the impact of investment or intervention such as demolition on neighborhood housing sale prices. The findings can help to provide policy makers with insights on where to spend resources in a shrinking city like Buffalo and identify potential interventions and appropriate policies. This investigation on spatial patterns of abandonment and demolition can also help to generate hypotheses to specify realistic and testable explanations for the patterns and shed light on uncovering the environmental backcloth that impacted locations of abandonment and demolition to tailor redevelopment strategies.
Background:
Many studies have shown the negative impact of abandoned houses on neighborhoods such as decreased property values and higher crime rates (Cohen, 2001). Cities in decline on the America’s Rust Belt have been using strategies such as demolition, rehabilitation or creative reuse to deal with the abandonment problems (Mallach, 2012). With limited resources to invest, a critical question is how and where to target scarce resources to be more effective and proactive. Whether the question is to invest in the neighborhoods with high concentration of abandonment to stop abandonment from spreading or to invest in the neighborhoods with currently low abandonment concentration, it is useful to know whether there are abandonment clusters, where the clusters are, and when and how they spread over the years so as to help understand possible contributing factors from the social, built, and physical environments. Little has been done, however, in exploring spatial clustering for housing abandonment and demolition. “Despite a prevailing belief that abandoned houses cluster and spread, there is limited empirical evidence demonstrating this” (Morckel, 2014, p1).

Spatial cluster analysis has utility for geographically pinpointing locations of statistically significant clusters. It has been long assumed that abandonment clusters and spreads from those clusters, and a few studies have suggested evidence of abandoned properties clustered or being confined to specific neighborhoods or areas (Accordino and Johnson, 2000). Only when clusters were statistically tested and located when regression models on abandonment can be better interpreted and characteristics in its social, built and physical environments can be studied; both are important to understanding why and how characteristics in a neighborhood influence the probability of abandonment and what strategies may be more effective to fight blight. In addition, Morckel (2014) suggested future studies to demonstrate spreading with longitude data.

Method:
The City of Buffalo is selected as the study area because it represents a critical case study of the patterns of abandonment and demolition. U.S. Census 2010 shows that the vacancy rate of the City is 15.7%, which is among the top ten cities with highest vacancy rates and populations over 250,000. To alleviate the blight, the City adopted an aggressive demolition plan. The total demolition cost per year in 2006 and 2007 was almost doubled than previous years and increased by 4 times from 2008 to 2010.

This study employed an integrative framework that include visualization, spatial agglomerative clustering, and local Moran’s I test to explore the spatial scale of clustering. We will use global and local tests to determine whether abandonment and demolition are spatially autocorrelated using Moran’s I, and identify the locations of hot and cold spots using local tests LISA. This approach helps to gain a better understanding of spatial variation and documenting cluster change and persistence. It also helps to yield a detailed description of the morphology of statistically significant geographic variation patterns for abandonment and demolition.

References
Legacy cities struggle to balance the needs of demolition and vacant land management arising from population shrinkage with desires to facilitate reinvestment in their aging built environments. The rich historic fabric found in legacy cities adds another layer of complexity because preservation is inherently costly, yet buildings embody important cultural and heritage characteristics, including the industrial history of manufacturing and production in these cities. As a financing mechanism for historic preservation, the historic tax credit program is a tool for neighborhood reinvestment that plays an important role in supporting the preservation and adaptive reuse of buildings nationwide, but particularly in the weak markets of legacy/shrinking cities (ACHP, 2014). Theories of neighborhood change rooted in bid-rent models argue historic preservation and related incentive programs result in the gentrification of neighborhoods through the displacement of low-income households and influx of higher income residents (Smith, 1998). Recent research shows RTC investments occur across a wide range of legacy city neighborhoods, including those that are low- and very-low income (Ryberg-Webster & Kinahan, 2016). The existing literature examining the social and political contexts of urban neighborhood preservation reveals these approaches shape neighborhood changes through their associated decision-making processes, key actors, and organizational structures (Saito, 2009; Ryberg, 2011; Zhang, 2011). However, despite its position as “the largest federal program specifically supporting historic preservation” (NPS, 2015), analysis of the RTC as a form of urban neighborhood preservation and questions of its role in processes of neighborhood change is absent from the discourse. This research seeks to fill this gap by asking: how do actors in differing neighborhood contexts (high distress vs. stable) use historic tax credits as a preservation and reinvestment tool? Using a comparative case study approach, this paper analyzes federal RTC projects in two St. Louis neighborhoods—one stable and one distressed – to understand how historic preservation contributes to processes of neighborhood change. Data from 20 key person interviews and document analysis reveal that RTC projects provide needed housing and commercial space in both stable and distressed neighborhoods and help communities reconnect to the cultural values embodied within their neighborhood’s built environment. This work provides important insights related to the both the opportunities and constraints of employing historic preservation and means of neighborhood revitalization and stabilization in legacy cities, and argues for changes to the federal RTC program that would increase its flexibility to better support the needs of distressed legacy city neighborhoods.

References
IS DENSITY AN ANTIDOTE TO THE HIGH COST OF HOUSING IN RISING MARKETS?

Abstract ID: 162
Individual Paper Submission

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The dream of owning a home is ever further out of reach for many Americans as home prices have been rising quickly in many cities while the middle-class incomes have been stagnant. An increasing number of studies point to restrictive land use regulations, particularly exclusive low-density zoning as an important cause of high housing cost, worsening housing affordability, and social segregation (Glaeser & Gyourko, 2003; Lens & Monkkonen, 2016; Pendall, 2000). Most of the prior studies, however, have relied on coarsely constructed regulatory indices to examine the effects of zoning regulations on housing supply or home prices at aggregate spatial scales (Knaap et al., 2007). They offer little information about the heterogeneous patterns of zoning within a local market and the complex mechanisms through which density zoning influences housing cost. This study attempts to partially fill this gap by conducting a case study in Portland, Oregon by analyzing and quantifying the effects of zoning and development density on the sales prices of both new and existing single-family homes at the parcel level. The purpose of this study is to provide a micro-level perspective on the mechanisms through which density zoning influences the cost of single-family homes in a rising market.

This analysis yields four major findings. First, it confirms that residential developers tend to build more higher-density homes when zoning codes provide them the flexibility to do so. But there is also huge heterogeneity in development density within each specific residential zoning category as many other factors are also at work in determining residential development density. Second, residential density at the micro-level measured as lot size may influence housing prices directly through determining land acquisition cost and indirectly by limiting building size. Its general effect on housing cost tends to be weaker for new homes than existing homes. Third, growing home size weakens the effect of higher-density in reducing housing cost. A prominent trend in Portland’s housing market is that single-family homes are getting bigger while being built on smaller lots. The quick increase of floor area in single-family homes has contributed to the worsening home affordability and such an effect has not been fully counteracted by dwindling lot size. Lastly, the effectiveness of density as a tool to improve home affordability may be further weakened when home buyers shift their preference toward more urban and compact development. As shown in this study, home buyers in Portland demonstrate a strong preference for single-family homes that are proximate to the city center and willingness to pay a premium for living
in denser neighborhoods. These shifting housing consumption patterns represent a welcome trend for their potential environmental benefits, but they may also cause a diminishing role of density in determining affordability. In conclusion, liberating exclusive low-density zoning may still help to alleviate the upward pressure on housing prices by increasing housing supply at the aggregate level, but its effect at the micro-level may be weaker than expected, particularly in liberal and expensive cities where home buyers are more likely to accept compact development.

References


Key Words:
density, zoning, land use regulation, home price, home affordability

THE NEW DEAL, LEGISLATIVE INTENT AND THE FIRST PUBLIC HOUSING RESIDENTS IN NEW YORK CITY

Abstract ID: 163
Pre-O rganized Session: Past, Present and Future: The Evolution of Public Housing in the U.S.

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Between 1934 and the time of the 1940 Census (April 1, 1940), the U.S government built and leased 30,151 units of public housing across 41 cities in 22 different states and the U.S. Virgin Islands (U.S. Department of the Interior, 2004). Built under the auspices of Roosevelt’s Public Works Administration (PWA) New Deal program and the fledgling U.S. Housing Authority (USHA) created by the Housing Act of 1937, this wide geographic distribution indicates an attempt to spread this housing across much of the U.S. Though this early public housing represents a shadow of the tens of thousands of public housing units built in the following decades, it is notable because it represents the first foray of the federal government into building and operating housing in U.S. history.

The legislative intent of the New Deal housing program was two-fold: 1) to stimulate the economy by injecting money into the construction industry and 2) to provide secure and affordable housing for lower-income households, especially those negatively affected by the Great Depression (the so-called “submerged middle class”) (Friedman, 1966). With a limited supply of public housing built in these early years, housing managers could carefully screen for tenants from the thousands of households that applied (Anbinder, 2016; Marcuse, 1986). The fact that rents for these units assumed residents were employed in working class jobs indicates that program administrators did not intend for the housing to be inhabited by the neediest residents (Friedman, 1966; Vale, 2013).

Aside from anecdotal accounts and the general criteria for tenant selection provided to housing...
managers, we know little detail about the early public housing tenants who benefited from this housing. This gap in our knowledge suggests two related research questions. First, how did the first residents of public housing compare to the pool of households eligible to receive the housing? Second, what affect did these residents have on the socio-economic conditions present in neighborhoods where this first public housing was built?

To answer these questions we use a unique methodology that compares addresses of the new public housing to enumeration district data from the 1940 Census to identify residents of public housing in New York City at the time of the Census. Because we use the de-identified, complete count 1940 Census, the 32,000 public housing residents that we include in our data set represent the universe of public housing residents in the City. We compare these residents to the larger pool of residents living in New York City in 1940 who were eligible to apply for the housing to gain insight into how closely housing managers adhered to the legislative intent for this housing. We compare the profile of residents living in the various housing projects to those residents in surrounding census enumeration districts to determine how the construction of this public housing affected the socioeconomic status of neighborhoods in New York City.

We believe that our research results will indicate that the earliest public housing residents were wealthier and better educated than existing research suggests. The imbalance between the supply and demand of public housing gave housing managers an opportunity to “cream” from the pool of potential residents, selecting households that were even wealthier and more reflective of prevailing notions of “good character” than was specified in the administrative criteria used in resident selection. Keeping in mind the slum conditions that most public housing in New York City replaced (Marcuse, 1986), we believe that these early public housing projects substantially raised the socio-economic profile of their neighborhoods. Our research findings provide a strong historical counter-narrative to the contemporary understanding of the function of public housing by planners.

References


Key Words:
Public housing, New York City, 1940 Census, Great Depression

CITIES OF STARS: URBAN RENEWAL, HOPE VI, AND THE CHANGING CONSTELLATIONS OF POVERTY GOVERNANCE

Abstract ID: 164
Pre-O rganized Session: Past, Present and Future: The Evolution of Public Housing in the U.S.

VALE, Lawrence [Massachusetts Institute of Technology] ljvale@mit.edu, presenting author
Public housing redevelopment varied greatly across cities during implementation of the federal HOPE VI program during the 1990s and 2000s. By examining how and why different types of actors have gained greater or lesser amounts of power in setting the agenda for remaking public housing in a given city, it becomes possible to explain the variety of approaches. Much of this variation, I argue, is rooted in a city’s experience with earlier efforts at slum clearance, urban renewal and central city highways, especially in cases where these mid-twentieth-century redevelopment efforts sparked lingering resentment in residential areas. Those cities that experienced both significant urban renewal and subsequent discontent about it often developed strong institutional mechanisms to thwart future rounds of displacement. Sometimes, this backlash is strong enough to yield broadly inclusive constellations of governance that favor preserving more public housing for low-income occupancy. Drawing on examples from gentrifying neighborhoods in Boston, San Francisco, New Orleans, and Tucson, the paper explains how and why some cities favored housing large numbers of very poor households when redeveloping mixed-income housing, while others placed more emphasis on higher-income households.

The concept of poverty governance seems one useful way to characterize the different blends of decision makers (and the forces acting upon them) in each city charged with managing the poorest. When public housing was built, federal dollars entered localities through a relatively simple—if frequently corrupt and discriminatory—form of governance centered on the public sector. Mayors appointed all or most of the members of a housing authority board; city councilors sometimes involved themselves in site selection but otherwise left this to planning and redevelopment agencies. Since residents for the new housing would not be chosen until its completion, they played no role in decision making. Similarly, public housing construction had no role for neighborhood service organizations, legal aid groups, or not-for-profit housing developers.

A half century later, in the aftermath of new mandates for “participation” developed in conjunction with various federal programs, low-income residents gained much higher expectations for their rights and roles. This vexed issue of participation and influence often proved central to implementation challenges for HOPE VI. In turn, this manifests itself through a much larger constellation of players engaged in poverty governance. In sharp contrast to the circumstances prevailing at the time when public housing was first built in the 1940s and 1950s, municipal officials no longer carry the same centrality. Instead, there are strong contingents from 1) the private for-profit sector, 2) the not-for-profit sector (both developers and community-based tenant support organizations) and 3) public housing residents, themselves. The universe of potential players may be the same from city to city but, in each specific case, some shine forth much more brightly than others.

Constellations contain many stars but it is still possible give a single name to the whole: think of Orion, The Big Dipper, Ursa Minor, or Pegasus. This paper identifies four basic types of constellation, each with its pole star in a different sector. The first type, The Big Developer, is named for its private sector dominance. By contrast, a Publica Major constellation retains a strong role for the state. Third is Nonprofitus, where not-for-profit organizations—whether developers or community-based organizations—carry special import. Finally, there is Plebs. Here, low-income residents themselves remain the sine qua non of the governance constellation. All of the other models must account for citizen participation but in a Plebs constellation residents are key decision makers, not just tolerated obstructionists. The paper illustrates the four types of HOPE VI governance constellation with examples from New Orleans, Tucson, San Francisco, and Boston.

References
The decreased supply of low rent housing in the U.S. has contributed to concerns about housing affordability for poor residents. For every three households below 30% of area median income, there is only one available rental housing unit that is affordable (Aurand et al., 2016). In addition, the affordability restrictions on nearly two million federally subsidized housing units will expire in the next ten years, potentially further reducing supply (JCHS, 2016). Despite glaring needs, policymakers and the public have remained equivocal about the government’s role in providing housing for the most economically vulnerable households (Vale, 2013; Vale 2000).

Public housing was the primary source of permanently affordable housing but it has been attacked by elected officials, private developers, and the government that created it. Critics have blamed public housing for creating concentrations of poverty and contributing to associated social problems, including unemployment, crime, and violence (Curley, 2005). Faced with concerns about severely distressed conditions, the federal government embarked on a plan to change the face of public housing (Cisneros and Engdahl, 2009).

Starting in 1993, the U.S. Department of Housing and Urban Development awarded more than $5 billion through the HOPE VI program to demolish more than 110,000 public housing units. Prior work finds that crime rates, gentrification pressures, and racial dissimilarity between public housing residents and city residents are associated with public housing removal across large cities (Goetz, 2013). Under HOPE VI, local housing authorities replaced demolished projects with developments that exhibit substantial variation in the mix of units targeted for low-income, moderate income, and market-rate residents (Vale and Shamsuddin, 2017). However, little is known about the reasons for this variation. What drives housing authorities to rebuild more affordable housing?

This paper examines the factors that predict two key aspects of housing redevelopment under HOPE VI: i) the share of demolished project units that housing authorities plan to replace, and ii) the proportion of redeveloped units that are dedicated to public housing. I conduct multivariate regression analysis to estimate the relationship between local demographic and economic conditions, housing authority characteristics, and redevelopment outcomes. The analysis is based on U.S. Department of Housing and Urban Development administrative data covering all 260 HOPE VI revitalization grants, which is matched with Census data. Preliminary results suggest that unobserved variables, including housing
authority leadership and local politics, may play a bigger role in HOPE VI redevelopment decisions than fitting into existing neighborhoods. The findings have important implications for planning efforts to address current affordable housing challenges and the future of public housing.

References


Key Words:
Public housing, Urban redevelopment, Affordable housing, Federal policy, Poverty

DEFENDING GLENDALE: PUBLIC HOUSING TENANTS' RESISTANCE TO RAD CONVERSION

Abstract ID: 166
Pre-Organized Session: Past, Present and Future: The Evolution of Public Housing in the U.S.

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The transformation and demolition of social housing has proceeded apace in many developed countries. Increasingly, social housing tenants are resisting the demolition of their communities and organizing in opposition to redevelopment (see, e.g., Bisset 2008; Wright 2006). In 2015 the Minneapolis Public Housing Authority announced preliminary plans to redevelop the Glendale Homes public housing development. The Housing Authority cited a growing maintenance deficit and their inability to maintain the property given inadequate Congressional funding of public housing capital budgets. The Housing Authority proposed using the federal Rental Assistance Demonstration (RAD) program to convert the property to private ownership and attract private investment to finance demolition and redevelopment of the site. The resident profile at Glendale Homes includes a very sizable Somali immigrant population. Residents immediately responded to the redevelopment plans by organizing a resistance organization they call "Defend Glendale." Defend Glendale has worked on its own and with partners to oppose the Housing Authority's plans. In the summer of 2015, the City of Minneapolis directed the Housing Authority to put its plans on hold pending a more thorough public participation process and a study of alternatives. This paper is an examination of the efforts of residents, their success to date, and the reactions of public officials, both with the City of Minneapolis and the Housing Authority. The case highlights a number of features of public housing redevelopment dynamics and the challenges that face tenants who wish to have a greater influence in decision making relative to public housing transformation (Goetz 2016).

References

THE FORMATION OF SOCIAL CAPITAL IN NEWLY CONSTRUCTED NEIGHBORHOODS
Abstract ID: 169
Individual Paper Submission

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What factors encourage or discourage the formation of social capital and community resilience (Brown & Kulig, 1996; Steiner & Markanton, 2013) in neighborhoods geared toward affordable/workforce housing and vulnerable populations (Bajayo, 2012)? Newly built starter-home neighborhoods—first introduced in the mass-produced Levittowns and commonly called “cookie-cutter” developments—present a unique opportunity to answer this question. Comparing how very similar neighborhoods built within the same time period and geographic area responded to the same stressor event sets the stage for a research experiment grounded in recent events with real world application. Lessons learned from divergent neighborhood outcomes help us better understand how to build more resilient neighborhoods and avoid constructing neighborhoods “built to fail” (Sorensen, Gamez, and Currie, 2014).

Starter-homes have been lauded as a way for lower- and modest-income families to own a little piece of the American Dream, but are they delivering on this promise? Starter-home neighborhoods built between 2000 and 2010 in Charlotte (Mecklenburg County), North Carolina, are studied to capture the effects of America’s Great Recession on this development typology. The research employs resident interviews in starter-home neighborhoods and interprets the results in light of an extended statistical analysis to gain a broader understanding of neighborhood level resilience. Results show that it is possible to facilitate the formation of social capital in newly constructed neighborhoods (and in particular starter-home neighborhoods meant for lower- and moderate-income families), and the presence of social capital is associated with community resilience. Therefore, land use policies and development practices should require new development to incorporate features—i.e. to “build-in” resources—that promote relationship-building and thus social capital and resilience. This will include a combination of social, physical, and economic elements, not just a single emphasis (Jabareen & Omri, 2017). Such resources include providing open spaces and larger and more frequent street trees to enhance the visual appeal of neighborhoods, adhering to quality construction practices, providing opportunities for community gathering and activities, and locating neighborhoods away from LULUs—locally unwanted land uses and with nearby amenities such as grocery stores or other services.

Community resilience is a new and emerging branch in resilience theory, and studies at the local level are lacking (Berkes & Ross, 2013). This research makes a unique contribution to this gap by exploring resilience at the neighborhood level, and specifically in suburban and urban infill contexts. Results strengthen community resilience theory by demonstrating that the lack of pre-existing resources in new neighborhoods hindered the development of social capital and community resilience, but also that resources and adaptability can be built into neighborhoods to help them achieve better outcomes. One thing we can count on is that starter-home developments aren’t going away. They are attractive as
workforce housing for lower- and moderate-income families, blue-collar workers, or lower salaried professionals. Furthermore, their speedy construction makes them an easy turn-to in community recovery following disasters or other types of collapse. Therefore, planning educators and practitioners will benefit from a greater understanding of the efficacy of the starter-home model and how to best position them for longer-term success.

References

Key Words:
starter-homes, Community Resilience, neighborhood outcomes, interviews, Recession

REALIZING INNOVATIVE SENIOR HOUSING PRACTICES IN THE U.S.
Abstract ID: 171
Individual Paper Submission

TZIGANUK, Ashlee [Arizona State University] atziganu@asu.edu, presenting author
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Countries across the developed world are in the throes of a dramatic demographic change—2012 to 2050 (Ortman et al. 2014). By 2050, seniors will comprise an estimated one out of every five adults in the U.S. (Ortman et al. 2014). Seniors live differently than other age groups and use their housing and communities in unique ways.

Older persons are more likely to live alone or in multigenerational households. They also express a strong desire aging. In the U.S., the senior population aged 65 and older likely will double from 43 to 84 million from to age in place near their friends and family. These qualities mean that distinct housing approaches are required to keep seniors healthy, socially integrated, and supported.

Innovative ways of housing seniors have long existed. Two often cited approaches are cohousing and accessory dwelling units, models more prevalent in Denmark and Canada respectively. Cohousing communities are small but growing in the U.S. As of 2017, there were about 163 cohousing communities and another 134 in development. Most cohousing communities are intergenerational, but interest in senior oriented communities is increasing. There were 12 established senior cohousing communities, and 13 in development as of 2017. Estimates of accessory dwelling units in the U.S. are difficult to derive, given that most are built extralegally in jurisdictions that prohibit them outright or impose strict zoning and building code requirements. In 1985, an estimated between 60,000 and 300,000 illegal units were built each year. It is likely that these numbers have since increased, as affordable

312
housing continues to be a pressing issue in many U.S. cities. U.S. housing planners, policymakers, and advocates have long expressed interest in adapting and scaling up these approaches. However, to date, few cohousing communities or accessory dwelling units have been built for seniors in the U.S. This study draws on the perspectives of U.S., Danish, and Canadian housing practitioners and senior advocates to explore the challenges of meeting seniors’ housing needs through cohousing and accessory dwelling units in the U.S., and understand how these challenges could be overcome. Data include structured interviews with housing practitioners and senior advocates in the respective countries. Informants in the U.S. include developers, planners, academics, politicians, housing organization leaders, and journalists. Additional informants and comparable contacts in Denmark and Canada are included through snowball sampling. Interviews with U.S. informants focus on barriers to implementing cohousing and accessory dwelling units in the U.S; those with Danish and Canadian informants focus on understanding how these practices and their supportive policies are implemented. Existing cohousing and accessory dwelling unit literature (professional reports, program evaluations, scholarly articles, etc.) from the U.S., Denmark, and Canada provides the context for these interviews. Findings show the numerous potential benefits innovative senior housing types can have on physical, social, and financial accessibility. However, barriers such as planning regulations and financing provide challenges and opportunities for innovative senior housing. This study concludes with a set of next steps and lessons learned for meeting seniors’ needs through cohousing and accessory dwelling units in the U.S. In all, it helps move the conversation on these strategies from visioning to production, showing planners their vital role in aiding seniors’ housing needs.

References

Key Words:
Housing, Ageing, Senior housing, Regulations, Accessibility

REDLINING AGAIN? SPATIAL DIFFERENCES IN RESIDENTIAL MORTGAGE ACCESSIBILITY DURING BOOM AND BUST IN OHIO
Abstract ID: 187
Individual Paper Submission

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This study investigates polarization of access to mortgage capital by neighborhood race before and after the mortgage crisis. Racial mortgage discrimination has been persistent in the U.S. housing market. Beginning with redlining in the early 20th century, discriminatory lending practices have manifested as a lack of access to credit for minorities and minority neighborhoods, compared to whites and predominantly white neighborhoods. During the subprime lending boom, lenders engaged in reverse redlining, targeting minority households for high-cost loans, and households relying on high-cost
mortgages eventually suffered high levels of mortgage debt. The U.S. housing market collapse brought a lot of foreclosures, particularly among minority households and in neighborhoods with high proportions of minority residence (Immergluck, 2009). In the wake of the crisis, major conventional mortgage lenders have seriously tightened their underwriting practices (Immergluck, 2011). Additionally, the extent to which households can access to mortgages still depends on race and ethnicity (Goodman, Zhu, & George, 2014, 2015; Immergluck, 2011; Richardson, Mitchell, & West, 2016; Stein & Nguyen, 2010). Given these trends, this study investigates the access to housing credit in the five metropolitan statistical areas (MSAs) in Ohio, hypothesizing a polarization of mortgage availability where neighborhoods of color may be less likely to have access to credit than white neighborhoods. This study documents the transition of the spatial distribution of residential mortgages since 2004 through 2015, examining three periods: the boom of housing mortgages, the bust of foreclosure, and post bust up to 2015, with two objectives. First, the study describes the varying flow of mortgage capital into neighborhoods (zip code) in the five MSAs in Ohio before, during, and after the crisis, demonstrating how access to credit varies in neighborhoods. Compared with predominantly White neighborhoods, households in neighborhoods with high proportions of minority residence disproportionately experienced a lower likelihood of receiving mortgages, no matter the applicant’s creditworthiness (Immergluck, 2009), even though various policies—the Fair Housing Act, the Equal Credit Opportunity Act, and Community Reinvestment Act—state such patterns of lending illegal. Second, this research describes differences in the quality of mortgages originated by neighborhood attributes. To investigate this, this study compares the annual percentage rate (APR) spread within minority neighborhoods to those within non-minority neighborhoods. The question based on existing studies is: are minority neighborhoods, especially after the boom, still more likely to have higher costs loans?

To approach the two objectives, the study begins with a description of the quantity and quality of residential mortgages originated, using data from the US Census, American Community Survey, Home Mortgage Disclosure Act, and CoreLogic©. First, the study uses Geographic Information System (GIS) to investigate geography of mortgage originations in five MSAs in Ohio, using the number of mortgage originations per 100 owner-occupied units and FHA mortgage share as the quantity indicator and the subprime mortgage share and APR spread as a quality indicator. Second, this study will overlay this descriptive information on neighborhood attributes, including neighborhood level income, credit score and racial composition. Second, the study uses multivariate regression analysis allowing for the simultaneous consideration of a variety of causes for mortgage lending. First, OLS regression analysis evaluates the association between the inflow of conventional mortgages and neighborhood attributes during three periods. Second, OLS regression analysis evaluates the association between Subprime-share and neighborhood attributes during the boom period. Third, OLS regression analysis evaluates the association between APR spreads and neighborhood attributes during the bust and post-bust period. Fourth, OLS regression analysis assesses the association between FHA share and neighborhood attributes during the bust and post-bust period. The findings will allow for the assessment of racial polarization in lending, controlling for other causal factors.

References


Key Words:
Mortgage Lending, Racial Inequalities, Neighborhood

MUNICIPAL ENGAGEMENT AND CITIZEN SCIENCE IN NEW ORLEANS CITY PLANNING PROCESSES
Abstract ID: 218
Individual Paper Submission

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In 2008, the City of New Orleans required a ‘Citizen Participation Program’ in the Master Plan that had the ‘force of law.’ The application of how the community was to be engaged, and how success would be measured, was not defined in Section 15 of the amended Master Plan. Within the same year, City Administration would demonstrate residents’ engagement through one of most divisive planning decisions post Hurricane Katrina in 2005 --- the closure of Charity Hospital. Charity hospital provided free health services in New Orleans since 1736. Reports indicate that over 100,000 patients were served during the 1 year prior to “Katrina”. A Memorandum between the "LSU and the Department of Veterans Affairs (VA) [led] to a replacement facility for Charity Hospital as part of the new VA complex." (Ott, 2012) Community notification, the development and visioning processes were considered by many to be minimal or ineffective. Initially 100 properties were slated for demolition after eminent domain was invoked to remove dwellings that would impede construction of the multi-plex hospital campus. In an effort to ameliorate the concerns of stakeholders, 81 "historic" homes, which rested on the VA/LSU campus footprint, were obtained by the City and moved to Louisiana Land Trust (LLT) vacant sites maintained by the New Orleans Redevelopment Authority (NORA). Extensive study determined that 25% of all city parcels or "$43,755 [potentially] blighted homes and empty lots in New Orleans in September 2010" were deemed blighted properties. (Thompson, 2015) The re-use of the LLT-RH sites was in alignment with two of Mayor "Mitch" Landrieu's recovery plans: Place-based Development and the Blight Reduction Strategy started in 2005. Community participation during the hospital strategic planning remained limited as was input on the scattered site locations, proximity and impact on existing housing and neighborhoods. In 2015, the NOLA Office of Community Development designated non-profit housing developers for construction of affordable housing using US HUD Community Development Block Grant (CDBG) funding. This study examines the process of post-disaster modern urban renewal using historic dwellings to create affordable housing and reducing blight; geospatial & condition analysis of the dwellings from the point of origin to the city-wide dispersed locations; and examines and measures the economic impact of the 13 affordable housing in the case study neighborhood of Hoffman Triangle in the Central City of New Orleans. This research focuses on the City of NOLA innovative response to continuous and sustained community participation through their Blightstat performance & accountability program. This research will add an equity perspective
using citizen science and participation GIS to inform municipal planning in both theory and in practice. Specifically, this case study will detail how the ‘middle out’ use of combined community/bottom up and municipal/top down information can be turned into open, free and accessible data. Spring 2017 sales of the ‘historic’ affordable houses in high risk census tracts will be used to evaluate their economic impact using IMPLAN. The ability for both the community and municipality to justify and support why and how the use of HUD Community Development Block Grant funds can positively influence the local and regional economy is paramount given changes in the Federal Administration. The City of New Orleans, with the support of Citizen Scientists and WhoData @ the University of New Orleans Department of Planning & Urban Studies, shines a light on an atypical planning process to reduce blight, bring properties back into commerce while using public funds and Community Development Housing Development Organizations (CHDO) to build affordable housing. The lessons learned are applicable in academia, in practice for all communities facing neighborhood change.

References

Key Words:
Charity Hospital, Public Participation Geographic Information Systems, Blight, Neighborhood Planning, Citizen Science

DIALOGOS AND PLANNING
Abstract ID: 224
Pre-Organized Session: Planning for AuthentiCITIES

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The theme of this presentation, fits on the panel proposal “Planning for AuthentiCITIES, Part II: Making Authenticity Happen; our proposed theme is part of an emerging discussion generated by the growth of Latinos in the country. Latinos are changing the demographic distribution of the United States,
accounting for more than half of the population rise from 2000 to 2010 and still they are not always represented in the decision making process—in the planning—of our communities. To be real, authentic to the changing demographics, it is relevant to acknowledge that this is a complex and diverse population and that complexity needs to be evident to city planner and/or community leaders. This essay reflects on the work of a series of “Diálogos”, Spanish for dialogue, first embraced by the Latinos and Planning Division of the American Planning Association, used as a mechanism for community engagement with Latino communities. While “Diálogos” have been held around the country this essay will focus primarily on the U.S.-Mexico border, an area known for its higher percentage of Latinos. Specifically, Diálogos allow the voices of communities to be heard and therefore adapting the participatory planning process among Latinos to be an authentic reflection of the needs on the ground; these are mechanism by which issues of perception and assets at the community level are contextualized to inform policy and development for cities. Diálogos engage planners, architects, researchers, community leaders, public officials, funding and charity organizations, and in general interested citizens to work on two specific tasks: first, collectively identify the most pressing needs for these evolving communities, and second envision ways to address them with a common agenda. On top of these adverse and supportive national networks of planning, community, and policy professionals is an emerging agenda, from the bottom-up, that is built on the collective voice of communities.

In this presentation we will discuss the methodology used to make our inclusion proposal a reality; on how to engage Latino communities in a successful way; from language used to participatory exercises. A key element in this “new” focus is on letting voices out of mainstream be heard and search for a planning field that incorporates not only their voice but also let them help re-define the core view of what the city is, and who do planners respond to such change. Our proposal contributes to the need of creating more authentic cities; as part of searching for “authentiCITY” in our planning efforts.

References

Key Words:
latinos, participation techniques, poverty, Engagement

NEGOTIATING DIVERSITY: THE TRANSITIONING GREEKTOWN OF BALTIMORE CITY
Abstract ID: 226
Pre-Organized Session: Planning for AuthentiCITIES

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This paper investigates the new social relationships between recent immigrants and the long-time residents in Greektown in Baltimore City, Maryland. This small and rather isolated neighborhood was once a European immigrant enclave in an old industrial city and still maintains its original ethnic characteristics. However, in recent years, as many neighborhoods are doing (Singer & Suro, 2000), it is accepting Latino immigrants, who now constitute more than 30% of the total population. Moreover, in
addition to the Latino immigrants, there are new market-rate housing projects on the peripheries of the neighborhood that have attracted new types of residents, mostly young professionals who prefer living closer to the downtown area (Hyra, 2015). In this neighborhood, these three racially, ethnically and socio-economically different groups face each other in their daily lives and negotiations among these different groups over social relations, cultural norms, and identities will shape the neighborhood’s future (Sandercock, 2000). Will Greektown remain an authentic Greek neighborhood, will it be taken over by the Latino community, or will it turn into a gentrified neighborhood? A fourth possible outcome could be a new, “authentic” identity created by the diverse groups of people.

Neighborhoods change due to various factors, and each neighborhood has its own reasons to change. Although no single reason can fully explain neighborhood changes, scholars have vigorously discussed the causes of neighborhood changes. The disappearance of “authenticity” in the neighborhood is often taken to mean demographic change, such as an increase or decrease of a particular race and ethnicity, because demographic change could be a key factor in determining a neighborhood’s economic and physical character. However, it is often overlooked that a changing demographic character means changing social relationships among various groups in the neighborhood—in other words, “social connectedness” as defined by Sharon Zukin (2010)—which is an important factor that manifests authenticity in the neighborhood. The Socio-cultural Approach to neighborhood change has been developed to explain how an individual’s adaptive activities, which are based on his or her group’s culture, values, and beliefs result in changes to neighborhoods (London, 1980). The focus of the data collection is on knowing how cultural differences such as language, beliefs, customs, and history are manifested in the daily lives and the social relationships of the inhabitants of this small neighborhood. The fieldwork, conducted since the fall of 2013, includes in-depth interviews with 48 residents, participant observations, and a survey. Some of the findings are:

1) strong identification as immigrants or the descendants of immigrants by Greek Americans may create room for the acceptance of new immigrants; 2) the Greek Americans lease the vacant houses to Latino immigrants and as such the two groups become economically dependent upon each other; 3) third-generation Greek Americans return to the neighborhood and bring with them new ideas of what an ethnic neighborhood could be; 4) Latino second generation immigrants who speak English may become the key persons to bridge the gap between the different groups; and 5) the new residents, who are young and highly educated, have the idea that “diversity is good,” which may help keep the neighborhood culturally diverse.

The paper further investigates policy implications and how the planners can work with this racially, culturally and socioeconomically diverse neighborhood in order to create new authenticity among the diverse residents in this new era of immigrants and the urban lifestyles of young professionals.

References
AUTHENTICITY IN VANCOUVER’S CHANGING CHINATOWN

Abstract ID: 227
Pre-Organized Session: Planning for AuthentiCITIES

SHIEH, Leslie [Take Root Studio] shieh.leslie@gmail.com, presenting author

Vancouver’s Chinatown is one of the largest remaining Chinatowns in North America. It is also one of the city’s oldest neighbourhoods with a visually distinct architecture and an active community. In the past 40 years, there have been many discussions about the most appropriate ways to manage Chinatown’s urban heritage and revitalization. Efforts began in the 1970s with a new heritage zoning schedule and a list of selected heritage buildings to be protected. Despite preservation efforts, Chinatown went through a long period of decline in the 1980s. Since then, efforts have turned from preservation to revitalization.

Today, after decades of revitalization efforts, the neighbourhood is seeing new development interest. This new interest is market driven rather than City driven as it had been in the past, and changes are rapidly taking place. New condominium developments are bringing new residents into the community. Escalating land prices and aging shop owners are leading to the closure of many longtime businesses. Consequently, these changes are prompting new questions: Are we safeguarding the heritage that makes Chinatown unique? And how do we anchor this rapid change with cultural assets? These questions underpin this paper.

This paper is divided into three sections. It begins with a discussion that draws together the literature on ethnic places in urban planning, urban design, and historic preservation. The revitalization of ethnic places in North American cities has taken various approaches as planners and community members grapple with preservation and development pressures. This section is followed by an overview of revitalization efforts in Vancouver’s Chinatown over the last four decades. It demonstrates that often time policies are limited to regulating tangible forms such as heritage building preservation, building heights, and land uses. However, community revitalization also involves safeguarding the intangible sense of place that is difficult to accomplish through policy. Section three articulates strategies for Chinatown whereby the focus is on preserving the community’s intangible culture and heritage. It focuses on a recent initiative to anchor change through the management of community-owned assets.

References

Many conflicting 21st c. forces have propelled cities to design and reform themselves for easier resident and tourist consumption. Increasingly this consumption links with the creation of “authentic” neighbourhoods, where the “authenticity” is socially constructed by empowered constituencies (Suleiman, 2012; Zukin, 2010). Thus, the notion of authenticity can be interpreted in many ways, often being all things to all people. While we often think of this term in connection with material objects, authenticity has its roots as an individual concept, promoting the exploration of meaning and identity, and examined by philosophers from Rousseau to Heidegger to Taylor. So does authenticity refer to the originality of a place or artefact, and its materials’ legitimate provenance? Is it instead a socially-negotiated construction, where society comes to appreciate the maligned “staged authenticity” of Disneyland as perfectly authentic? Or does it hearken back to existential philosophy, where one’s quest of authenticity is anchored by the need to resolve the gap between who they are in modern society and their true selves (Braman, 2008), thus focusing less on site and place and more on one’s internalized experiences (Wang, 1999)?

All of these questions and types of authenticity come together, overlap, and clash in the process of community development. In unpacking the notion of authentic neighbourhoods, this paper focuses on two broad themes: conflict and reconciliation, and time and space. First, conflict and reconciliation are implicated in defining and enhancing what makes an authentic neighbourhood. This entails marking territory as well as gatekeeper practices, all of which may involve the use of signs, symbols, and more functional barriers. In this regard, authenticity has been used to accelerate or deny various groups’ right to the city (Zukin, 2010). Namely, who gets to say what is authentic? And when we try to repair previous asymmetrical power relations, how do we achieve authentic community making authentically? Second, recognizing that time and space are fluid, multi-layered, and interweaving (see Banet-Weiser, 2012; Olalquiaga, 1992; Zukin, 2011), we examine their interrelationship in “authentic community development.” For example, as a sentimental longing for selected aspects of the past, nostalgia plays a strong role in informing people’s understandings of authenticity (Suleiman, 2012). Thus, historic preservation efforts fueled by societal-scale nostalgia can help aggravate gentrification, because, Zukin observes,” If authenticity is a state of mind, it’s historic, local and cool” (2011:26). In this approach to authentic places, objects, and processes involved in authenticity are interlinked. As Suleiman (2012) recounts in his study on the postwar gentrification of Brooklyn Brownstoners, the designation of a place
as authentically historic derives from a group’s specific narrative constructions to help explain and contextualize the “authentic” label. Not just in Brooklyn, but elsewhere we see instances where a building earned its authenticity through its connection to a particular culture involved in its creation (for example, a distinctive building created by Chinese immigrants, or a court house created by a European monarch associated with justice reforms). Such origin and association stories can be significant for one or more groups because they help advance their understandings of who they are and how they evolved in a place. Such origins set limits as well as open up possibilities for the use and interpretation of these buildings as objects. And yet, “authentic” buildings acquire additional layers of meaning from other post-origin times, which also shape how the past is interpreted and re-enacted.

This paper, supplemented with brief examples from published cases elsewhere and anecdotal/interpretive cases, represents a review of the urban studies, philosophy, cultural studies, sociology, and marketing literatures that consider authenticity. It will conclude with recommendations for future research and exploration, both at theoretical and more practical levels.

References


Key Words:
authenticity, gentrification, right to the city, culture

PEOPLE, PLACE, AND PROCESS: TYPOLOGIES OF AUTHENTICITY

Abstract ID: 230
Pre-Organized Session: Planning for AuthentiCITIES

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Creating ‘authentic places’ has become a norm for both planning and urban design, a norm which carries multiple conflicting meanings and intentions. Instead of subscribing to one definition of an authentic place, I argue that planners and designers should acknowledge different kinds of authenticity, as well as the different intentions behind them and their implications for planning and design.

Some describe authentic places as those that are “old” or “established.” Others describe them as places where one “feels at home” or as places that are untouched by outsiders. However, these descriptions (as well as many others) mask contradictions within the term. These contradictions often come to light in the differing intentions of creating authentic places, which can put economic development goals at odds with social equity goals. For example, some argue that authentic places can help people establish close-knit communities (Zukin, 2009). Yet, authenticity, particularly as it relates to place culture and aesthetic,
can too often become a narrative that commodifies people and places for the purposes of profit (Evans, 2003; Quinn, 2005; Zukin, 2011).

In this paper presentation, I will explore different types of authenticity that emerge from conversations with residents of and visitors to the Alberta neighborhood of Portland, Oregon, an historically Black neighborhood that has grappled with its identity as an ‘authentic neighborhood’ over the years. Adapting the theoretical frameworks of authenticity presented by Zukin (2009 & 2011) to the responses of residents and visitors, I propose a new framework of authenticity that involves the variables of: people (who lives where), place (what does the place look like), and process (how have people come to live where they do, and how has the place come to look the way it does). Respondent perspectives suggest that different types of authenticity see changes (and absence of change) in these variables differently, resulting in many different outcomes being labeled “authentic.” By creating a typology of authentic places from this new framework, I argue that planners and urban designers can better understand the intentions behind each type and their implications for social equity and economic development.

References

Key Words:
Authenticity, Social equity, Economic development, Urban design

STATE MANDATES, HOUSING ELEMENTS, AND LOW-INCOME HOUSING PRODUCTION
Abstract ID: 238

RAMSEY-MUSOLF, Darrel [University of Massachusetts Amherst] darrel@larp.umass.edu, presenting author

A housing element is a collection of planning techniques (e.g., density bonus, accessory dwellings, inclusionary housing, mixed-use) that cities implement in order to satisfy housing needs (Ohm, Merrill, and Schmidke 2000). After considering local demand, a city’s housing element should position local housing inventory in relation to regional demand (Housing and Urban Development Act of 1968, 1968). In many states, housing elements are required chapters within general plans and in conjunction with the general plan’s other elements (e.g., land-use, open space), the housing element communicates a local housing vision (Baer 1997). Regarding low-income households, many housing elements accommodate low-income housing needs by designating sites, identifying subsidies, and adopting intergovernmental programs that broaden participation (Bratt 2012). This collective attention should produce desirable housing for all economic segments.

In this paper, I examine the efficacy of state mandated housing elements as a low-income housing
intervention. As planners we need to know whether housing elements have an impact on actual housing production or whether they are otherwise meaningless activities. Therefore, I ask: to what extent have state mandated housing elements increased low-income housing production? After examining the existing empirical research (e.g., CA, FL, IL, MN), this study found aspirational success (i.e., attention to, planning for) rather than low-income housing production. This aspiration is due to state mandates that do not evaluate subsequent housing production or provide consistent subsidies, but simply reward the planning process.

To remedy this dilemma, I argue that states should reform their mandates (e.g., governance, goals, compliance, forecasting, density, penalties, and finance) in order to mitigate exclusionary zoning in cities. As an impetus, states should rely on recent revisions to federal fair housing rules. In 2015, the U.S. Department of Housing and Urban Development (HUD) revised the agency’s implementation of the Fair Housing Act of 1968 and now requires program participants to complete an assessment of fair housing (AFH) as a component of a consolidated plan (Affirmatively Furthering Fair Housing, 2015). An AFH may suggest land-use and zoning reforms as “meaningful actions” within a “strategic plan” to reduce the impact of any factor that restricts fair housing choice (2015, 311, 316-317). Because states are direct recipients of HUD funding, states can mandate local housing element content as part of their AFH. As a caveat, HUD only accepts or rejects the AFH. In closing, the passage of any state low-income housing law will not be easy. However, the uneven performances of housing elements in California, Florida, Illinois, and Minnesota suggests that planners must do more than attend to and plan for low-income housing needs.

References

Key Words:
low-income housing, mandates, states, cities, fair-share

LOCAL APPROACHES TO HOUSING IN THE U.S.
Abstract ID: 239

YERENA, Anaid [University of Washington Tacoma] arqanaid@gmail.com, presenting author

The current all-time high number of severely cost-burdened renter households highlights the deteriorating housing landscape low-income renters are facing (Joint Center for Housing Studies, 2016).
The homeownership rate is approaching a record low due to a backlog of homes in foreclosure, tight credit, weak income growth, and poor credit scores. The latest trends in housing value and interest rates, household income and, demographic shifts are making matters worse. According to a recent Housing Affordability study (Gudell, 2017), national increases in home values and rising mortgage interest rates – currently at a five-year high – will make mortgages more expensive. The burden of the increased housing costs is compounded by limited household income growth (Short, 2017). As the latest Advisor Perspectives report (2017) states, the real median household income is below 2000 levels. Adding to these problematic conditions, the Federal government’s latest budget includes a 4.3-billion-dollar decrease in spending for the U.S. Department of Housing and Urban Development (White House, 2017). This reduction in federal support for housing coupled with market conditions have placed an added pressure on state and local governments to act.

This study aims to understand the current state of local approaches used to increase the supply of affordable housing. This study uses data collected through an online survey of housing staff in all U.S. cities with a population of 100,000 or more (N=272). The data are used to describe the adoption of specific types of local affordable housing strategies across the U.S.

The study found that local governments employ strategies such as including linkage fees on new commercial development, supporting tax-increment financing, imposing taxes on real estate transactions, using publicly owned land for affordable housing development and adopting regulation to include or expand inclusionary zoning ordinances.

This study suggests the current housing and political conditions represent a window of opportunity for housing advocates to mobilize with the goal of increasing the number and novelty of approaches cities implement to create affordable housing.

References

Key Words:
affordable housing, local policy

HOUSING POLICY: THE STATE OF THE STATES
Abstract ID: 240
Contemporary U.S. federalism has increased states’ policy responsibilities and is likely to continue doing so under the current national administration. In the domain of affordable housing, states have filled a void left by federal shifts by developing their own policies and programs, as well as by expressing state policy preferences through federal initiatives (Yerena and Basolo, 2015; Scally, 2009). Differences across states, such as housing need and political ideology, suggest variation in the support states will provide for affordable housing. Moreover, support will vary across states by direct forms such as state fund appropriations and indirect forms such as tax expenditures and regulation, as well as by year for any given state. While research has examined single approaches to affordable housing support, including single and multi-state studies (see, for example, Ramsey-Musolf, 2017; Scally, 2012; and Yerena and Basolo, 2016), the literature lacks a comprehensive, descriptive analysis of the affordable housing support from all states. This research asks the question, “What explains the level of state affordable housing support?” In an effort to answer this question, the research uses a secondary data set constructed from many sources including the Census, the National Council of State Housing Finance Agencies, and the Council of Development Finance Agencies. Quantitative methods will be employed to describe and analyze numerous forms of state support and to examine an exploratory model aimed at understanding state support comprehensively (a total of direct and direct forms of support). The findings will reveal the structure of housing support among the states and encourage a dialogue about the relative importance of planning and related regulation in state affordable housing strategies.

References

Keywords:
affordable housing, state housing policy, housing finance, housing planning

HALFWAY HOMEOWNERS, HALFWAY CITIZENS: MOBILE HOME PARKS AND UNEVEN RECOVERY AFTER THE 2013 COLORADO FLOODS
Abstract ID: 247
Pre-Organized Session: Trauma and Loss with Planning in the Center

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Mobile home parks are an important source of affordable housing for millions of U.S. households. Mobile home parks are frequently exposed to floods, storms, and other natural hazards, so much that
researchers use them as an indicator of vulnerability in the built environment. While numerous studies have documented the physical vulnerability of mobile homes, disaster researchers have a limited understanding of the socio-spatial dimensions of risk in mobile home park communities. In this paper, we examine the contribution of mobile home parks to disaster risk through a detailed study of the 2013 Colorado floods. The floods destroyed over 450 mobile homes and permanently displaced thousands of people. Drawing on data collected through household surveys, semi-structured interviews with households and recovery officials, and observation of recovery planning meetings, we describe four socio-spatial dimensions of risk in mobile home parks: concentrated vulnerability, divided asset ownership, restrictive or exclusionary planning, and community bias. Our analysis reveals that mobile home park residents are uniquely vulnerable before, and after, disasters. We conclude by describing policy and planning interventions that might mitigate risk and improve recovery outcomes for mobile home park residents, and argue the need for broader study of mobile home parks as a source of both risk and resilience in communities in the United States.

References


Key Words: Mobile Home, Manufactured Housing, Recovery, Risk, Vulnerability

INDIGENOUS FUTURITY AND MISSING AND MURDERED INDIGENOUS WOMEN: OUT OF SETTLER LOGICS/INTO AN INDIGENOUS FEMINIST PRAXIS

Abstract ID: 248
Pre-Organized Session: Trauma and Loss with Planning in the Center

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The impact Missing and Murdered Indigenous Women (MMIW) has on Indigenous families and communities is the collateral damage of the ongoing settler colonial project. MMIW is an example of premature death in Indigenous communities that is predicated on group differentiated vulnerabilities. (Gilmore, 2002) These vulnerabilities are enabled by settler colonial logics that render Indigenous women and girls' bodies as both violable and as terra nullius.(Smith, 2005; Leiby, 2009; Harjo, Robertson, Navarro, 2017) The experiences and needs of Indigenous women and girls must be included in liberation project of Indigenous communities, and what is right for them will be good for the entire community. This paper examines settler logics that maintain Indigenous women as violable and seeks to intervene by stepping out of settler logics and into Indigenous futurities informed by Indigenous feminisms. I will trace the historical context of racialized and gendered spaces that create the
conditions of possibility for the MMIW crisis. Further, I will discuss the ways in which gendering Indigenous community praxis provides an architecture of an Indigenous futurity. I provide two examples, the first, a class based project taught in the course, Foundations of Community Development, and focused on MMIW in Winnipeg Manitoba and prepared students from a wide range of backgrounds to employ an Indigenous feminist praxis. The second example is the traveling Walking With Our Sisters art installation, which provides insight into Indigenous women enacting their community-driven praxis. (Harjo, Robertson, Navarro, 2017) Indigenous futurity is informed by needs of Indigenous women and girls and works in service to decolonize community planning praxis and (re)center on Indigenous ways of being and knowing the world within planning and community development.

References


Key Words:
Indigenous planning, Indigenous feminism, settler colonialism, futurity, trauma

TRAUMA AND RESILIENCE: MAKING THE CASE FOR A TRAUMA-INFORMED PLANNING PRACTICE.

Abstract ID: 249
Pre-Organized Session: Trauma and Loss with Planning in the Center

WAGNER, Jacob [University of Missouri-Kansas City] wagnerjaco@umkc.edu, presenting author

Planners seeking to know resilience and sustainability as practical strategies in the context of human and environmental shock must embrace and understand the concept of trauma and trauma-informed systems. Planning educators seeking to better prepare a diversity of students for the uncertain world of cities that they will face as practitioners must also better understand the increasing importance of a trauma-informed approach to professional education.

Trauma-informed planning practice is increasingly necessary for planning in the context of post-disaster, and post-crisis moments that follow major disruptions, such as hurricanes, floods or other catastrophic weather events, or wars, terrorism and everyday urban violence. In communities with unresolved historical trauma and unresolved grief, (Brave Heart 1995) planning practice must embrace a deeper understanding of local and community histories to better understand how to function in a trauma-informed manner.

This paper reviews the literature of planning and seeks to answer the question: what would a trauma-informed planning practice look like? What are the necessary components of a trauma-informed plan? How can planning educators better integrate trauma into the lexicon of planning theory and practice?
With increased attention to resilience, sustainability and equity in planning, is it time for planning theory and practice to include trauma as a key concept?

Planning can be an important means to re-establish order in the face of chaos after a disaster, to increase involvement and citizen ownership of environmental change processes, and to mitigate the unresolved historical episodes in which the collective experience of trauma resides. While “resilience” has become more common in our everyday language and in the discourse of planning, trauma seems to remain obscured. Yet, planning scholarship has known for decades that planned environmental changes are often traumatic for communities who feel powerless in the face of loss and change (Marris 1986; Lynch 1976). Planners have longed worked in areas of social policy that are already finely attuned to the presence of trauma and the need for trauma-informed practice, including - for example - homelessness or planning in the arenas of ethnic conflict (Bollens 1998). Further, the planning literature on the “dark side” of planning (Yiftachel 1998) and planning as a means of social control and traumatic environmental changes suggest that planners and planning institutions need to recalibrate to become more aware of the ways in which planning itself can be traumatic for local communities. This paper begins a process of bringing the literature of trauma and trauma-informed systems into the world of plans, planners and planning thought.

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Key Words:
trauma, resilience, sustainability, equity

MEMORIALIZING OUR TRAUMATIC SOCIETY: PLANNING, PUBLIC SPACE, AND EVERYDAY MEMORIALS IN THE 21ST CENTURY

Abstract ID: 250
Pre-Organized Session: Trauma and Loss with Planning in the Center

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This paper examines the generational shift in public mourning driven by the rising number of traumatic deaths. It uses theory and the Getty Images database of photographs to analyze “everyday memorials,” which are physical artifacts of new styles of public memorials that sometimes conflict with modernist planning approaches in areas such as public space and transportation. The findings are that public mourning rituals manifested in everyday memorials are unlike to recede, forcing planning agencies to craft a regulatory scheme to allow them space within the public realm.
Recently, scholars described a remarkable tragedy in American life. After decades of increasing longevity, progress on lengthening life has plateaued, even slipped backwards for a significant segment of the American population. A significant cause of this reversal is traumatic death. Trauma is now the leading cause of death for Americans under the age of 50. While motor vehicles have long been a significant cause of early deaths and homicides have taken too many young minority Americans, suicide and the opioid epidemic have extended the effect of trauma to all communities, including white middle class residents, and those living in rural and suburban communities.

For planners, this realization has many potential impacts, including a renewed interest in gun violence and the expanding commitment to Vision Zero. One could also examine how the traumatic society is related to employment trends, family dynamics, and other social and economic characteristics of American society.

Here, I want to explore how the traumatic society complements a shift in dying and death practices. Death has escaped from its modern institutions of the hospital, funeral home, and cemetery to return to the streets, homes, digital space, and even bodies of Americans. This return of public mourning after decades of privatization has important implications for planners and policymakers, but also suggests a broader meaning for all of us who will experience these heartrending deaths.

The new public mourning is exemplified in the everyday memorial. I use this term to resituate examples that previously have been called spontaneous, makeshift, and grassroots memorials. Examples include roadside shrines, ghost bikes, vinyl memorial decals, memorial tattoos, pavement memorials, memory t-shirts, and digital memorials (including social networks sites and internet cemeteries). Together, this assemblage of mourning places have allowed Americans (and people worldwide, although this paper focuses on the US) to relocate activities and artifacts to the public realm to provide them with a place to mourn and to advocate for policy and planning changes that might mitigate the impact of the traumatic society.

The paper will utilize a coded analysis of newspaper images and a rapidly growing ephemeral and academic literature to examine the phenomenon. The newspaper images are an indicator of the growing acceptance of everyday memorials as signifiers of death. The paper will also use these images to code the design, placement, and cultural meaning of the everyday memorials to create an index of mourning artifacts. I will use this index as a means to explore how different types of everyday memorials represent challenges to contemporary planning practice.

References


Key Words:
trauma, mourning, ghost bike, commemoration, public space
LOSS, CHANGE AND INSECURITY: PROSPECTS FOR CROSS-RACIAL COALITION BUILDING IN WHITE WORKING-CLASS COMMUNITIES

Abstract ID: 251
Pre-Organized Session: Trauma and Loss with Planning in the Center

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There has never been a more important time for research around immigration, identity and belonging from the perspective of white working-class Americans. Support for Donald Trump in the white working-class communities is largely explained by a political campaign that validated and responded to a sense of loss and anxiety. While the progressive movement reassesses, those in community development (both in municipalities and community-based organizations), find themselves working in divided communities with little sense of how to navigate a politically hostile climate where neighbors barely know each other and may not even speak the same language. How can those working in community development engage with diverse groups of people and find common cause? What must they understand about the white working-class population to bring them on-board?

This paper will offer some insight into these challenges by focusing on the grassroots perspectives of white working-class communities around three key questions: 1. Are current definitions of the white working-class fit for purpose? 2. Is the view of white working-class communities as disconnected and racist the reality on the ground? 3. What are the prospects of cross-racial coalitions between white working-class communities and communities of color?

The findings draw from conversations in five cities: “Global City”; New York, NY (Bay Ridge, Brooklyn); “Rust Belt”; Dayton, OH; “The South”; Birmingham, AL; “Sun Belt”; Phoenix, AZ and “Pacific Northwest” Tacoma, WA. Working with local partners, over 350 interviews were conducted. For each city, we interviewed 15 key informants (elected officials, municipal employees, executive director of community organizations, union reps, religious leaders), 30 white working-class residents in focus groups, plus 25 informal interviews in third spaces (bars, diners, community events, Uber drivers). Finally we held local workshops in each city to bring participants together to “reality check” our findings and further probe the possibilities for cross-racial coalition building post-election.

In short, we found that the white working-class communities across our sites feel a tremendous sense of loss in the face of economic uncertainty and demographic change in their neighborhoods. This includes interconnected layers of economic insecurity (loss of jobs, lack of upward mobility, housing foreclosures), political invisibility (silent discontent and lack of political voice) and cultural insecurity (changing face in white working-class communities due to immigration, and the disappearance of third spaces). Most white working-class people interviewed in focus groups valued the importance of racial and cultural differences amongst work colleagues, neighbors and in their own families. Many showed interest in the everyday lived experiences of diversity and a desire to make it work. Additionally, we saw grassroots efforts to work out responses to immigration and change at the local level without the help of government or mediating organizations. At the same time, many white working-class residents feel left behind as community institutions cater to immigrants and racial-minorities, leading to claims of reverse discrimination and colorblind racism. There is a clearly a need for to bring people together at a
very small scale. White working-class residents long to connect to neighbors but do not necessarily have the capability to rebuild community.

References

Key Words:
white working-class, immigration, neighborhood change, coalition building, community development

PLANNING FOR EQUITABLE NEIGHBORHOOD DEVELOPMENT: LOCAL GOVERNANCE, COMMUNITY ADVOCACY, AND RESIDENTIAL AND COMMERCIAL AFFORDABILITY IN 80 U.S. CITIES
Abstract ID: 256
Individual Paper Submission

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This paper elucidates municipal governments’ capacity for equitable neighborhood development by analyzing new data on 80 U.S. cities’ strategies to preserve residential and commercial affordability in neighborhoods that experience reinvestment or redevelopment. An equitable development approach aims to improve neighborhood quality in previously disinvested areas while giving incumbent residents the opportunity for active participation in shaping their community’s future and for affordable, long-term residence in the neighborhood should they wish to remain (Kennedy & Leonard, 2001; Shaw & Porter, 2009). This framework recognizes that although reinvestment and redevelopment have the potential to improve living conditions, raise property tax revenue, and reduce socioeconomic segregation, the associated increases in living costs and changes to neighborhood character often have adverse social and economic consequences for incumbent low-income households and the local businesses and services they frequent (e.g. Newman & Wyly, 2006; Deener, 2007). This can precipitate gentrification, which refers to the socioeconomic transformation of previously disinvested neighborhoods as low-income residents and potential low-income in-movers are replaced by more affluent households (Kennedy & Leonard, 2001; Newman & Wyly, 2006).

Despite having limited fiscal and political capacity to mitigate gentrification-induced displacement, city governments across the country are using old and new policy tools to balance reinvestment with initiatives that support existing residents’ stake in the neighborhood (e.g. Levy, Comey & Padilla, 2007). Yet few studies have systematically examined and compared cities’ efforts to achieve more equitable neighborhood change. Consequently, the types of city planning action, intergovernmental support, and community advocacy that could redistribute the costs and benefits of neighborhood revitalization in diverse political, demographic, and economic contexts are not clearly understood.
This paper asks: which strategies are large U.S. cities using to address residential and commercial displacement, and how does local context - particularly, the level of community advocacy for affordability, citizen participation in neighborhood planning, and private real estate organizations’ influence on policymaking - affect which strategies are used? To answer this question, I will present new findings from a mixed-methods study that systematically documents cities’ place-based affordability policies. The author developed and distributed an original survey that asked community development and planning directors in the 150 largest U.S. cities to indicate which of 27 place-based affordability policies were adopted or implemented in their jurisdictions at the time of the survey. The survey also documented each government’s process for engaging residents in plans to rezone or redevelop their neighborhoods and captured information about local community mobilization and private real estate industry participation in policymaking. The survey results were supplemented with information from official plans and ordinances, and subsequently merged with contextual data about each city. This paper draws on the responses of the 80 cities that completed the survey as of March 2017.

The findings will provide city and community planners and advocates with critical information about what localities with challenges and contexts similar to their own are doing to promote equitable development. In addition, the findings will reveal how different aspects of a city’s policy and socioeconomic context can be leveraged to improve the neighborhood outcomes of low-income households. More broadly, this paper will provide insight for scholars and practitioners into local governments’ capacity to act on behalf of vulnerable residents through progressive policy action in an era of fiscal constraint.

References


Key Words:
equitable development, housing affordability, commercial affordability, gentrification, displacement

METROPOLITAN VARIATION IN HOUSING FILTERING: DEMOGRAPHIC FORCES, NEW CONSTRUCTION, AND LAND USE REGULATION
Abstract ID: 266
Individual Paper Submission

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Filtering of housing has long been considered the principal process providing “naturally forming affordable housing” in the United States (HUD 2016). Unfortunately, filtering performed poorly in recent years while the need for it has been greater than ever. Lower-income families without housing assistance are extremely hard pressed to find rental housing that is affordable and meets their needs, particularly in larger or growing metropolitan areas.

Federal, state, and local governments operate a number of housing assistance programs to help lower-income families afford rentals, estimated by Schwartz (2015) as totally 8.3 million in 2012. However, needs for rental assistance outstrip the allocated resources which are shrinking in today’s fiscal climate. In the face of limited public resources, we should reexamine the filtering process as a long-term strategy that can help expand access to lower-income housing. Testing the effectiveness of filtering for provision of lower-income housing is important for helping planners and policy makers decide how much of the lower-income housing needs can be met by naturally forming affordable housing and how much will require housing assistance programs.

The objective of this study is to examine how much filtering has occurred in metropolitan areas over the last decades and, if so, what contextual factors have accelerated filtering in some cities more than in others. Filtering largely depends on adequate supply which has widely varied over time and space. Thus, we focus on spatial variation in the rate of filtering for two key decades of construction, the 1970s and 1980s, which are accounting for nearly one-third of the national lower-income housing stock in 2015 (This share is far greater in Sun Belt metros than in other cities).

We take a vintage longitudinal approach that uses repeated cross-sectional Census and American Community Survey microdata. We trace the housing units built in a given decade as they grow older over time. This study defines a household as lower-income if it is at or below 80 percent (alternatively 50 percent) of the area median household income. Filtering can be measured by the increase in occupancy by lower-income households of a given vintage between one survey time and the next. This study examines filtering in regard to lower-income renters in multifamily units in particular because that dwelling type is a primary source of lower-income housing. A sample of the 238 largest metros was used to study filtering trajectories across housing markets. Given that filtering occurs over an extended period of time, normally decades, this study takes a long-term perspective by estimating the effectiveness of filtering across decades.

Focusing on the multifamily rentals built in the 1970s and 1980s, we explore the factors that caused faster filtering in some metros for three decades: 1990s, boom (2000-2006), bust (2006-2010), and recovery period (2010-2015). Factors include measures of housing construction and land use regulation, numbers of young adults and overall employment growth, and key economic indicators. Our preliminary findings confirm a substantial variation in the metropolitan patterns of filtering across decades. Filtering is only weakly perceptible in most of the ten largest metros. But it still was an effective source of housing for lower-income families in medium- and small-sized cities. Filtering also was more effective outside the decade of the 1990s when multifamily construction was unusually depressed across the nation.

The results highlight the importance of relative balance between supply and demand for the effectiveness of the housing filtering process. Evidence shows greater downward filtering of multifamily rentals in areas with greater new construction indicating eased competition for limited rentals. Filtering is also stronger in areas with fewer young adults, indicating less entry-level demand pressure on rental market. The effect of land use regulation has an added effect of impeding downward movement of rental
units in metros. This implies restrictions of the normal supply response to growing demand has a negative effect on lower-income renters by reducing the expected opportunities from filtering.

References


Key Words:
Demographics, Housing Filtering, Land Use Regulation, New Construction

SELL OUT TO PUSH OUT: UNTANGLING THE RELATIONSHIP BETWEEN MULTIFAMILY PROPERTY SALES AND DISPLACEMENT RISKS

Abstract ID: 284
Individual Paper Submission

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The latest wave of gentrification has happened very quickly, enough to make this neighborhood change become more disruptive than the previous influxes of affluent people into the inner-city. This dramatic set of economic and demographic changes imposes disproportionate rent increases in low-income communities, with accelerated displacement risk of vulnerable populations in the communities (Ellen and Ding, 2016). Today, only one percent of upper-income groups are left out from this displacement (Chapple, 2016). Communities of color are especially vulnerable.

The affordable housing lost during gentrification is provided by the market, but indicators and systems of neighborhood typology in research have not fully unpacked the components of change in the low cost housing stock. There are only a few studies of naturally occurring affordable housing (NOAH) that describe its variation and dynamics. One outstanding example is the report from Minnesota Housing partnerships (2016), which found that a disproportionate number of multifamily rental units were sold in moderate and low-income, racially diverse neighborhoods. This reveals how upscaling older apartment properties increases displacement risks of the most vulnerable populations, low-income renters and people of color in marginalized communities.

This study pays attention to NOAH in the multifamily sector, and its preservation as a strategy to mitigate displacement risk. Currently, 72% of multifamily properties in Portland, Ore. are low-quality apartments (1&2 stars in the rating system by Costar). More than two thirds of apartment sales that
occurred between 2010 and 2015 were made to low-quality apartment. Considering the current housing emergency in the City, it is significant to examine the relationship between sales/conversion of multifamily properties and displacement risks of vulnerable people.

The research asks two basic questions: what is the potential for displacement with multifamily building sales/conversion, and does it perform as predictors of gentrification and displacement? First, the research investigates the geographic distribution and frequency of apartment sales in Portland, Ore. with particular focuses on demographic and spatial analysis in order to find the relationship between housing market investment and displacement risk. Next, the research examines the trajectories of apartment sales from 2010 to 2015 in order to compare the value of gentrification typology (Bates, 2013) for predicting market hotspots. The findings of research will inform how natural or market-rate affordable housing in older apartment buildings disappears, costing low-income renters and people of color their homes without creating an affordable replacement. The research will also discuss how apartment sales as a form of housing market investment can be incorporated into the existing gentrification typology for better predictability.

References

Key Words:
displacement, gentrification, apartment sales, conversion, typology

THE IMPACT OF NEW URBANISM ON SINGLE FAMILY HOUSING VALUES: THE CASE OF ISSAQUAH HIGHLANDS
Abstract ID: 293
Poster

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New Urbanism (NU) has been a prevalent issue in architecture and planning fields over the last few decades as an alternative to reforming the sprawl pattern of suburban growth. New Urbanist design principles have been adopted for many housing and neighborhood planning efforts in the United States. Do the attributes of New Urbanist housing serve as an impetus for improving economic value through increasing property value?

This study compares the home prices of Issaquah Highlands (IH), an exemplar of NU project in Seattle Metropolitan area, with those of traditional suburban single family homes in the City of Issaquah.
null hypothesis is that consumers are willing to pay similar prices for houses in Issaquah Highlands and for houses in the surrounding conventional subdivisions. The principal database used consists of US Census, Washington State Geospatial Data Archive (WAGDA), and the King County Tax Assessments. The final data set consists of 1,075 single family housings over the three-year period from 2012 to 2014 based on sale records throughout the City of Issaquah. This study uses the hedonic pricing model to assess the impact of New Urbanism on the value of single family residences through linear and semi-log functional form. Descriptive statistics show that more expensive properties are located in Issaquah Highlands ($638,358), followed by all sales ($622,066), and out of Issaquah Highlands ($608,673). 45.1 percent of sampled properties are in Issaquah Highlands, and 54.9 percent are outside of Issaquah Highlands.

The findings reveal that consumers are willing to pay a premium to reside in a community developed by New Urbanism principles. A New Urbanism community in Issaquah Highlands confers appreciable housing value benefits to a single family house. The coefficient of the binary variable indicating to a proxy for New Urbanism is positive and statistically significant, presenting that people are willing to pay a $40,985-$56,762 premium (approximately 6.2-6.5 percent) for houses in Issaquah Highlands.

The present study provides several implications for future research and policy development in the urban planning field. Particularly, the findings are very valuable to urban planners, developers, policy makers, and consumers, though the results are limited to only a single family house. Further, the statistical relationships among 1,075 sale prices and several characteristics are appealing and compelling for communities developed by New Urbanism principles.

References

Key Words:
new urbanism, urban sprawl, property value, hedonic price model

RESIDENTIAL REINVESTMENT AND THE EVOLUTION OF THREE SUBURBAN IMMIGRANT NEIGHBORHOODS
Abstract ID: 342
Individual Paper Submission

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Contemporary immigrant settlement patterns stand in contrast to those of previous immigrants and challenge assumptions about the spatial assimilation process. Historically, after having first settled in ethnic enclaves in the inner city, immigrants who acquired education, wealth, and language skills dispersed into the suburbs seeking better housing and schools. Since the 1960s, however, many
immigrants have been bypassing central cities and moving directly to the suburbs as their initial place of residence in the United States. Some immigrants are settling in “ethnoburbs”—multiethnic suburbs in which one ethnic group has a significant concentration (Li, 2009). Transnationalism and changes in immigration policy have resulted in more highly educated and higher-income immigrants than in previous generations. Instead of spatially dispersing into mainstream American society, immigrants seeking larger, more contemporary housing may choose to live within suburban ethnic concentrations by demolishing and rebuilding single-family housing to create homes that better match their needs and preferences.

The construction of suburban “monster homes” is often a highly contentious process opposed by longtime residents. The paper examines suburban ethnic concentrations within ethnoburbs, focusing on the ways in which immigrants transform the physical form of their neighborhoods through the redevelopment of single-family homes and how the physical transformation affects the formation and evolution of the ethnic concentrations. The paper focuses on the Asian immigrant communities located in three ethnoburbs in the inner-ring suburbs of Chicago—Morton Grove, Skokie, and Lincolnwood, Illinois, suburbs with high percentages of Asian residents, i.e., 22.2%, 21.3%, and 21.1%, respectively. These three suburbs are located within larger, statistically significant spatial clusters of housing redevelopment activity (Charles, 2014). These three suburbs have highly ranked school districts, but something else not captured by the econometric model is affecting why residents are choosing to demolish and rebuild homes in these particular neighborhoods. This raises the following questions: what are the residents’ motivations for demolishing and rebuilding homes in these neighborhoods, and how does this housing redevelopment activity affect the formation and evolution of the ethnic communities in these municipalities?

With a geographic focus on three ethnic communities located within multi-ethnic, inner-ring suburban municipalities in the Chicago area, the research project investigates how immigrants’ redevelopment of single-family housing affects the formation and evolution of suburban ethnic communities. This research project uses exploratory spatial data analysis (spatial cluster analysis) followed by semi-structured interviews, archival research, and observation. The project endeavors to inform our understanding of the immigrants’ residential settlement patterns and to reconceptualize the spatial assimilation process of contemporary immigrant groups.

References

Key Words:
immigration, suburbs, reinvestment, residential redevelopment, mansionization
HOW DO HOUSEHOLDS COPE WITH RENT BURDEN? A COMPARATIVE ANALYSIS OF LOS ANGELES AND THE COACHELLA VALLEY, CALIFORNIA

Abstract ID: 353
Individual Paper Submission

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Wage stagnation and rising housing costs have forced households to devote a larger proportion of their income to housing over time. Some households pay so much of their income on rent that they lack sufficient residual income for basic necessities. The term “rent burden” has come to describe those households paying more than 30 percent of their monthly income on rental costs, which is regarded as a threshold after which households make tradeoffs that significantly impact their quality of life. Previous rent burden studies lack a nuanced assessment of the mechanisms underlying decision-making and the cumulative impacts of rent burden coping strategies on residents. This project uses data from a survey and focus groups of rent-burdened households to illuminate the coping strategies and cumulative vulnerabilities of rent burden on residents, to understand how residents internalize an increasingly unaffordable housing market.

Rent burden became increasingly prevalent after the Great Recession of 2007-08 (Colburn & Allen, 2016). In 2015, approximately 49.1 percent of households were encumbered with rent burden, up from 47 percent in 2005 (Fernald, 2016; Fernald, 2015). From 2008 to 2014, the number of severely burdened households—those paying more than 50 percent of income to rent—rose from 2.1 million to 11.4 million. Low-income and undocumented households disproportionately experience rent burden (Ault, 2016; McConnell, 2013; Greulich, et al., 2004). Since rent burden is a function of income and housing costs, variation likely exists in how residents experience rent burden across income levels, cultural groups, geographies, and local factors including land use policy and urban form.

Existing rent burden research has either relied upon descriptive statistics or correlational work, finding that rent burdened residents are more likely to increase their household size leading to overcrowding and experience energy insecurity (Díaz McConnell, 2016; Hernández, et al., 2016). Negative associations between overcrowding and child health and educational outcomes have been established, and point to the deleterious and long-term consequences of rent burden (Lopoo & London, 2016; Mueller, & Tighe, 2007; Harkness & Newman, 2005). Slow housing policy response has forced households to make tradeoffs in consumption patterns, including lower food, education and prescription drug spending, impacting child cognitive achievement and housing quality as housing costs increase (Newman & Holupka, 2016; Mason, et al., 2013; Kirkpatrick & Tarasuk, 2011; Pollack, Griffin, & Lynch 2010).

While this research has provided insight into risks and trade-offs, it has not provided a deep understanding of how households are internalizing rent burden, strategizing to cope, and cumulatively impacted over time. Our research addresses this literature gap by conducting a micro-level analysis of rent burden to understand the direct and indirect impacts experienced by households. We undertake comparative case studies of rent burden in the Coachella Valley, California (with a focus on the rural communities of Mecca and Desert Hot Springs) and the South Los Angeles Promise Zone. Both areas share similar state and regional contexts, with diverse populations, high rent burden and many immigrants. These areas both exist within collective impact initiatives attempting to improve neighborhood conditions for low-income residents. The systematic variation in the case studies allows us to observe conditions and coping strategies across geographic, income-level and housing cost
differences. We draw from primary qualitative data from resident surveys and focus groups.

Our findings thus far have revealed important information about perceived risks and informal coping strategies, such as informal credit markets and lending pools. In the Coachella Valley, where agricultural and hospitality workers endure seasonal unemployment, residents are making impactful seasonal tradeoffs between energy, water, food and transportation in order to survive. Immigrant status produces additional vulnerability, and residents leverage legal immigrant status to help others gain access to institutional resources.

References

Key Words:
Rent Burden, Housing, Inequality, Neighborhood Change, Affordability

URBAN DECLINE AND RESIDENTIAL PREFERENCE: THE EFFECT OF VACANT LOTS ON HOUSING PREMIUMS
Abstract ID: 359
Individual Paper Submission

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A major shift in the economic and residential development has left communities with abundance of vacant lands across valuable areas in the city. Vacant lands are often associated with increase in crime rates and decrease in property values in the community. The vacancy nearby pushes home and business owners to leave the declining neighborhood. Considering the existing infrastructure in the urban settings, the vacant land possess a substantial potential to improve community value, especially in the metropolitan areas. In such settings, vacant lands are located nearby, if not surrounded by, residential or commercial areas where local governments seek to improve the quality of life for their residents and users in return for community development and increased tax revenue. As local governments are allocating substantial funding into alleviating the negative impacts of such lands, it is important to understand the impact of those vacant lands have on the communities and the value of properties therein in terms of their condition in the neighborhood.

There has been a few hedonic studies that included vacant land as one of their attributes, but there has not been any hedonic studies that focused on vacant land and its conditions. This study analyzes
longitudinal impact of vacant land in terms of its density, distribution, and duration in the City of Minneapolis, MN. The research design focuses on analyzing how the different conditions of vacant lands, i.e. size, density, distribution, and duration, impact the value of single family houses in the neighborhood from year 2002 to 2015. The study period is divided into seven two-year periods. Using market price data from sales transactions collected over a period of fourteen years, a series of spatial hedonic models is examined in a longitudinal analysis to compare effects of the vacant land and examine the conditions where the neighborhood is more significantly affected. The researchers are expected to find how the size, density, distribution, and duration of the vacant lands impact the value of properties in low-, middle-, and high-income neighborhoods.

References


Key Words:
vacant land, spatial hedonic pricing model, longitudinal impact, property value

OUTCOMES FOR DETROIT'S LIHTC HOUSING AFTER YEAR 15
Abstract ID: 373
Pre-Organized Session: Preserving Housing in Detroit's Weak Market Conditions

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The Low-Income Housing Tax Credit (LIHTC) program is the nation’s largest federal program to produce affordable housing. In Detroit the program has led to development of about 15,500 units, most of them built in the late 1990s and early 2000s. When projects reach 15 years of operation, the tax-credit investors sell their ownership. The concern in Detroit is how to restructure the financing and ownership to preserve the projects as decent affordable housing after year 15, a point at which many projects require major repairs. More than 5300 units will reach that age between now and 2020, so finding solutions is an urgent need. LIHTC provides decent affordable housing for low-income renters who are in poverty or near poverty, many of whom are elderly or disabled or have experienced chronic homelessness.

Research has not addressed what happens to LIHTC projects in very weak housing markets. The national characterization of outcomes is unlikely to describe Detroit’s because of the deterioration of
Detroit’s housing market over the last 10 years. In addition, nearly all the research uses data on projects that reached year 15 before the recession and had less complex financing than later ones. Finally, the physical and financial condition of projects determines solutions to repositioning projects at year 15, but prior research has relied almost entirely on interviews with key informants and lacked data on conditions to show what solutions work in different situations.

Working as part of a Detroit affordable housing task force with representatives from CDFIs, LISC, general partners facing their projects’ expiration, the trade association for CDCs, and the city’s housing department, we are aiming to answer the question: what are the outcomes for LIHTC projects reaching year 15 in a very weak housing market, why, and how can such projects be preserved as decent affordable housing? We are collecting data on expiring projects’ financial situations and on past projects’ outcomes. We are learning about the results of pilot efforts to resolve the expiring projects’ financial problems. We will map projects by physical condition and neighborhood housing market strength and will correlate project outcomes with neighborhood housing market conditions, type of housing project management, and financial structure. We expect that in contrast to HUD’s national survey findings, numerous single-family, scattered-site projects will be uninhabitable and require demolition. A substantial share of the remaining projects will have failed to obtain financing for needed renovations and will no longer provide decent affordable housing. We will identify solutions that are worth trying in an effort to preserve decent affordable housing in a very weak housing market. The conditions surrounding the provision of decent affordable housing to low-income households is a central concern to urban planning scholars and practitioners. Because LIHTC has produced so much affordable housing and remains the major source of federal funding, understanding what happens as LIHTC housing ages and how to preserve it under varied housing market conditions is of considerable importance.

References

Key Words:
affordable housing, LIHTC, housing preservation, refinancing housing, Detroit

INHERENT INSTABILITY: POST-CRISIS URBAN HOUSING MARKETS AND SPECULATIVE ACTIVITY
Abstract ID: 374
Pre-Organized Session: Preserving Housing in Detroit's Weak Market Conditions

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Over the past decade new pipelines of predatory and speculative activity in housing markets emerged from the broader financial crisis, the state response to serious disruption in housing markets, and the ongoing financialization of real estate (Christophers 2015). This paper examines the evolution of these pipelines in the city of Detroit and the outcomes of speculative practices. We then focus on one aspect of that market, the increasing use of land contracts, and the relationship between these property pipelines and rising evictions in the city.

We employed multiple and diverse methods to follow the various channels through which property moves and is experienced. Our qualitative approach combines participant observation with Detroit Eviction Defense, court documents, and interviews. Our quantitative work draws on a diversity of data sources to understand the ways in which property markets have transitioned in the past decade. These include mortgage issuance and foreclosure records from RealtyTrac and HMDA, foreclosure records and land contract filings from the Wayne County Register of Deeds, tax foreclosure data from the Wayne County Treasurer, and property speculator data from the research collective Property Praxis whose work utilizes the City of Detroit Assessor data. This mixed method approach allows for a comprehensive engagement with post-crisis housing markets and its material outcomes.

Our findings indicate a bifurcated system of predatory speculation between local and global capital. There is a significant expansion of activity by long-time local actors on the fringes of the housing market, particularly those with portfolios of slum rentals and houses for cash sales. In addition, there is an influx of global capital buying in volume and operating either as a wholesaler to smaller speculators or contracting with local property managers for land contract sales or management.

The prominence of local actors in these markets both challenges some of the more totalizing narratives of financialization. In the US, it demonstrates the ability of local actors, the tenement landlord of earlier decades, to adapt and expand despite the increasing liquidity of real property. It also illustrates the dependence of global real estate investment firms on the knowledge of local management companies (Gotham 2009). These local actors provide a historical through-line in understanding predatory speculative activity and the urban decline that follows. The case of global financial investment offers a diverse set of actors often preying on one another rather than on residents in the city. These liquidity-centered speculative investments have ancillary costs as houses sit vacant and deteriorate. But when these owners’ attention turns toward city residents the instruments of choice are the land contract, a local management company to collect payments, the bailiff to serve eviction papers, and clean out crews to empty the evictees possessions into a dumpster (Desmond 2016, Satter 2009, Taylor 2012).

What has emerged over the last decade is an increasingly refined system of dispossession through instruments such as land contracts and the willingness of courts to defer to debt holders and dispatch police to remove people from their homes in a place where the population continues to decline. Though land contracts are a small portion of real estate markets, developments in this informal market provide shape to the broader transformations of the housing market and the effects of financialization on everyday life for city residents on the margins. The limited access to legal protections and negligible oversight of land contract or lease-to-own agreements captures both the experimentation and exploitation on the fringes of the housing market. The nature of these speculative, predatory activities challenge assumptions about housing markets in declining cities and neighborhoods and need to be understood as central features on contemporary property markets by urban planners.

References
**URBAN REGENERATION IN DETROIT: EXAMINING ISSUES OF HOUSING AFFORDABILITY**

Abstract ID: 376

Pre-Organized Session: Preserving Housing in Detroit's Weak Market Conditions

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Shrinking cities in the United States typically have a significant number of low-income households and as these cities implement revitalization strategies to recover from years of economic and population decline, a more critical lens is required to analyze the social and housing impacts of urban regeneration. There is a popular presumption that shrinking cities have an abundant supply of affordable housing, which stems from the observation that low-demand housing markets will generate lower housing prices due to the fact that supply greatly exceeds demand. However, a weak housing market with high vacancy rates does not necessarily mean increased housing affordability for residents, especially low-income residents. The literature on U.S. shrinking cities tends in large part to focus on the underlying causes of property abandonment and disinvestment (eg. Galster, 2014), race and redevelopment, decline-oriented planning, impacts of tax foreclosures and land speculation, and the use of land banks and other approaches to address the problem of vacant and abandoned properties (eg. Dewar, 2015; Hackworth, 2016). Some recent research has started to investigate the state of affordable housing in shrinking cities from the perspective of siting in neighbourhoods of opportunity and accessibility to transportation (Tighe & Ganning, 2016). However, very little research has examined the social and housing implications of regeneration initiatives for low-income populations in resurgent shrinking cities.

This research contributes to the emerging literature and helps to inform planning practice by exploring the affordable housing issues and challenges specific to U.S. shrinking cities undergoing regeneration and by illustrating how processes of gentrification and abandonment can help to reduce the supply of decent, affordable housing that is available to low-income populations (following Marcuse, 1985). This paper uses Detroit as a case study to examine the impacts of recent regeneration initiatives on the city’s housing affordability landscape (2010-2015) by exploring how the affordable housing opportunities of low-income populations in the greater downtown area have been affected by recent intense redevelopment. The research investigates the following central research question: What are the housing impacts of regeneration initiatives in Greater Downtown Detroit?
To address this question, this study employs a mixed methods research approach to determine and understand: the geographic distribution of subsidized housing production in the city; the change in affordable housing supply; the change in housing cost burdens across income groups; the change in housing policy frameworks and funding; demographic change; affordable housing issues; and the extent of displacement. The quantitative component draws upon: HUD (Department of Housing and Urban Development) data; ACS (American Community Survey) data; housing conditions data; building permits data; and tax foreclosure data. The qualitative component is based on a three-month 2016 research trip to Detroit where I conducted 22 semi-structured key informant interviews with: tenants; community development financial professionals; housing and community workers; affordable housing developers; real estate professionals; and tenant organizers. Initial findings suggest that affordable rental housing options for low-income households are tightening and under increasing pressure due to rising rents and a shifting Section 8 landscape. Housing cost burdens also remain a serious issue for low-income renter households, and tenant experiences living through downtown redevelopment illustrate tensions between old and new Detroit.

References


Key Words:
affordable housing, shrinking cities, revitalization

SINGLE-FAMILY RENTALS: A STEPPING-STONE TO HOMEOWNERSHIP OR ITS SUBSTITUTE?

Abstract ID: 379

Pre-Organized: Rental Housing: New Dynamics in the Market and How to Modernize Federal Programs

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Single-family rentals make up the largest increase in the housing stock since the Great Recession, as investors converted previously foreclosed homes to rental (Immergluck & Law, 2014). Meanwhile, rental demand surged when some families returned to renting after foreclosure and would-be homeowners sat on the sidelines. On net, 3.8 million families became single-family renters between 2006-15. But attitudinal data indicates that most renters still aspire to own someday, despite recent upheavals to homeownership (Collins & Choi, 2010; Drew & Herbert, 2013). As a result, these considerable shifts in renter demand likely reflect families whose housing choices are constrained, either
temporally (waiting for the right moment) or financially.

Census data indicate that the characteristics of single-family rentals and their occupants are distinct from those of multifamily rentals and single-family owner-occupied homes (Drew, 2015). However, Census data do not provide insights into the reasons why an increasing number of households are picking single-family rentals, or what their future housing aspirations are. This paper presents data from a national survey of renters in single-family homes owned by both institutional and mom-and-pop investors that we conducted in Spring 2017. The survey explores four themes: 1) the demographic and socio-economic characteristics of renters choosing to live in single-family homes; 2) where single-family renters lived before, including whether they were renters or owners previously; 3) the decision-making process of why these households chose to rent, as well as why they chose the property and neighborhood in which they live; 4) and their future housing plans, including whether they expect or desire to buy a home in the future and what conditions need to be met in order to act on those aspirations.

Some neighborhoods have been transformed by an influx of investor-owners and new renters. As a result, practitioners have worried about shifts in neighborhood character and the longer-term prospects of these families and neighborhoods. While descriptive, this survey provides important insights into questions related to tenure and neighborhood choice of contemporary households. These findings help us capture the characteristics of new entrants to these communities, in addition to understanding the motivations for the selection of their homes. The results can also inform policies for the development of a housing stock to meet the needs of an increasingly large group of renters with diverse housing concerns and aspirations.

References

Key Words:
single-family rental, housing preferences, barriers to homeownership, neighborhood preferences

REFORM OF THE LOW-INCOME HOUSING TAX CREDIT PROGRAM
Abstract ID: 380
Pre-Orgaized: Rental Housing: New Dynamics in the Market and How to Modernize Federal Programs

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Low-Income Housing Tax Credit (LIHTC) authority is allocated annually from the federal government to each state’s Housing Finance Agency (HFA). The HFAs award the authority to development proposals. The annual allocations totaled about $7.6 billion in fiscal year 2015 (Gramlich, 2015). The rationale for the LIHTC production program is that it adds units where there is a shortage of affordable
units. If the LIHTC program is a response to market need, the LIHTC units should be found disproportionately in tight markets, those with low rental vacancy rates. This research will examine the extent to which the LIHTC program is locating units in tight markets across the nation. In addition, the LIHTC program should be locating units in markets where there is a shortage of units at the price point served by the program, where rents are affordable to households with income between 30% and 60% of the Area Median Family Income. This research will examine the extent to which the LIHTC program is locating units in census tracts with shortages of units at this price point. The findings will be used to identify possible reforms that could be made to the program.

References


Key Words:
Low-Income Housing Tax Credit, Affordable housing, Rental housing, Rental vacancy

HOUSING COST BURDEN IN THE HOUSING CHOICE VOUCHER PROGRAM

Abstract ID: 381
Pre-O rganized: Rental Housing: New Dynamics in the Market and How to Modernize Federal Programs

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U.S. renters’ housing cost burdens are reaching historic highs. According to the Joint Center for Housing Studies (2016), the number of households spending more than 30 percent of their income on rent rose by 3.6 million between 2008 and 2014, and the number of households spending more than 50 percent of their income on rent rose to a record high of 11.4 million. These high housing cost burdens fall most heavily on renters earning the lowest incomes. Of those earning less than 30 percent of the Area Median Family Income (AMFI), 62 percent spend more than 50 percent of their income on rent (Table A-1A, Steffen et al. 2015).

The Housing Choice Voucher (HCV) program, the nation’s largest tenant-based rental assistance program, is designed to alleviate these high housing cost burdens for qualifying low-to-moderate income households. For those participating in the HCV program, the U.S. Department of Housing and Urban Development (HUD) awards housing assistance payments through local public housing agencies that cover the difference between 30 percent of a household’s adjusted gross income and a payment standard that reflects the cost of renting a standard quality housing unit. In theory, HCV recipients should not be spending more than 40 percent of their income on rent while participating in the program, yet research finds that many HCV participants still experience housing cost burdens in excess of this threshold (McClure 2005). Some evidence suggests that the scarcity of affordable rental housing in areas where HCV participants desire to live may be one factor contributing to higher housing cost burdens (Pendall
Other possible explanations include variable income streams that do not keep pace with adjustments to housing assistance payments, poor program compliance monitoring on the part of local public housing agencies, or rising utility costs that are not offset by HUD utility allowances.

This report examines trends in housing cost burden for HCV participants between the years of 2003 and 2015. We examine cross-sectional data in each of these years and conduct a cohort analysis of those who initially leased-up in 2003 and 2008. We find that housing cost burdens for HCV participants have risen since 2003, and the year-to-year changes in housing cost burden roughly approximate trends in the recent housing market cycle. Housing cost burdens are particularly high for those earning the lowest incomes. Larger families with children that are headed by non-elderly persons, females, and those without disabilities also experienced higher cost burdens. Those living in newer, larger single family homes have experienced higher cost burdens than those living in other housing types. These trends play out unevenly across geography. In most years since 2003, housing cost burdens were higher for those living in low-poverty neighborhoods. Much of the housing cost burden faced by HCV participants is attributable to renting units above local payment standards combined with changes in income that do not keep pace with rising rents. This research draws upon these and other findings to offer policy recommendations for ways to reduce the incidence of high housing cost burden among HCV-assisted renters.

References:

Key Words:
Housing Choice Voucher, housing cost burden, housing affordability, U.S. Department of Housing and Urban Development, rental housing policy

MAPPING AIRBNB USAGE ACROSS NEW YORK CITY NEIGHBORHOODS: IMPLICATIONS FOR REGULATION
Abstract ID: 382
Pre-Organized Session: Rental Housing: New Dynamics in the Market and How to Modernize Federal Programs

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The short-term rental market has invited considerable attention in many cities. Proponents argue that short-term rentals help long-time residents earn needed income and increase the attractiveness of their...
city as a tourist destination, while critics charge that short-term rentals alter the nature of residential buildings, take homes off the market and lead to higher rents for long-term renters. Both sides of the debate offer anecdotes, but there is little rigorous empirical evidence about actual usage patterns and how they vary across neighborhoods. This paper explores this spatial variation in New York City, using unique, census-tract level data from Airbnb, combined with administrative, census, and social media data on neighborhood characteristics. We first examine how the intensity of Airbnb usage differs across the city’s census tracts and how patterns changed between 2011 and 2016. We calculate several measures of spatial diffusion. We explain this variation by estimating the relationship between Airbnb rental activity and neighborhood and population characteristics, as well as by analyzing the degree to which usage is correlated with short-term rental rates. How do the incomes and demographics of residents vary with Airbnb usage? Which types of neighborhood amenities are correlated with greater or lesser intensity of usage? To what extent do short-term rental rates or the ratio of short-term to long-term rents predict the intensity of usage?

We then explore the variation in the ratio of short-term to long-term rents to understand which neighborhoods are relatively more profitable for short-term rentals, and to probe the assumption that short-term rentals necessarily outcompete long-term rentals. We rely on a few different sources to capture long-term rents, including census data, administrative data on rental income, and asking rents from Zillow. We estimate hedonic rent models to test whether amenities are valued differently by short-term and long-term renters. We assume certain amenities (like schools) are more valued by long-term renters than short-term renters, whether others (such as proximity of restaurants or distance to key tourist attractions) are more valued by short-term renters.

In the last part of the paper we consider possible regulatory responses to this emerging market. While most jurisdictions have adopted a single, citywide set of rules, we show significant variation in the prevalence of short-term rentals across New York City’s neighborhoods. This variation raises the possibility of neighborhood-specific regulatory responses, like that recently enacted in Portland, Maine. We discuss the pros and cons of such approaches in the last part of the paper.

References


Key Words:
Housing, Rent, Neighborhoods, Sharing Economy

THE IMPACT OF THE RISE OF HOUSING SEARCH WEBSITES ON US RENTAL HOUSING MARKETS

Abstract ID: 383

Pre-Organized Session: Rental Housing: New Dynamics in the Market and How to Modernize Federal Programs

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The use of housing search websites has become increasingly important in the housing search process. While scholars have examined this shift from a number of perspectives there is little attention paid to the potentially major impact of this shift on metro-level rental markets. Kroft & Pope (2014), in one of the few papers that address metro-level impacts, found evidence that the increasing prevalence of Craigslist ads was correlated with declines in rental vacancy rates. However, rental vacancy rates themselves are a complicated-to-interpret metric as Belsky (1992) notes.

This paper establishes a new method of assessing the effect of search websites on metro markets and uses this method to assess and interpret the claim that Craigslist affected rental vacancy rates. First an improved measure of the prevalence of housing search services in metro markets is developed. Second, this measure is used with a more complete model of rental vacancy rates and a larger data set to re-examine Kroft & Pope’s findings. Lastly, following on the work of Gabriel & Nothaft (2001), I deploy a new data set to decompose rental vacancy rates into the frequency and average duration of vacancy in order to show the different impact Craigslist has on these two variables.

I find (i) that Craigslist’s prevalence in metro rental markets varied dramatically in the mid-2000s and had achieved near-saturation in some markets, (ii) that its prevalence was correlated with a decline in rental vacancy rates, and (iii) that this effect can be explained by Craigslist’s differing impact on the frequency and average duration of rental vacancies. This decomposition also provides a means of understanding the implications of the shift in rental vacancy rates.

This research has a number of implications. The rise of information technologies has long been studied because of its implications for fair housing concerns, and data scraped from these technologies has been trumpeted as a powerful new data source for researchers (Boeing & Waddell, 2016). That technologies like Craigslist have an effect on metro rental markets is understudied and public officials should understand these effects as these technologies proliferate in the private market and are adopted by the public sector. Researchers and analysts should also anticipate and acknowledge these effects and understand that while Craigslist can be useful as a data source it also changes the markets in which it operates.

References

Key Words:
housing, big data, Craigslist, urban economics, vacancy rates

SHORT TERM RENTALS IN SMALL CITIES: IMPACTS AND REGULATIONS
Abstract ID: 387
Individual Paper Submission
A short-term rental (STR) can be generally characterized as a housing unit that is rented or leased for less than 30 days. Often referred to as vacation rentals, they are not new to the housing market. However, in recent years, technology has greatly influenced the STR and vacation rental market. Internet-based businesses such as Airbnb, VRBO, HomeToGo, LUXbnb, CouchSurfing, HomeAway, FlipKey, VaCasa, have given residents and visitors access to a user-friendly global marketplace. These companies cater to the exchange of STRs under the coordination of a web-interface.

Platforms like Airbnb take advantage of the access economy phenomenon. While the access economy has proliferated, these platforms often fly under the radar of government taxation and regulation. Accordingly, there are many perceived negative impacts of short-term rentals including the loss of tax revenue and impacts on the accommodation sector, neighborhoods, and housing affordability. Still, the widespread use of these platforms show evidence of many localized benefits including: the ability for property owners to earn income by renting out their unused space, the ability to offer tourists and visitors the experience of living like a local, and among others, the ability to drive visitors toward areas and destinations that were not traditionally accessible for tourists (spurring economic activity to new areas of a community).

Because this access economy activity is a recent phenomenon, research to date is sparse. Gurran and Phibbs (2017) examine the prevalence and impacts of short-term rentals in Sydney, Australia, focusing on how planners can respond. Guttentag (2013) examines the legality and tax implications of Airbnb in six large cities, focusing on the disruption to the accommodation sector. ECONorthwest (2016) examined the affordability impacts of short term rentals in Seattle and Portland. Thus far, research has focused on large metropolitan areas. Our research fills an important gap by focusing on small, tourism-oriented towns in Oregon.

We are interested in how short-term rentals affect small towns in Oregon. We address the following research questions in this paper: 1) What is the prevalence of short-term rentals in small cities? 2) What are the positive and negative impacts of short-term rentals in small cities? 3) What is the current regulatory framework for addressing short-term rentals? 4) What tools can cities use to reap the benefits of short-term rentals while minimizing negative impacts?

To examine the prevalence of short-term rentals, we rely on city-level data from Airbnb and parcel-specific data from Airdna for all cities under 100,000 in population in Oregon. We examine the share of total units with a short-term rental and examine the proportion of short-term rentals to vacant units, rental housing, and affordable housing inventory. To understand the positive and negative impacts and the regulatory environment, we rely on a survey administered to city managers and city planners. Preliminary findings show that some small cities in Oregon have over 10 percent of the housing stock available through Airbnb. Only four (of 36)counties and nine (of 242) cities require that renters pay transient lodging taxes through Airbnb. (Airbnb, n.d.)

This work provides timely and important information to small cities about a recent trend affecting housing. Planners and city staff need to understand how short-term rentals are affecting their communities and respond with appropriate regulatory controls.

References

Key Words: land use regulation, short-term rentals, housing affordability

FREE FROM THE FEDERAL LEASH? HOUSING AUTHORITIES AS AUTONOMOUS ACTORS IN LOCAL AFFORDABLE HOUSING MARKETS
Abstract ID: 401
Individual Paper Submission

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In alignment with the conference theme of “Cities, Regions, and Growth: Smart, Inclusive, Equitable?” this paper examines the role of public housing authorities (PHAs) in promoting inclusive and equitable cities and regions. Devolution in federal housing policy since the 1980s has altered the regulatory environment and financial support for public housing authorities. Federal changes have created opportunities for organizational flexibility among PHAs, allowing them to be lead affordable housing providers in some communities. Additionally, the growing, market-based emphasis in federal policy is hastening PHAs’ evolution into hybrid organizations; more PHAs are becoming mission-driven organizations with characteristics of public, nonprofit, and private sector organizations. This incorporation of strategies from different sectors to address a mission is a hallmark of hybrid organizations (Billis, 2010; Nguyen, Rohe, & Cowan, 2012; Skelcher & Smith, 2015). While European authors have discussed non-profit or third-sector organizations becoming hybrids (Billis, 2010), US scholarship suggests that quasi-public PHAs are also becoming hybrids as they employ private sector methods and financing to meet their public missions (Nguyen et al., 2012).

The dynamics of federal policy changes, funding reductions, and organizational flexibility lead to several questions about the impact of PHAs as autonomous actors in local markets for affordable housing. This paper uses in-depth case studies of four housing authorities across the US. We ask: what decisions do PHAs make as they navigate the competing interests of the public, the market, and community forces and values? How do we characterize variations in PHAs’ activities? And, what is effective policy for enhancing PHAs’ ability to continue to meet their public missions? We describe the variation in PHA activities across the case study locations and create hypotheses about the reasons for variations in PHA approaches to providing housing outside of the public housing stock. The cases are located in San Antonio, TX, Richland County, MT, Alameda, CA, and Lebanon County, PA. These housing authorities illustrate specific variations in state legislation, the local housing market, community size, development partnerships, political context, and racial diversity of the locale. These elements are key explanatory factors in the variation in public housing authorities’ engagement in
housing delivery outside of the public housing stock (Kleit, Airgood-Obrycki, & Yerena, 2017). At each location, we interviewed housing authority staff, development partners, city and county officials, and local housing advocates.

The case studies provided insights into the hybrid organizational structure and the mechanisms that enable PHAs to develop housing outside of the public housing stock. In response to emerging federal funding programs, the PHAs have engaged in partnership agreements and created new non-profit organizations. The PHAs that have development partners sought to expand their own capacity using the experience of non-profit and for-profit sectors. PHAs navigated the expectations of these sectors while maintaining their central mission. One PHA’s staff has significant development experience and formed a development non-profit to retain control over the process and the associated developer fees. In each location, local governments also provided crucial gap financing and coordinated affordable housing efforts with the PHA. However, PHAs that operate as separate entities from the city or county had a greater degree of flexibility in their decision-making. The interviews highlighted the opportunities and challenges that PHAs experience as hybrid, mission-driven organizations.

Planners and policy makers can aid PHAs in developing housing by introducing local inclusionary zoning ordinances, giving PHAs the power to issue their own bonds, capitalizing entrepreneurially on unique opportunities as they arise, permitting partnerships with non-profit and for-profit organizations, and allowing PHAs to operate as independent organizations.

References

Key Words:
public housing authorities, affordable housing development, housing policy, hybrid organizations

SOCIAL CAPITAL AND COMMUNITY BUILDING IN A KOREAN CHINESE ENCLAVE IN SEOUL
Abstract ID: 442
Individual Paper Submission

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Korean Chinese have been rapidly growing and are now the largest migrant group in Korea. Given that Korea used to be proud of itself as a ‘one-ethnicity society’, there have been increasing concerns about the growth of migrants including Korean Chinese. To reduce prejudice and social conflicts between migrants and native people, social capital and community building efforts are critical components for
sustainability in ethnically diverse communities. However, few studies analyze how social capital and community development are associated in ethnically diverse communities.

Our case study area, Daerim 2-dong, is the largest Korean Chinese enclave in Seoul. The community used to be called the “heaven of crime” and struggle from disorders such as illegal dumps and street fights. However, it seems that such problems have been reduced in last two to three years. Residents in the community say that crime rates, illegal dumps, and street fights have declined due to various efforts at the community level. Those community efforts include volunteer works such as community policing and cleaning streets, informing Korean Chinese community rules, and running a community space and programs to facilitate interactions between native Koreans and Korean Chinese. These efforts have been made by cooperation among native Koreans, Korean Chinese, and the neighborhood, district, and city governments. That is, bonding, bridging, and linking capital might have played a critical role for the improvement of community conditions. The improvement of community environment might also have changed existing social capital. These situations lead us to ask the following question: what is the interrelationship between social capital and community building in a Korean Chinese enclave?

We examine the interrelationship between social capital and community building by conducting in-depth interviews with Korean Chinese, native Koreans, and public officials and collecting supplementary data from fieldwork and governmental documents. Given that the most critical issues in the community have been crime and dirty living environment but the problems have declined, the interview questions centered on how social capital and community building efforts are interrelated regarding the improved environment.

The empirical analysis finds that social capital played a critical role for the initiation of the community building efforts and the community building efforts also expanded existing social capital. In particular, utilizing strong bonding capital among Korean Chinese in bridging between native Koreans and Korean Chinese and linking residents and the governments was critical for the improved community environment. Also, the improved community improvement helped increasing bridging capital between native Koreans and Korean Chinese.

By examining the interrelationship between social capital and community building in a Korean Chinese enclave, this study provides critical information for developing sustainable and inclusive communities and promoting social harmony to urban policy makers in Korea that has moved toward a multicultural society.

References

Key Words:
social capital, community building, community development, multiculturalism, urban regeneration
CULTURE CLASHES & CRASHES: COLUMBUS, OHIO ARTISTS ON THEIR CREATIVE HOUSING NEEDS

Abstract ID: 463
Individual Paper Submission

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The 2016 fire at Ghost Ship, a creative space in Oakland, has brought planners’ attention to artists and the safety of their creative spaces. Artists were quick to voice their concerns about the context that led to this disaster; rapid increases in housing costs were creating market pressures for artists to live and create in marginalized, illegal spaces. (Timberberg, 2015; PBS NewsHour, 2017). City plans need to address creative class housing and production space needs for safety, but the relationship between planners and the artists they want to support in their creative cities can be complicated.

This paper is an ethnographic case study comprised of affiliated artists within three artist organizations in the Franklinton neighborhood of Columbus, Ohio. Columbus, Ohio is recognized as a creative city in the literature, and recently experienced more redevelopment of its traditional arts district, the Short North. (Florida, 2003; Redaelli, 2011). Harvard Business School has become interested in the city’s culture adding a course called “The Columbus Way”, to describe how the city’s low-risk insurance values influenced its neoliberal development. Housing inequity has risen in Columbus, Ohio, along with its creative city status. The economic segregation is significant, with the Urban Institute ranking Columbus, Ohio in the top five most economically segregated cities in the US (Pendall & Hedman, 2015). Columbus’ Short North Arts District has become too expensive for artists, causing a creative class migration to Franklinton, a historically marginalized neighborhood. The results found that artists feel financially insecure, especially regarding their housing and creative spaces. Many interviewed artists had purposefully ignored or covertly broken zoning and city ordinances in their creative activities. Some of interviewed artists had even trespassed and occupied adjacent, vacant properties in an attempt to beautifying their immediate location. Those interviewed were cognizant of the role artists themselves can play in gentrifying neighborhoods, with one artist organization adopting the mission to fight against displacement. Artists had dual-desires to both 1) be outsiders to mainstream culture and 2) to instill more typically middle-class values into the neighborhood. Generally, artists felt conflict towards city planners as they wanted their neighborhood to receive reinvestment, however they remained concerned about the policing of their creative pursuits and displacement.

This study provides an in-depth look at why local artists make decisions to engage in legal or illegal creative activities, and their complicated relationship between local planning authorities and their sense of self-identity, as framed by housing market pressures in the creative city of Columbus, Ohio.

References


Key Words:
Creative Class, Artist Illegal Activites, Neighborhood Change, Trust, Culture

PERCEPTIONS OF (IN)SECURITY AND FEAR OF CRIME IN THE FACE OF URBAN RENEWAL: A CASE STUDY OF A DIVERSE INNER CITY NEIGHBORHOOD

Abstract ID: 470
Individual Paper Submission

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This research revisits the notion of urban renewal from the standpoint of (in)security and fear of crime in poor and racially diverse urban settings. Social movements for peace and security, the continuing struggles of immigrant populations and the failure of urban renewal efforts to address equity and inclusiveness issues remains a challenge to community revitalization efforts (See Ay & Miraftab, 2016). Mainstream efforts have placed emphasis on aesthetics – creating new amenities in deprived neighborhoods – hoping the result would be sustainable social improvement. More comprehensive revitalization efforts require understanding the complexity behind common incivilities and re-evaluating ineffective, or as Jacobs (1961) described, “feckless” interventions.

This paper will evaluate the causes and the effects of perceptions of (in)security and fear of crime (See Skogan, 1986) in a well-known hostile urban setting in Puerto Rico; a US territory that has been subject to great social and economic stress in the last decade. Literature on urban criminological theory indicates that perceptions of (in)security and fear of crime arise from built environment and socioeconomic factors (See Valera & Guárdia, 2014). Hence, using mixed methods, we will examine both built environment indicators and socioeconomic characteristics that may be associated with insecurity in a decaying inner city neighborhood. We will also articulate possible revitalization interventions in the context of inclusive and equitable planning theories considering both physical and social factors. We conducted 100 in-person interviews within our study area in order to study citizens’ self-reported perceptions of crime and fear of crime, as well as real victimization experiences. We also collected relevant socioeconomic and demographic information. Our survey instrument combined established methods for measuring perceptions of (in)security and fear of crime (See Grohe, 2011; Valera & Guárdia, 2014) including scenario exercises illustrated through the use of photographs. We also conducted in-depth interviews with key informants, including city planners, community advocates, and the state police in order to conceptualize the broader institutional context of security in our study area. In addition, we also conducted a historicized view of the social and economic impacts, some due to revitalization initiatives, that the people of Río Piedras, Puerto Rico have endured.

This research intends to bring to the forefront some important issues (e.g., migration, racial diversity, and economic crises) that have been deprioritized in conventional, amenity oriented revitalization efforts. The paper will inform current city and regional planning revitalization agendas by exploring perceptions of (in)security and fear of crime in diverse and complex city neighborhoods. Our aim is to provide more inclusive methods to revitalization attempts, while contributing to two current
conversations within planning scholarship: (1) inclusive and equitable planning, and (2) sustainable social transformation processes. We intend to make this paper a case study applicable to similar inner city neighborhoods in the US.

References

Key Words:
Insecurity, Fear of Crime, Diversity, Urban Renewal, Community Revitalization

OTHER GEOGRAPHIES OF GENTRIFICATION
Abstract ID: 473
Roundtable

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In 2000, the British geographer Loretta Lees argued that scholars needed to think more critically about the geography of gentrification to analyze how its processes differ by spatial context and location. Since that time, a number of studies have given attention to these questions in diverse communities across the U.S. and the world. This panel will address how scholarship that applies a critical geographic lens has and can continue to advance scholarly work on gentrification. This includes questions about what a critical geography of gentrification looks like, current gaps in existing scholarship, and how studies of “other” geographies can inform effective urban policy, planning, and community organizing responses aimed at mediating the negative impacts of gentrification on marginalized groups and communities. The panel will bring together scholars studying gentrification in different U.S. contexts, including urban, suburban, and rural communities in high-growth and declining Rustbelt metropolitan areas in the Midwest and Northeast.

References

Key Words:
Gentrification, urban geography, suburbs, displacement, redevelopment
MODEL CONSTRUCTION OF URBAN FORM EVOLUTION BASED ON THE FACTOR ANALYSIS——A CASE STUDY OF ZHENGZHOU CITY, HENAN PROVINCE, CHINA

Abstract ID: 479
Lightning Research Presentation

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The study of urban form evolution is a reasonable generalization of geographical factors such as natural, economic and social conditions in a certain historical period and environment factors which are in the certain scope of city space, and explores the development trend of the future of the city, so as to provide the basis for city planning and urban design.

With the acceleration of the current global city integration, the urban construction within the scope of the world enters a new stage, factors which are affecting urban development are increasingly diversified and complicated, prompting the new integration of urban space and the frequent reorganization of the internal structure, which leads to the evolution of urban morphology more than at any other time in history, and the form evolution presenting new features; At the same time, Urban problems also show a trend of diversification. There is existing a direct relationship between urban form and urban problems. To create a sustainable urban form and to ease or solve thoroughly urban problems, the article combs the quantitative analysis of the urban form evolution, and from the perspective of the factor analysis, it also uses charts and other means to analyze systematically the factors influencing urban morphology evolution and the action mechanism of various factors. Then from the point of the cultural factors including the natural factors, and the city administrative boundary, urban planning, traffic conditions, politics, economy, the attractive function among the adjacent cities and other human factors, it builds the model which is suitable for all urban morphology evolution, and also uses the method of analysis chart to explain in detailed the parameters of the model. Considering the differences among cities, the article puts forward the regional, comprehensive, regular principles of the model parameter choice; To avoid the subjectivity of the research results, based on the index system of the evolution model parameters, the article adopts the quantitative method of statistics, and introduces the perspective of position analysis, and makes a comprehensive quantitative analysis. After completed these works, we can gain the possibility evolutionary number of different positions, which can also be as the results to describe the trend of urban form.

Finally, taking Zhengzhou as an example, this article analysis the basic situation and the background of the development of Zhengzhou, and clearly analyzing the influence factors of Zhengzhou’s urban form, and points out the factors that influence urban form of Zhengzhou, and use the method of quantification to analyze the influence factors of different directions, and also make a choice of acceptance, based on the above works, building urban morphology evolution model of Zhengzhou which we can point out that Zhengzhou will develop towards East and Southeast in the future, It comes to that the city form will appear as "L" shape (or sickle shape) in Zhengzhou, and will be "petals" form or "T" shape in the forward as the changing of regional development environment and the speeding up of the process of integration of Zhengzhou and Kaifeng. Based on this, we can make the high quality of urban design which can create a sustainable urban form. To make things better, the article shows the future urban form by drawing map.

References
Over the past few decades or so, the housing landscape in the United States has changed rapidly. For example, the U.S. experienced a national house price bubble that ended in the spring of 2006 and then triggered the national subprime and foreclosure crises. These developments in turn resulted in the Great Recession, although many impacts are still visible, especially in multiple local housing and labor markets. In the meantime, the national homeownership rate has declined, returning to the level of the mid-1990s due to foreclosures, decreased household formation rates, increased debt burdens, including student debt, and extremely tight lending requirements. Policymakers in Washington, DC have responded to these developments in multiple ways. For example, they nationalized Fannie Mae and Freddie Mac during the financial crisis of 2008 and the subsequent Wall Street bailout. In addition, U.S. Congress helped to establish several programs to assist homeowners who were at the brink of foreclosure.

The demographic and socioeconomic environment of the United States has changed rapidly as well. While Baby Boomers have been much studied over the past several decades, Millennials have only recently been discussed as they have surpassed Baby Boomers in terms of numbers and become large future drivers of the housing market. Perhaps surprisingly, each group is different in terms of its characteristics and housing and lifestyle choices. For example, some Baby Boomers move to retirement communities, possibly in the Sunbelt, while others choose to age in the communities in which they have resided for a long time. Some Baby Boomers sell their single-family homes in the suburbs to move to condominiums or apartments downtown while others age in place. Some Baby Boomers live comfortable lives while others struggle financially, thus possibly taking on one or several part-time jobs.
With regard to housing, there may be issues related to affordability, maintenance, and the use, lack, or abundance of space.

Over the past few decades, U.S. social housing policy has continued to be fragmented, and there is a trend toward attempting to accomplish more with fewer resources. This development has been especially challenging given the lingering impacts of the housing crisis and the Great Recession, discussed above, and the gridlock in Congress and its focus on reining in spending, especially on social issues like housing.

This Roundtable will discuss answers to the following questions:

- In regard to housing finance, how does the racial and ethnic wealth gap influence housing finance? What is the role of parental wealth in housing finance?

- In regard to social housing, how have federal housing programs and policies evolved and how has the meaning and execution of public housing shifted and diversified, in tandem with new roles for the private sector? Have public housing authorities (PHAs) become a flexible organization form that, in the right local conditions, make PHAs key local actors in affordable housing delivery and preservation?

- In regard to senior housing, what are desirable housing models and innovative practices for aging in the community?

- In regard to neighborhood revitalization, what are desirable approaches for planning for centers in new neighborhoods compared to planning for centers in already existing neighborhoods? What are challenges in case of a collaboration between Redevelopment Land Agencies and Community Development Corporations when it comes to housing and community development?

- In regard to suburbs, what are the impacts of various housing policies on the evolution and transformation of suburbs?

References


Key Words:
housing, homeownership, housing finance, social housing, neighborhood revitalization

THE RECONSTRUCTION STRATEGY OF MOUNTAIN RURAL COMMUNITY BASED ON THE SYMBIOSIS THEORY
Abstract ID: 493
Poster

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Abstract: Rural communities, which have a certain scale of residents in rural area forming a social community, are the center of the rural residents of production and social activities. Due to the inconvenient transportation, poor level of productivity, the phenomenon of inefficient mountain land utilization, farming culture disappeared and the decline of material space environment become serious. Space reconstruction become a breakthrough of utilizing land resources rationally and promoting a benign evolution of rural regional system.

The space reconstruction of mountain rural community is a complex engineering system, which have to consider the exchange process and regulation of material, information and energy. Symbiosis theory regard as the core theories of ecology which research on material exchange between symbiotic unit, information transfer, and energy transfer. It has applied widely into the ecological, economic, management, agriculture and other fields, and it has achieved remarkable achievements. It means " In a certain symbiosis environment, symbiosis units form by an interdependent and mutually beneficial relationship in the process of competition survival space ".

This paper introduces the symbiosis theory to analysis of space reconstruction in mountainous rural community and to define the principles and steps of refactoring. Take the Shatan community, Taizhou, Zhejiang Province as an example, this paper analyses the three elements of symbiosis of the present situation and the existing problems. Finally, this paper raises three strategies of optimizing symbiotic model, strengthening symbiotic environment for problems and coordinating symbiosis units to form a space layout as the "four areas, three axis, three points".

The result shows that the symbiosis theory is a proper way to demonstrate the space reconstruction for rural community; the rural communities’ space reconstruction based on the symbiosis strategy respects to the principal position of rural residents, to realize rural community " sharing resource and environment ", to take advantage of rural community resource, and to improve the efficiency of rural community land use, which also provides a new idea of mountain rural community construction.

Key words: Spatial layout; Symbiosis theory; Space reconstruction; Mountain rural community

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Relevance of work: The master planning of environment comprehensive treatment in Yutou village, Shatan District, Taizhou

References

Key Words:
Spatial layout, Space reconstruction, Symbiosis theory, Mountain rural community

PATHWAYS TO INCLUSION: THE CONTEXT FOR NEIGHBORHOOD INTEGRATION IN CHICAGO, HOUSTON, AND WASHINGTON, DC

Abstract ID: 494
Pre-Organized Session: Building Inclusive Cities: Lessons from Houston, Chicago, and Washington DC

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The United States is becoming more diverse by age, race and ethnicity, household composition, and income even as its population continues to grow. Major metropolitan areas are the crucible of these changes. They account for most of the nation’s population growth and a disproportionate share of its non-white population, have a greater diversity of household types and sizes, and feature much sharper income inequality than the rest of the U.S. Their responses to aging, diversification, and growth will likely have an outsized impact on the future of the entire nation.

In this paper, I provide a contextual backdrop for the other three papers to be presented on this panel, on the specific actions that could promote economic and racial inclusion in neighborhoods of the Chicago, Houston, and Washington, DC, commuting zones (CZs, equivalent to metropolitan areas). All three CZs are currently segregated by race and income, but ongoing growth trends could provide fuel for inclusion. Unlike in past eras, people other than white non-Hispanics (whites) will account for most of the net growth in households from now to 2040, as older whites begin to pass away in larger numbers and growth in younger whites slows. At the same time, however, the number of senior-headed households will grow markedly in all three CZs, a transition whose full implications are yet unknown.

How will these transitions play out in neighborhoods? Moreover, how can local, regional, state, and national stakeholders bend the curve toward greater inclusion? The paper will compare the CZs on a few dimensions that provide further context for the case-study papers. Household formation and homeownership attainment differs across the three CZs. But in all cases, minority homeownership attainment has been somewhat more resilient than in the nation on average. This suggests that new action to support higher wages and incomes, rental housing affordability, and mortgage access could ease intergenerational sales of older white homeowners’ dwellings to younger non-white families. Such policies could help hasten racial integration and sustain income mixing in middle-income neighborhoods. Additional measures are likely to be necessary, however, to integrate established affluent neighborhoods and to promote mixing in distressed, mostly non-white neighborhoods. Finally, policies will need to be set that encourage the construction of new neighborhoods and communities that are much more mixed by income and tenure than in the recent past.

The political context of these three CZs, a final subject for this paper, makes Chicago look especially challenging and the Washington region least so among these three. Chicago’s municipal landscape is bimodal, with a welter of small cities and villages accounting for about 40 percent of the population and Chicago itself for nearly the same amount. Washington has a small number of fairly large jurisdictions, each of which could take actions that would integrate the core of the region and reduce the pace of fringe development in counties where new neighborhoods have been more racially and economically
exclusive. In Houston, finally, the actions of the City of Houston alone can make a very big contribution to inclusion. What can shift the calculus of local decisionmakers in each case to bend the curve toward inclusion? Stay tuned for the case studies, and for future research.

References

Key Words:
Integration, Neighborhoods, Inclusionary housing, Projections

AN EQUITABLE FUTURE FOR THE WASHINGTON, DC REGION?: A REGIONAL APPROACH TO BUILDING INCLUSIVE NEIGHBORHOODS
Abstract ID: 495
Pre-Organized Session: Building Inclusive Cities: Lessons from Houston, Chicago, and Washington DC

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The Washington, DC metropolitan area is a large, economically robust region that is one of the most racially and economically diverse, but also most segregated in the county. Over the last decade, it has also emerged as one of the expensive places in the country to live. Like many fast-growing metropolitan regions, the DC metropolitan area faces a critical challenge of addressing longstanding issues of social and spatial inequality amidst a crises of affordability.

In this paper, I ask what it would take to remake neighborhoods in the Washington, DC metropolitan area so that the region moved decisively toward racial and economic inclusion in the next 10 to 15 years? Based on a review of secondary literature, demographic and spatial data, and existing housing policies, I propose a regional approach to housing equity that focuses on both breaking down barriers to affordability and building a strong platform for current and future residents to be a part of the region’s continued growth and prosperity. This approach centers on four tactics, including preserving existing affordable housing units through aggressive anti-displacement strategies; capturing greater land value to produce new affordable housing, especially near transit; increasing the density and diversity of single-family home zones; and tackling the region’s stark east-west divide with fair-share policies. I also propose tactics to generate the regional cooperation and coordination, political will, and leadership needed to support an inclusive growth agenda. This paper offers an assessment of both the challenges of creating equitable neighborhoods in fast-growing, economically robust metropolitan regions as well as promising housing policies and political strategies to move them towards this goal.

References
TWO EXTREMES OF RESIDENTIAL SEGREGATION: CHICAGO’S SEPARATE WORLDS AND POLICY STRATEGIES FOR INTEGRATION

Abstract ID: 496
Pre-Organized Session: Building Inclusive Cities: Lessons from Houston, Chicago, and Washington DC

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Radiating out from a city that for decades fought hand over fist to create and maintain near perfect segregation, the city of Chicago and the region in which it sits face contemporary challenges that make inclusion and equity an imperative, yet grapple with a history that has deeply entrenched its racial and economic separation. This history is coupled with present day practices that reinforce its 180-year history. It is within this context that we are working on a project to address Chicago’s persistent racial and economic segregation through a cross-sector regional initiative called the Cost of Segregation, led by the Metropolitan Planning Council and funded by the MacArthur Foundation and the Chicago Community Trust.

We argue that a movement is needed to rethink strategies for integration in the region’s two poles: concentrated poverty and concentrated wealth. We focus there not because the areas between the poles are unimportant, but because we recognize two factors: integration in these “middle” areas may be less challenging than in the extremes, and increasingly, the bulk of the region’s real estate is habitated not by the middle class but by either the impoverished or the affluent. In growing areas of concentrated poverty, market-based strategies have long ceased to be effective, and in areas of concentrated affluence, efforts to induce the inclusion of affordable housing through regulatory measures have been met with resistance and even lawsuits. In both, a new level of political will and economic resources is necessary to achieve a more integrated and equitable Chicago. In this paper, we present initial policy recommendations that could restructure Chicago’s persistent patterns of residential segregation. In exploring new policies for these two poles, we share our reflections about how to move the Chicago region decisively toward integration by race and income. We focus on policy strategies to facilitate integration and equity in areas of disinvestment, such as access to credit and remedies for appraisal gaps. We also highlight policy strategies to address integration and equity in areas of affluence, such as legal and regulatory approaches that address zoning impediments to affordable housing.

References

CAN A MARKET-ORIENTED CITY ALSO BE INCLUSIVE?
Abstract ID: 497
Pre-Organized Session: Building Inclusive Cities: Lessons from Houston, Chicago, and Washington DC

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Houston, Texas represents a challenge for inclusiveness that is both unique and important. It has a reputation as one of the most market-oriented cities in the nation for real estate development – and yet it nevertheless has a complicated regulatory system, an abundance of land, and an uncoordinated set of financial incentives for economic development and real estate development. However, within this seemingly contradictory set of conditions lies the opportunity to create a model for a more inclusive, market-oriented city.

Once a traditional Southern city – at least in terms of its racial composition – Houston has emerged in the last 30-plus years as one of the most ethnically diverse cities in the United States. And at a glance, Houston would appear to be a city of unparalleled opportunity for this diverse population.

Houston also has a reputation as one of America’s most affordable cities, at least for housing. Compared to cities on the coast such as New York, San Francisco, Los Angeles, and Washington, Houston is relatively affordable. There is no question that the Houston housing market – especially the suburban housing market – provides opportunity for people with good blue-collar and white-collar jobs. But the big picture masks growing inequality and disparity that is at least as bad – and perhaps worse – than the national average.

Although its general pattern of disparity, displacement, and gentrification is typical of large American cities, Houston faces a unique set of challenges and opportunities in seeking to overcome spatial disparities associated with housing and transportation. Since 1980, Houston has seen a startling increase in the concentration of poverty, with almost 40% of all Census tracts in Harris County now suffering from concentrated poverty. Residents of Houston and Harris County also suffer from geographical disparities on almost every social and economic factor ranging from health to income. Some neighborhoods still feature income diversity, but most of these neighborhoods consist of moderate- and low-income residents of color. Affluent neighborhoods – especially affluent white neighborhoods – are increasingly segregated by income from the rest of the Houston region.

On the plus side, Houston has an abundance of land and, unique among large American cities, no use zoning – conditions which ought to present both ample opportunities for both market-rate and subsidized affordable housing. But the lack of use zoning specifically – and the general absence of strong government controls that exist in most other large cities – also limit opportunities to use otherwise strong market forces to create affordable housing, both naturally and via subsidies.

Considering both Houston’s challenges and opportunities, this paper posits key actions that could be pursued to encourage greater inclusivity in Houston. First and foremost it calls for the city of Houston to
establish clear inclusiveness goals that it can apply in both high-opportunity and underserved communities. Then, it suggests that government entities direct both regulatory mechanisms and financial incentives toward the pursuit of those goals. This might happen through the targeted use of public subsidies to encourage private construction of affordable housing. Or it could occur through the pursuit of regulatory shifts such as parking reductions, that result in lower developments costs. Finally, it suggests that local government leaders focus on Houston’s abundance of vacant, publically-owned urban land as an asset and carefully plan how to deploy it in the drive to create inclusive redevelopment.

References
- William Fulton, Director, Kinder Institute for Urban Research
- Rolf Pendall, Director, Metropolitan Housing and Communities Policy Center, Urban Institute
- Elizabeth Mueller, Professor, University of Texas at Austin

Key Words:
Housing, Inclusive planning

MIGRANTS’ RIGHT TO THE CITY IN SPAIN

Abstract ID: 502
Pre-Organized Session: Migrants’ Spaces and Rights to/in the City: Organized by the Mellon Humanities + Urbanism + Design Initiative at Penn

GONICK, Sophie [New York University] sophie.gonick@nyu.edu, presenting author

Many accounts of global uprisings have looked to their spontaneous qualities and joie de vivre. In such retellings, these movements emerge endogenously, channeling local dynamics outwards, where they might connect with transnational networks of protest. Those analyses that acknowledge embedded internationalisms often highlight the work of flaneur activists. In this way, Porto Alegre comes into proximity with the spectacle of Occupy or the more intimate confines of a Spanish squatted social center. The experiences of male subjects, often white, relatively young, and able bodied, are often privileged in these accounts.

Yet the introduction of postcolonial and feminist gazes into our study of urban social movements perhaps might help us apprehend unseen transnational trespassings. In this presentation, I turn to the anti-evictions movement in contemporary Madrid, Spain, to reveal how urban social movements can be shaped by unassuming processes and actors typically left off the map of our scholarly imagination. Using the concept of provincialization, I interrogate the role of migrant women in forging a particular politics of resistance. Through ethnographic and archival research, I trace how Ecuadorian women, often of indigenous origin, became homeowners during the city’s millennial property boom. Configured as a means of conferring legitimacy and even citizenship, ownership soon proved deadly, as default turned dreams into debt. Yet against the myriad violences this system engendered, these women were early pioneers for resistance, in part because of the differentiated nature of their experiences. Here I elaborate how they drew upon indigenous traditions of both collective life and activism to resist their prescribed fate, contributing to the birth of one of Spain’s most successful and enduring movements. This presentation will demonstrate how local struggles that respond to immediate urban conditions are deeply influenced by transnational flows of people and politics. Further, it will re-center race and gender as central variables within the Mediterranean’s urbanism of crisis and contestation.

References
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Key Words:
Right to the City, Social Movements, Migrants

Abstract ID: 507
Pre-Organized Session: Local Causes and Consequences of Gentrification

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This paper takes a novel look at the black box of residential mobility related to gentrification in the Chicago metropolitan area. While longitudinal analysis of neighborhood change indicate which social, economic, and demographic factors reflect patterns of gentrification, understanding where demand for housing in gentrifying neighborhoods comes from and where displaced residents go has been more challenging. Past research on residential mobility indicates that motivations for residential mobility are diverse, and that likewise market and regulatory filters, and overall effects of mobility are likewise diverse and mediated by numerous contextual factors.

In this paper, I analyze patterns of residential mobility at the household level for the Chicago, Illinois Metropolitan Area and relate these patterns to longitudinal patterns of neighborhood change. Drawing upon a novel source of longitudinal household residential location data, I construct 10-year residential mobility histories for over 8.1 million households living in the metropolitan area. Using community detection methods, I parse out spatial and temporal relationships between origin and destination neighborhoods based upon more than 1.2 million moves made over this 10 year period. I focus my analysis on patterns of mobility related to neighborhoods experiencing gentrification, with the goal of identifying patterns of market displacement and replacement, and by illustrating how patterns of mobility are related to broader patterns of neighborhood change for both origin and destination communities. This work presents a novel approach for identifying common housing mobility pathways associated with gentrification, with substantial implications for policy-relevant regional trends including population loss, the suburbanization of poverty, and continued patterns of racial and economic segregation.

References
GENTRIFICATION DEBATES: IDENTIFYING GENTRIFICATION AND ITS EFFECTS IN MINNEAPOLIS-ST. PAUL.

Abstract ID: 508

Pre-Organized Session: Local Causes and Consequences of Gentrification

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Concerns and debates over gentrification are emerging in many metropolitan areas. This paper focuses on two elements of these debates. First, identifying and measuring gentrification is often a contested matter. Specifically, whether or not gentrification is occurring in any given neighborhood is a matter of debate. Second, there is frequently disagreement as to whether gentrification in, in fact, a problem to be mitigated or a process to be encouraged. On the one hand some officials and neighborhood leaders find that reinvestment is the goal in creating a thriving 21st-Century metropolis, while on the other hand, residents and activists elevate concerns about involuntary displacement, especially when communities of color find that reinvestments do not directly benefit them.

This paper addresses these two questions in the context of Minneapolis and Saint Paul. Our research utilizes quantitative metrics, which can be used at the macro scale to determine if neighborhood change is occurring, and combines them with a qualitative analysis of perceptions of gentrification in the Twin Cities. Specifically, we apply the gentrification indices developed by Lance Freeman, Lisa Bates, and Lei Ding to neighborhoods in the Twin Cities. We have also conducted interviews with local public officials, nonprofit leaders, and residents to examine how they are identifying and experiencing gentrification. Our findings show great overlap between the quantitative indices of gentrification and the felt-experience of neighborhood leaders.

Finally, our paper includes analysis of how our interview sources talked about gentrification and neighborhood change. We highlight the values that are expressed in different views of gentrification, and highlight the nature of the debates about gentrification within particular neighborhoods of the region.

References
NEW GENTRIFIERS? THE SOCIO-SPATIAL EFFECTS OF CHARTER SCHOOLS IN LOS ANGELES

Abstract ID: 509
Pre-Organized Session: Local Causes and Consequences of Gentrification

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Charter schools have exploded in growth in U.S. urban areas. In the Los Angeles Unified School District (LAUSD – the site of this research), the number of charter schools grew from 10 to 197 between 2000 and 2013, and these schools now educate 12 percent of all LAUSD students. The underlying purpose of charter schools is to take advantage of more flexible curriculum and staffing requirements and, in many cases, to replace struggling nearby traditional public schools. Given the strong connections between local school quality, property values, and neighborhood demographics, successful charter schools can be a catalyst for neighborhood change, and potentially, gentrification.

This paper uses data on every charter school that opened in LAUSD between 1996 and 2013 in addition to traditional public school enrollments for that same time period. We use these data to first examine the effect of charter school openings and closings on traditional public school enrollments. Importantly, we estimate the distances over which charter school openings affect traditional public school enrollments, to allow educators to better respond to the proliferation of charter schools (which do not typically have fixed enrollment boundaries) in their districts.

Then, we identify the effects of charter schools on gentrification and displacement in Los Angeles neighborhoods. Gentrification is a complicated concept, and measures of this phenomenon that rely on quantitative data are often limited. A way to improve these measures is to combine several neighborhood attributes to bear on this measurement problem, to develop a measure as comprehensive as possible. Using neighborhood-level data at several points in time: 1990, 2000, and estimates from the American Community Survey for 2007 through 2013, we develop a measure that draws on several neighborhood indicators, and identify the effects of charter school openings on these indicators, using panel data and fixed effects regression models.

References

Key Words:
Gentrification, Charter schools, spatial statistics, neighborhood change

WHEN THE NEIGHBORHOOD GOES: RISING HOUSE PRICES, DISPLACEMENT, AND RESIDENT FINANCIAL HEALTH
Abstract ID: 510
Pre-Organized Session: Local Causes and Consequences of Gentrification

BUNTEN, Devin [Board of Governors of the Federal Reserve] devinbunten@gmail.com, presenting author

Even as the cost of housing in major coastal cities rises ever higher, our understanding of the effects of neighborhood price increases on residents remains limited. This deficit is driven primarily by data limitations: households move regularly, and changes in neighborhood outcomes over time may reflect the changing composition of the neighborhood rather than the changing fortunes of its initial residents. To address this challenge, this paper utilizes a very large, individual-level administrative panel dataset that includes information on credit outcomes, age, and detailed geography (to the census block level) for a large fraction of U.S. households over the period 2002-2014. By combining this information with neighborhood characteristics—in particular, with house prices and rents—I am able to address an array of questions about rising neighborhood prices and their effect on initial residents. Rising prices may reflect improved amenities within the neighborhood, or they may reflect tight housing supply. Do residents leave their neighborhoods more often when prices rise? Are rising prices harmful the financial health of residents, or are they able to pay them without compromising their financial health? Do these effects vary significantly across cities or across neighborhoods, and if so, what are the covariates? Can policies like zoning that restrict neighborhood housing supply affect the rate of displacement? Advocates of looser housing supply hypothesize that it would reduce displacement (and associated harms) by funneling incoming residents to new construction, while opponents argue that new construction may change the amenity value of the neighborhood and thus encourage a further influx of wealthier residents, exacerbating the housing cost problem and encouraging further displacement. And finally, do these effects depend on whether the resident holds a mortgage (i.e., is a likely homeowner) or not (i.e., is a likely renter—at least among younger people)? My preliminary work suggests that rising neighborhood-level house prices are associated with (1) falling credit scores for likely renters, (2) rising credit scores for likely homeowners, and (3) no increased propensity for renters to leave the neighborhood. However, the fall in credit scores for renters appears to be driven by the set of renters who do leave, suggesting that rising prices may alter the composition of outgoing renters. Finally, rising prices are associated with a falling variance of in-neighborhood credit scores, suggesting that more-expensive cities are also more heavily segregated ones.

References
ARE NEIGHBORHOODS FOR NEIGHBORS? A HEDONIC STUDY OF AIRBNB’S IMPACT ON PROPERTY OWNERS IN WASHINGTON D.C.

Abstract ID: 511
Individual Paper Submission

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Short-term rental housing has become increasingly popular with the global success of Airbnb, an on-demand short-term rental platform. While the San Francisco based company claims victory for bringing economic and social benefits to its subscribers, it is facing challenges from both local communities and city governments. In its hometown, the city seeks to regulate the short-term rental housing market first with a city ordinance signed in 2014 and later with stricter regulations in Proposition F, though it was voted down in 2016. Opponents are concerned that Airbnb would divert precious housing opportunities from local renters and cause noise and safety violations affecting local homeowners and renters (San Francisco Chronicle, 2015). As the subscribers of Airbnb grow, such problems become increasingly visible.

It is worth examining whether the proliferation of Airbnb is truly perceived as a negative spillover to local residential community with increasing traffic, increasing noise level, and decreasing sense of neighborhood safety (Edelman and Geradin, 2016). However, unlike hazard waste sites that convincingly increase resident perceived risk level and lower property value (Mccluskey and Rausser, 2001), there is more nuance about Airbnb: A non-user may perceive economic and social benefit of Airbnb from their neighboring Airbnb users’ experience. This network effect is a common benefit for products of the sharing economy (Sundararajan, 2016, page 118). From a housing policy perspective, such potential social bridges are worthy of preserving (Lang and Hornburg, 1998).

We, as planning scholars, have little to no knowledge about the housing market consequences of Airbnb due to its novelty and its complicated crowd-based nature. Nevertheless, it is high time to address the issues associated with Airbnb, as the tension between Airbnb community and Anti-Airbnb community intensifies dramatically in the past few years.

This study will examine the impact of Airbnb on property owners in the city of Washington D.C. A hedonic model will be used to explore how the density of active Airbnb listings, as a location-based disamenity/amenity, can affect residential property values. Furthermore, I will take advantage of the event shocks of presidential election, inauguration, and Women’s March as a natural experiment to the District’s Airbnb market to derive the causal effect of Airbnb density on variation in number of property transactions and average property values at a neighborhood level.
The preliminary findings suggest that the number of Airbnb expands rapidly in the District with a remarkable spatial concentration in downtown and historical areas. An average of 70% of entire-unit rentals raise the concern about how guest behaviors may affect neighboring property owners. In addition, an unusual number of new Airbnb listings emerged after the 2016 presidential election and barely retired after the inauguration in January, 2017, creating a natural experiment setting. A panel of property sales records and hedonic attribute data from Office of Tax and Revenue of D.C. municipal government are used in the hedonic study. With the robust empirical strategy and statistical analysis, I expect to find how the density of Airbnb causally affects Washington D.C.’s property owners on property transactions and property values. I will also discuss the important housing policy implications in regard of whether the District of Columbia should regulate the Airbnb market.

References


Key Words:
Airbnb, Neighborhood Effect, Hedonic Study, Housing Regulations

NEIGHBORS AND NETWORKS: THE ROLE OF SOCIAL INTERACTIONS ON THE RESIDENTIAL CHOICES OF HOUSING CHOICE VOUCHER HOLDERS

Abstract ID: 518
Individual Paper Submission

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Finding a home is not easy, especially for low-income households who find only a small share of listed units to be affordable. This is all the more true in metropolitan areas with tight housing markets, where fewer units become available. Consider that a household with an income at the 25th percentile of the local renter income distribution in one of the nation’s ten largest metropolitan areas in 2014 would have found less than 5 percent of available rental units to be affordable. A key goal of the housing choice voucher program is to enable recipients to move to a broad diversity of neighborhoods. Yet while low-income households who are lucky enough to obtain a housing choice voucher should encounter many more affordable units, they still typically live in neighborhoods that are only slightly less disadvantaged than the typical poor household (Pendall, 2000; Wood, Turnham and Mills, 2008; McClure, 2013).

Recent studies have probed this puzzle of voucher holder neighborhoods, and they have pointed to a number of potential contributors: the geographic concentration of units renting below voucher rent caps,
limited search time, tradeoffs between housing structure and neighborhood, and landlord discrimination (Rosenblatt and DeLuca, 2012). The existing literature has yet to pay much attention to the role of informal information networks. We explore whether voucher holders appear to use informal networks in their housing search and whether those networks tend to steer them to higher poverty neighborhoods.

We use geocoded longitudinal data on the universe of housing choice voucher holders between 2011 and 2014 to learn whether and how households with vouchers use informal networks to aid their housing searches. While we do not have direct information on search methods, we can observe whether voucher holders tend to move to the same neighborhoods as other voucher holders who live in the same building or block, after controlling for the initial neighborhood and household attributes. We find robust evidence that pairs of voucher holders who live in the same building or in very close proximity to one another are more likely to move to the same neighborhood than other pairs of voucher holders who also live in the same neighborhood but further away from one another. We find that these effects are magnified in tight housing markets where searches may be more challenging. They also appear to be magnified in more segregated metropolitan areas, where voucher holders, about two thirds of whom are black or Hispanic, may also face more significant constraints. Finally, voucher holders who live close to other voucher holders who move are more likely to move to higher poverty neighborhoods than other voucher holders from their same neighborhoods, suggesting that social networks among voucher holders tend to guide them to higher poverty areas.

These results suggest that providing more information and guidance to voucher recipients regarding neighborhood options, and thus reducing their reliance on social networks, could lesson their exposure to neighborhood poverty.

References

Key Words:
housing, neighborhoods, voucher, social networks, poverty

INFORMALITY IN U.S. HOUSING MARKETS: PLANNING PROBLEM OR PLANNING SOLUTION?
Abstract ID: 522
Pre-Organized Session: Managing Informality II- Land and Development

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Informality has been widely studied in the developing world, and its implications for planning have been thoroughly examined (Roy, 2005). Domestic planning research on informality has been far more limited, particularly research on informal housing. It is increasingly apparent, however, that informality is in fact
common in U.S. housing markets, permeating everything from land development (Larson, 2002), to housing production (Mukhija, 2014), to property ownership (Way, 2010). Unlike much of the informal housing in the Global South, where entire swaths of the urban fabric may exist in largely extra-legal circumstances, informal housing in the U.S. takes on unique forms: in particular, U.S.-style informal housing varies markedly from place to place, it is often hidden from view, and it is typically interwoven within otherwise formal housing markets (Durst & Wegmann, 2017). This paper draws upon the existing literature on informal housing in the U.S. in order to examine its implications for planning scholarship and practice in this country.

I argue that U.S.-style informal housing poses both challenges and opportunities for planners. On the one hand, informality represents the “unplanned” or “unplannable.” As such, efforts to conduct rational planning for housing production are potentially stymied by the fact that much of the informal activity in U.S. housing markets is hidden from view, both from the public at large and from planning professionals. Moreover, even when planning can succeed in “regularizing” informal housing—that is, bringing it back into compliance with codes and norms—such gains are often offset by what seems to be an inevitable reversion to informality. On the other hand, informality also offers an important opportunity for planners in the U.S. to rethink their approach to social planning. If planners are willing to work, as Roy (2005) argues, within a “state of exception,” informality in U.S. housing markets may be viewed as a planning solution rather than a planning problem.

References

Key Words:
Urban informality, Housing, United States

PLANNING FOR UNPLANNED SUBURBS: GROWTH MANAGEMENT AND INFORMAL LAND DEVELOPMENT IN THE UNITED STATES
Abstract ID: 523
Pre-Organized Session: Managing Informality II- Land and Development

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Informal housing exists in the United States in a variety of forms but is often overlooked by scholars, planners, and policymakers (Durst and Wegmann, 2017). One of the most striking examples is the more than century-long practice of informal land development, in which residential subdivisions have been carved out of desert, mountain, and swamp—often with little to no planning and few if any services—
and sold to buyers. Lots in such subdivisions typically remain vacant for extended periods of time and when housing is eventually built it often fails to meet even basic building codes (Krulikowski, 2008, Shultz & Groy, 1988, Ward, 1999). States have undertaken varied efforts to stymie the proliferation of these “unplanned suburbs” and to address the often long-standing and intractable challenges they pose to planners and policymakers.

This paper draws upon insights from research on urban informality in order to examine the efficacy of these various approaches and their implications for growth management policy in the United States. Seven states with markedly different approaches to growth management located in three of four census regions are examined: Arizona, California, Florida, North Carolina, Pennsylvania, Texas, and Washington. The analysis draws upon the existing scholarly and legal literature, as well as key informant interviews with local planners, in order to understand how states have “planned for unplanned suburbs”—that is, how they have sought to prevent the spread of informal residential subdivisions and address the downstream challenges they pose to planners.

The results of the study illustrate the enduring challenges posed by informal land development in the United States. Certain states such as California, Florida, and Washington have instituted preventative policies that have completely forestalled the development of new informal subdivisions, however, these states continue to grapple with intractable challenges associated with ailing or lacking infrastructure, poor-quality housing, and widespread lot vacancy. These problems originate from and are exacerbated by the informal nature of these subdivisions, which complicates efforts to conduct retroactive planning in largely unplanned communities. These same problems also exist in states such as Arizona and Texas, but so do other more severe challenges due to the general failure of these state to undertake efforts to prevent the development of new unplanned suburbs.

These findings contribute to the scholarly literature related to U.S. informality by highlighting the century-long efforts by planners and policymakers to address the challenges posed by informal land development. The analysis presented here brings renewed attention to the need for and the efficacy of growth management policies in stymying the spread of informal subdivisions, and it illustrates the persistent challenges that planners face in grappling with long-standing problems in pre-existing unplanned suburbs.

References


Key Words:
Informality, Land Development, Housing, Growth Management, Subdivision Regulation

PARTICIPATION, PLANNING, AND PROTEST: INFORMAL DWELLERS’ STRATEGIES TO COMBAT EVICTIONS ASSOCIATED WITH MEGA SPORTS’ EVENTS IN BRAZIL.

Abstract ID: 524
Pre-Organized Session: Managing Informality II- Land and Development

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Informal human settlements are characterized by the "lack of serviced land and social housing as well as a dysfunctional legal system which generates large costs for residents including the lack of public services, discrimination by others, environmental and health hazards, and inequitable civil rights" (Fernandes 2011: 2-3). Two typical characteristics of informal settlements sets them apart from formalized neighborhoods in terms of struggles against evictions: precarious and variegated tenure security and physical infrastructure.

Given these characteristics, residents of informal settlements often hesitate to take part in formal local politics, benefiting from alternative forms of participatory governance (Nunan and Satterthwaite 2001). Participatory budgeting in Porto Alegre provides an example of how municipalities can build institutions that represent the needs of informal dwellers (Pimentel Walker 2013; 2016). Nonetheless, participatory budgets and master plan councils can provide limited tenure security to informal dwellers in the face of intensive capital investments.

My research has demonstrated the failure of participatory planning mechanisms to mitigate the exclusionary effects of mega-sports events in the cities of Porto Alegre, São Paulo, and Rio de Janeiro. Although, housing movements have unsuccessfully attempted to block the approval of soccer stadiums renovations and the associated urban renewal projects at participatory master plan councils, a few anti-eviction campaigns have been successful. This paper analyzes the strategies and tacit knowledge deployed by informal dwellers to save their homes; specially the use of alternative media, partisan politics, coalition building, and street demonstrations.

Findings on the master plan council’s approval of soccer stadium renovations and associated urban revitalization projects related to the World Cup 2014 are based on participant observation of master plan council meetings between July 2009 through March 2011. Alternatively, findings on the effectiveness of the diverse strategies that housing movements undertook to prevent World Cup related evictions have been based on interviews with the activists of the housing movements, NGO representatives, and the community leaders of informal settlements under threat. These interviews with key informants took place during my dissertation fieldwork (July 2009-March 2011) and the summers between 2013-2015.

The field work documented informal dwellers’ struggles for tenure security within the institutions of participatory planning and how the World Cup represented a shift away from participatory planning. Finally, the research demonstrates how informal settlers must constantly renegotiate community organizing strategies in the face of changing structures of participatory governance, legal reform, and new proposed urban redevelopment projects.

References


Key Words:
Mega Sports' Events, Evictions, Tenure security, Participatory planning

UNDERSTANDING NEOLIBERAL METROPOLITAN-CITY BUILDING AS A PROCESS OF UNDERDEVELOPMENT IN BLACK NEIGHBORHOODS: THE CASE OF THE KING URBAN LIFE COMMUNITY IN BUFFALO, NEW YORK
Abstract ID: 561
Individual Paper Submission

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This study posits that in legacy cities systemic racism and the chronic underdevelopment of black neighborhoods are interwoven with the metropolitan city building process and the operation of the urban land market. We explore this thesis through a case study of the King Urban Life community, a small underdeveloped black neighborhood in Buffalo, New York. A parcel level analysis is used to examine neighborhood scale changes brought about by the metropolitan city building process as Buffalo’s economy shifted from industry to service and high-technology.

The underdevelopment of inner-city communities was a byproduct of economic change and the remaking of the urban metropolis during the rise of neoliberalism. In this context, we posit that the underdevelopment of the King Urban Life community was driven by the intersectionality of (1) neighborhood depopulation catalyzed by white outmigration and neighborhood resegregation (2) implementation of a city strategy to solve the neighborhood housing surplus problem by mass demolition without a community redevelopment plan (3) decline in rental housing quality caused by property entrepreneur’s strategy of profit maximization combined with disinvestments (4) disinvestment in neighborhood physical infrastructure by city leaders, and (5) declining housing appreciation (housing values) caused, in part, by a disfigured neighborhood context, which consisted of owner-occupied housing units interspersed with vacant lots, abandoned structures, and poorly maintained rental units.

We conclude by arguing that distressed, underdeveloped characteristics found in many inner-city black neighborhoods do not occur in a vacuum, nor are they simply the mirror-like reflections of the socioeconomic status of the people living in them, nor are they the “natural” outcomes of residential segregation. Rather, the neighborhood context in these underdeveloped communities is shaped by microeconomic forces, conscious political decisions, and by race-based patterns of intra- and inter-neighborhood migration which are informed and driven by the metropolitan city building process.

References


Key Words:
Housing Market Dynamics, Underdevelopment, Residential Segregation, Black Neighborhoods, Metropolitan City Building

JUMP-STARTING THE HOUSING MARKET IN A WEAK-MARKET CITY: RESULTS FROM MIDTOWN AND DOWNTOWN DETROIT

Abstract ID: 566
Individual Paper Submission

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The near-collapse of Detroit in the wake of the financial crisis and the associated Great Recession led to widespread efforts—public, private, and philanthropic—to stave off the worst effects of the disaster and to foster renewal in the iconic weak market city. Given the severity of the city’s problems, and their structural character, improvement will surely be slow and uneven. Some of the strongest neighborhoods show signs of very gradual recovery; others experience not only continuing high levels of vacancy and abandonment, but also on-going outmigration and further decline.

Downtown and adjacent Midtown, the city’s two largest employment districts, present a much more encouraging picture, with clear signs of new private investment. Each has been the target of a variety of revitalization investments, primarily from the corporate and philanthropic sectors. One set of initiatives, Live Midtown and Live Downtown, were designed to help increase the population and density of the neighborhoods by stimulating demand in the residential real estate market. Launched in early 2011, each made a five-year commitment to provide the same well-designed package of financial incentives to encourage the employees of anchor institutions and firms to move to Midtown and greater Downtown. Another, less tightly structured and less well publicized, set of incentives were created to stimulate the supply side of the rental housing market. That five-year program window has recently closed, and there is no doubt that conditions in both neighborhoods have improved. Both markets were stagnant in 2010. New market-rate rental properties began entering the market in late 2012, occupancy rates are high (98%+), rents are rising, and the pipeline of new projects continues to grow. This paper examines the results of each set of incentives, and places them in the context of sustained planning activities, largely by high-capacity nonprofit organizations, designed to make both neighborhoods more attractive places to live, work, and play.

The most detailed analysis will examine the strategy behind the Live Midtown and Live Downtown program design, and use five years of program data to profile their performance. It will pay particular attention to where participants located, whether they were new to the area, and the rents they paid. It will pair this with an examination of the amount of private developer activity in the neighborhoods during the same time period, especially the number and pricing of new units brought on line, and associated changes in market rents and occupancy rates, and with progress in effecting neighborhood improvements, especially in improving both actual and perceived safety. The results of this analysis will then be assessed in the context of alternative explanations for changed conditions, including changes in local employment and investments by anchor institutions.

This analysis is intended to help both planners and researchers better understand how to craft effective strategies to strengthen weak markets, and to suggest promising lines of research to clarify the
conditions under which such strategies are likely to make a difference. Analysis to date suggests that a demand-side stimulus, while a useful tool, is unlikely to suffice; that supply-side strategies (i.e. developer incentives) are critical in very weak markets; and that public sector incentives, while extremely important, may need to be supplemented by other types of incentives in the weakest markets.

References


Key Words:
neighborhood revitalization, legacy cities, stimulating housing market, weak-market cities

THE EFFICIENCY AND EQUITY ISSUES IN CHINA’S HOUSING PROVIDENT FUND: EVIDENCE FROM SEVEN CITIES

Abstract ID: 575
Individual Paper Submission

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How government organizes its housing finance system to encourage housing development and consumption varies by individual countries. In general, housing finance systems can be categorized into two approaches: market-based institutions that are integrated into the broader financial system versus special self-funded circuit institutions that are separated from the rest of the financial system (Chiquier & Lea, 2009). While advanced market economies have often adopted the first approach, countries where private lenders were not active in long-term lending often turn to the second approach to generate dedicated housing funding. One example of the self-funded circuits is the Housing Provident Fund (HPF) program that has been in use in China since 1992.

Essentially a compulsory housing saving plan, the Chinese HPF program requires both employers and employees contribute a certain percentage of the employees’ salaries to the employees’ individual HPF accounts. In return, employees can withdraw their HPF savings and get subsidized HPF loans for qualified housing expenses such as home purchases and renovation. By 2012, the program has collected 5 trillion RMB savings, with the number of active contributors up to 102 million, and an outstanding HPF loan balance of 1.7 trillion RMB (Chen and Deng 2014). It has become one of the most important housing programs in China (Deng et al. 2011). This paper evaluates the efficiency and equity issues in the administration of China’s HPF program.

Like other housing programs in China, HPF has a decentralized management structure. The central government sets up the principles and rules, while the management of HPF fund falls entirely on local HPF centers, who are responsible for collecting and distributing HPF fund within their jurisdictions. As a result, there is considerable flexibility in local HPF management. Local HPF administrations can adjust the contribution rate as well as the salary basis used to calculate the contribution. They also have discretion over the issuance of HPF loans. However, very few studies have examined the variations in local HPF management. We do not know to what extent the HPF has become a local housing policy tool.
and what role it has played in addressing local housing problems. Nor do we know whether the local variations in HPF management have made a difference in program outcome.

This paper will fill this gap. We have constructed a panel dataset that provides a comprehensive coverage on the annual collection and uses of HPF fund in seven major Chinese cities for the period of 2004 to 2014. The seven cities include Beijing, Shanghai, Chongqing, Guangzhou, Guiyang, Hangzhou, and Tianjing. For these cities we also collected a rich dataset on local housing market conditions and local economies from various government statistical yearbooks. Econometric models were built to examine the uses of the HPF loans and their relationship with local housing and economic conditions. Moreover, the period we study is a time when China experienced unprecedented economic growth and, at the same time, the development of a serious housing affordability crisis. A particular issue we consider in our econometric analysis is how the HPF has been incorporated as part of the Chinese government’s macroeconomic strategies to serve the dual goals of promoting housing and economic prosperity while meeting the needs of the disadvantaged groups. Findings from this paper have important implications for the future reform of the HPF program.

References

Key Words:
Affordable Housing, Housing Finance, China

THE BUILT ENVIRONMENT AND FORECLOSURE
Abstract ID: 592
Poster

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One strategy to stabilize neighborhoods is to reduce the number of foreclosed properties, which typically remain vacant and poorly maintained. While studies have found that foreclosures are disproportionally clustered in ethnic minority and low-income communities, little is known about the impact of built environments on foreclosures. Previous studies have focused on the risk of mortgage default prior to the actual foreclosure process, and none have considered the multidimensional attributes of built environments. To fill these identified research gaps, I examined the extent to which various attributes of built environments are associated with foreclosure inventories and sales.

The current study was conducted in Los Angeles County, California. The final dataset was created with parcel-level foreclosures, census-based socio-economic data, and GIS-based built environments. We measured various stages of foreclosure: our outcome variables were the number of pre-foreclosure, short-sale, real estate owned (REO), and REO sales in 2010. Socio-economic and behavioral variables included race, population, age, median household income, education, unemployment rate, mortgaged homes, and walking or biking to work. Various dimensions of built environments were assessed in the following five domains: (a) density, (b) diversity, (c) design, (d) destination, and (e) neighborhood
safety. The unit of analysis was the census tract (N=2320). Negative binomial regression was employed for statistical analysis, with the statistical significance level at 0.05.

Consistent with previous literature, the study found that neighborhoods with a higher percentage of ethnic minority and low-income residents were significantly associated with higher rates of foreclosures. After controlling for the socioeconomic characteristics of neighborhoods, we found that neighborhoods that were more densely populated and with mixed land uses were associated with lower rates of foreclosures. Neighborhoods with many recreational destinations were negatively associated with foreclosures, while a higher percentage of shops and stores was not significantly associated with foreclosures. Neighborhood safety was also shown to be associated with small foreclosure inventories. This study shows that built-environment characteristics significantly affect the number of foreclosures. Safer neighborhoods and more accessible and diverse built environments appeared to be significant factors contributing to a sustainable community that deters foreclosure events.

References


Key Words:
Foreclosure, Built Environment, Neighborhood, Minorities

RESIDENTIAL DEMAND FOR WALKABILITY AND SAFETY ACROSS COMMUNITY SETTINGS AND AGE GROUPS
Abstract ID: 610
Poster

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Walkable communities are increasingly promoted for their health, social, and environmental benefits. The housing market also shows a growing demand for such communities. However, it is still questionable to what extent the demand or preference for walkable communities accord with various other housing demands across different populations (Handy et al., 2008; Myers & Gearin, 2001). There is also a shortage of studies examining the interrelationships between objectively evaluated neighborhood quality and preferences for walkable and safe neighborhoods, which are considered in actual residential location choices (Van Dyck et al., 2011; Yu & Zhu, 2013).

This study examined who considers walkability and safety when selecting their residence. It further explores how older (≥65 years) vs. middle-aged (50-64 years) home buyers, and urban vs. rural home buyers may consider these factors differently. It used the datasets from two recently completed research projects carried out in six non-metropolitan communities in Texas, including four urban towns with
populations ranging from 70,190 to 137,147 and two rural towns with populations ranging from 22,663 to 39,795. Activity (e.g. walking for transportation) and personal data (e.g. residential preferences, SES, lifestyles) were collected via surveys, and built environment (e.g. land uses, density) and safety incident data (e.g. crimes, crashes) were measured using GIS within a 1km sausage network buffer from each survey respondent’s home. Bivariate and multivariate binomial logistic regressions were estimated to identify significant personal and environmental correlates of walkability and safety considerations at a significance level of 0.05. All analyses were conducted across the total sample (n=630) and four subsamples including urban (n=294), rural (n=336), older (n=366), and middle-aged (n=264) subsamples.

In the total sample, those who were non-Whites, walked for transportation, and considered safety, were more likely to consider walkability when choosing their residential location. Those who considered housing affordability and neighborhood attractiveness, walked for transportation, and were rural residents were more likely to consider safety when selecting their residence. Perceived safety from traffic, food stores, and shopping malls were environmental factors positively correlated with the likelihood of considering walkability when making residential choice. Park/recreational space and food stores were negatively associated with safety considerations. From the subsample analyses, findings were similar between the rural and older subsamples, and between the urban and middle-aged subsamples. Among rural or older residents, proponents of walkability were healthier, more active, and had a lower SES, while safety proponents were engaged in more walking but less sedentary activities. Among urban or middle-aged residents, race/ethnicity and having children in the household were significant correlates of neighborhood considerations.

Unique environmental correlates were found by subsamples. Perception of safety for walking (e.g. sidewalk conditions, unattended dogs) was negatively associated with both walkability and safety considerations. It may be because those who paid for neighborhood walkability and safety were likely to have higher expectations for those conditions in their neighborhoods. Food services played different roles on walkability versus safety considerations. It was positive for those who preferred walkability for residential selection but negative for those who considered safety to be important for their residential selection. Green/vacant spaces and single family residences were negatively related to safety consideration, while multifamily residences were a positive correlate of safety consideration.

Understanding the nature of understudied population groups can pave the way for future research to better understand their differential housing demands. Future research is also necessary to address neighborhood safety as an important facet of walkability, but safety is a multi-faceted concept and walking-related safety is one of its facets. Environmental characteristics such as land uses, destinations, and perceived safety are differently valued by various sub-populations according to their housing demands and preferences. Further efforts are needed to better understand diverse residential demands within the larger context of the community environment and demographic shift.

References


Key Words:
Walkability, Safety, Residential Preference, Residential Choice, Neighborhood Environment

EVICTION-BASED DISPLACEMENT AS GENDERED AND RACIALIZED CLASS-MONOPOLY RENT
Abstract ID: 613
Individual Paper Submission

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Despite recent research on evictions that has moved the subject to the forefront of urban analysis, eviction remains notably under-theorized. This paper seeks to contribute to the understanding of eviction by tying land rent theory to empirical evidence in the form of georeferenced eviction records from 2000 to 2015 in Dane County, Wisconsin. The analysis regresses total eviction filings by block group based on housing and demographic indicators using Poisson and negative binomial models. In addition to supporting previous conceptualizations of eviction and eviction-based displacement, the findings reaffirm the importance of race, income, and the familial status of households in the process of urban displacement. In order to explain the particular spatial and demographic pattern of eviction-based displacement in Dane County, the article argues land rent theory, and specifically the Marxian notion of class-monopoly rent, is valuable for understanding the phenomenon.

References

Key Words:
eviction, displacement, class-monopoly rent

BACK TO THE CITY: EXPLORING DIFFERENCES IN THE LOCATION CHOICE PATTERNS AMONG MILLENNIALS
Abstract ID: 617
Individual Paper Submission

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There is growing interest in examining the residential location choice of millennials. Several studies have shown that the proportion of millennials living in cities has been increasing as millennials are coming back to the cities (e.g. Moos, 2014; Walter-Joseph, 2015; Atherwood, 2015; Myers, 2016). These studies analyzed the patterns of location choice among millennials relative to similarly aged
cohorts in prior periods or the relationship between their location preference and the places where they live. Though there is general agreement that millennials are choosing to live in cities at higher rates relative to prior generations, there is almost no study that focuses on the differences in the location choice patterns among millennials. This study aims to fill that gap by focusing on differences in location choice among millennials using longitudinal data.

Data for this study comes from the Panel Study of Income Dynamics (PSID) which is a national panel survey of families in the United States. This study uses the most populous 25 cities in the U.S. based on 2010 Census and the 24 Metropolitan Statistical Areas (MSA) in which these cities are located. It analyzes residential location preference by first looking at the difference in choices among three groups aged 18-35 (young adults), 36-55 (middle age group), and 56 and over (older group). Between 2001 and 2011, the average population density of the census tracts where young adults live increased by 35% while the population density of the other two groups decreased by 20% and 10% respectively in the same period. In additional, the average distance between residential locations and the city center of young adults in 2011 decreased by 15% from 2001 levels while the distance of the other two age groups increased by 3% and 8% respectively between 2001 and 2011. These reinforce the findings from prior studies which show young adults are coming to the city.

A close look at the location patterns among millennials yields further interesting results. After grouping the data into income groups (using quartiles) and by the education level of the family head (into three groups), we note that the highest increase in residential population density and the largest decline in distance from the city center occur among those in the highest income quartile and in the highest education group. The residential population density for the highest income group was 120% higher in 2011 as compared to 2001 and distance to the city center decreased by 19%. Among those with the highest education levels, residential population density increased by 48% and the distance to the city center decreases by 14% in the same period. In contrast, population density for the first income quartile increased by just 9% and distance to city center decreased by 4%. The opposite trend was observed for the lowest education group where population density decreased by 7% and distance to the city center increased by 9%. These shifts suggest that there is substantial variation in the location preferences among millennials and that more pronounced changes in density and closeness to the city center are principally occurring among wealthier and highly educated segments of the population.

The study will further examine the role of different household and urban factors in location preference using multivariate analysis. The result of this study can contribute to increasing our understanding of residential choice patterns among millennials and its broader implications for urban areas.

References

Key Words:
residential location choice, young adults(millennials), central city
Record-breaking floods struck Texas in the spring of 2015. The state experienced flooding in northern, eastern, central, and southern counties, to the extent that President Obama declared the state a major disaster area on May 29. At least 27 people died. According to Houston’s mayor, nearly 4,000 properties were damaged in the Houston alone. Disasters such as this require substantial resources to deal with increases in housing repair and temporary shelter needs. To better anticipate these housing needs, it is important to examine the timeline of these disaster-related needs to better develop proper mitigation plans according to disaster phases. Limited research has focused on specific housing unmet needs over time during disasters due to difficulties in obtaining these data. Thus, the objective of this research was to examine the time-related patterns of specific housing and shelter needs prior to, during, and after the 2015 Texas floods.

The study period—May 1 through June 30, 2005—provided a baseline beginning before the spring floods, disaster management during flooding, and early recovery continuing through more than a month from flooding in most communities. The study area included all 254 Texas counties. We used the Texas 2-1-1 caller database to identify disaster-related unmet housing and shelter needs captured in real-time. The 2-1-1 system is a three-digit phone number for seeking help with a wide array of non-emergency unmet needs (e.g., housing, utilities, food, medical resources). In 2004, Texas established 2-1-1 information and referral service state-wide with 24/7 coverage. The 2-1-1 caller database included call date, location where seeking support services, and callers’ specific needs. For this study, only disaster-related calls were examined (N= 4,880). Unmet needs were coded by type, focusing on housing- and shelter-related categories. These unmet needs were then analyzed over time throughout the 2-month study period.

About a quarter (24.2%; N=1,183) of all disaster-related 2-1-1 calls concerned housing-related needs—the most frequent type of unmet disaster needs. Other types of disaster calls included utility (9.1%), food (8.4%), transportation (3.9%), and medical care (2.2%) issues. Unmet needs by evacuees for sheltering comprised 11.8% (N=578) of all disaster-related calls. Of those encountering access barriers for sheltering, 83.9% were for emergency shelters, 13.8% for homeless shelters, and 2.3% for hotels/motels. The most frequent housing-related disaster calls were for home rehabilitation needs (26.4%), rental housing needs (21.2%), and help needed for post-disaster damage reporting (20.4%). Analyzing over time, demand for help with these different types of needs varied. As expected during the extensive flooding, volume of shelter needs was the highest, followed by disaster management needs for post-disaster damage reporting, home rehabilitation, and rental housing. In early recovery during late June, however, these patterns changed; the volume of rental housing needs was the highest, followed by on-going shelter, home rehabilitation, and post-disaster damage reporting needs. The results of this study will enhance researchers’ understanding of the temporal patterns of housing and shelter-related needs resulting from extensive flooding, which will be helpful for disaster managers and policy makers seeking to establish more effective programs.

References

Key Words:
Housing, Shelter, Unmet needs, Flood, Disaster

WHAT'S CHANGING, WHO'S STAYING, AND THE POWER OF CARING: RESIDENTS’ EXPERIENCES OF GENTRIFICATION IN ANTICIPATION OF TRANSIT ORIENTED DEVELOPMENT
Abstract ID: 671
Individual Paper Submission

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The tension between the benefits of neighborhood development and the threat of displacement of lower-income residents is receiving increasing attention among scholars, city officials, and community coalitions. On the one hand, there is widespread agreement that transit-oriented development increases access to jobs while expanding housing resources and other amenities, and generating local tax revenue. On the other hand are concerns that development will result in gentrification that displaces low-income residents and people of color.

Empirical research has yet to discern definitively whether transit-oriented development and displacement inevitably go hand in hand. Studies have been criticized on methodological and conceptual grounds. Some employ units of measurement that are not sufficiently aligned with the changing economic and social geography or the data on which they are based cannot distinguish between voluntary and involuntary moves. Moreover, many of these studies adopt a narrow conception of displacement that does not capture the experience of excessive housing cost burdens or social and psychological hardships of those who choose not to relocate. Nor do most studies convey how residents are contending with these challenges or how they may be benefiting from the development in ways that might be sustained and expanded with support from current and potential public, nonprofit, and private sector interventions.

This participatory action research, conducted in partnership with four community-based nonprofits, aims to address these limitations by focusing on residents’ lived experiences in a gentrifying community in Somerville, MA, a historically working class city of immigrants undergoing rapid development in anticipation of the extension of a major subway transit line.

A survey designed with input from residents was administered by resident-teams in two phases: a door-to-door survey in two neighborhoods targeted for development in the new transit corridor in the summer of 2016 (N=80) and, in the spring of 2017, at venues that convene the community partners’ constituents (N=67).
Some preliminary findings from the first phase are consistent with a displacement narrative. Residents concur that the general appearance of their neighborhoods and the quality of the schools are improving while housing affordability and traffic are getting worse. Less affluent residents were more likely to say that access to services and stores that sell what they need and can afford was getting worse. Moreover, while virtually all want to remain in their homes and the neighborhood, displacement pressures are apparent. Nearly half the tenants reported rent increases and a small but significant number struggle with crowding and meeting basic needs, with the noteworthy exception of residents of subsidized housing.

Other findings convey mixed perspectives. Longer-term residents and residents of the more rapidly gentrifying neighborhood were more likely to say that parks and crime were getting better. And most were uncertain about the prospects of new employment opportunities.

Contrary to the displacement narrative, veteran residents and people-of-color were more likely to express a sense of belonging in their neighborhood. The majority believe in the efficacy of collective action to improve the community. While, newcomers have more experience with a wider range of civic engagement activities, twice as many residents of the more rapidly gentrifying neighborhood -- where anti-displacement organizing has been more extensive -- had participated in demonstrations.

Discussion of the findings (planned for early summer) among residents, city officials, and the community partners will inform an additional question about the value of this type of research for guiding community advocacy, city and nonprofit anti-displacement interventions, and public education about gentrification and resident power. These deliberations will be occurring in the context of recently expanded inclusionary zoning regulations and the eminent launching of a neighborhood council to be empowered to sign a community benefits agreement with a master developer in the study area.

References

Key Words:
gentrification, displacement, transit-oriented development, participatory action research, public deliberation

HOUSING AND THE TRUMP ADMINISTRATION: AT THE ABYSS?
Abstract ID: 685
Individual Paper Submission

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On March 14, 2017, the Trump Administration released its budget proposal for fiscal 2018. The budget would increase funding for the Department of Defense by $50 billion and fund this increase through sharp decreases in numerous departments and programs. The administration would cut the U.S. Department of Housing and Urban Development budget by more than $6 billion, or 13 percent. In addition, the budget called for the elimination of other housing-related programs and the administration's promise of tax reform has caused the price of Low-Income Housing Tax Credits to drop sharply.

This paper will review and assess the prospects for affordable and fair housing under the Trump Administration, and discuss the potential for state and local interventions. In addition to documenting the impact of the final budget for 2018, it will also examine the extent to which the administration's proposals for infrastructure investment are likely to offset budgetary reductions. The paper will also examine the state of the Low Income Housing Tax Credit in the wake of the administration's tax reform proposals. It will also discuss changes in federal policy towards fair housing, including its efforts to change the Consumer Finance Protection Bureau and the recently implemented Final Rule for Affirmatively Furthering Fair Housing. Finally, the paper will examine what if any opportunities recent federal policy changes pose for states and localities interested in supporting affordable housing and promoting fair housing.

References


Key Words:

Housing Policy, Trump Administration, Federal Budget, Affordable Housing, Fair Housing

DEFINING AND LOCATING COMMUNITY VULNERABILITY TO CLIMATE CHANGE IN OREGON CAP-AND-TRADE LEGISLATION.

Abstract ID: 687

Pre-O rganized Session: When Planning Doesn't Work: How People Push Back

This session brings together a collection of studies examining the ways in which racialized communities are contesting normalized planning processes. The authors bring together diverse perspectives on local planning conflict in communities of color that include issues of land use, climate change, migration and economic development in American regions ranging from the Northwest, California, and New York to the Southeast. Taken together the studies propose radical alternatives for future planning practices, as modeled by low-income and Latino, African American and Southeast Asian American residents who have been traditionally disenfranchised from the planning process.

Objectives:

- how to trouble shoot the traditional planning process to incorporate communities of color in a more radical way.
The purpose of this research project was to identify populations that may warrant special protections and consideration for cap-and-trade greenhouse gas emissions (GHG) policy in Oregon. The project examined urban and economically distressed rural areas to determine communities that are likely to experience adverse impacts from cap-and-trade policies, identified ways to mitigate these negative effects, and determined ways that benefits from these policies will accrue in these communities. A key component of this project was to involve community organizations and members likely to be impacted by climate change throughout the research project. In this paper, we discuss both the findings from our research as well as the process of the research project to educate planners and practitioners about how to conduct a community based environmental justice practice meant to shape state wide legislation.

The work for this project included reviewing existing cap-and-trade programs, scholarly and practice literature, and interviews with Oregon environmental justice advocates to understand how equity and environmental justice goals can be achieved in an Oregon cap-and-trade program. We spoke with environmental justice advocates in Oregon at various stages of the project to ensure all definitions such as how to describe affected populations and identified recommendations have been discussed with them as well as surveyed actors in environmental justice organizations. We coupled the information from the literature, interviews, and surveys with demographic and spatial analysis to accomplish four tasks:

1. We identified populations that would be disproportionately affected by cap-and-trade legislation (described as environmental justice communities, henceforth). From this identification, we developed a definition for these populations to ensure government programs can locate, support, and protect the communities. As part of this work, we mapped where these communities were located. We paid specific attention will be paid to developing a definition that will address the distinctions between urban and rural residential and occupational patterns, such as mapping where environmental justice and "economically distressed" rural areas (as defined by Oregon state statute) intersect.

2. We assessed how a GHG emission cap-and-invest system could negatively impact environmental justice communities including areas that are or may become “hotspots,” making recommendations on how to offset those negative effects. The work around hotspot development was driven by results from the California GHG cap-and-trade program where industries that had traded for more carbon production resulted in higher concentrations of pollutants than had previously existed.

3. We defined community benefits that could be accrued in environmental justice communities. We looked at 1) benefits that occur due to the implementation of cap-and-trade programming such as potential new jobs; 2) benefits that could be created through revenue raised during the implementation of the program.

4. Lastly, we identified methods to distribute benefits to environmental justice communities.

The findings from the study were used to inform Oregon state legislation, and will used in future legislative activities.

References
Key Words:
Equity, Cap-and-trade, Climate change, Greenhouse gas emissions, Vulnerability

SYMBOLS OF GENTRIFICATION? MAKING SENSE OF NEW DEVELOPMENTS IN LOS ANGELES CHINATOWN
Abstract ID: 694
Individual Paper Submission

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In July 2016, Los Angeles Chinatown celebrated the opening of Blossom Plaza, a mixed-use transit-oriented development that provides 20% affordable housing. Some in the community have called the opening “a long awaited victory” and a “historic day” for Chinatown as it took 20 years in the making and is one of the remaining Community Redevelopment Agency (CRA) projects to be completed since the dissolution of CRAs in California in 2011. However, others also point to that building as a sign of gentrification coming into the neighborhood. Why do these different, often conflicting, interpretations occur within the community? How do the different interpretations of Blossom Plaza’s role in the community and potential impact speak to broader community conflicts about the trajectory of change in Los Angeles Chinatown?

Drawing from 2 years of ethnographic fieldwork in Los Angeles Chinatown and using a semiotic analysis approach, I will show how Blossom Plaza has become a symbol of neighborhood change that highlights a specific tension of how Chinatown is both a symbolic Chinese American ethnic space with rich cultural heritage and a revitalizing downtown space that can attract new investment. Findings from this research highlight ethnic placemaking arguments (Aguilar-San Juan, 2009) that show that as community stakeholders, old and new, narrate their opinions and experiences with Blossom Plaza, they are attempting to regulate, territorialize, and symbolize specific economic and cultural identities of Chinatown that often come into conflict with one another. Additionally, the differences in understandings of Blossom Plaza may be indicative of internal differences among Chinatown community representatives who now vary by generation, political ideologies, and vested interests that reflects the increasing diversity of both the local Chinatown community and the broader Chinese American community of Southern California. These differences have created conflicting visions and methods of change in Chinatown from within the community itself, complicating racial turnover.
narratives of gentrification and contributing to difficulties in sustaining long-term community development efforts.

This presentation has broader implications for gentrification studies that explicitly examine how this phenomenon is viewed from the different people who contribute to or are impacted by these changes (Freeman, 2011; Brown-Saracino, 2010), as well as how stratification within the community can be drivers of change (Hyra, 2009). However, less is known about how these issues may unfold in older Asian American immigrant neighborhoods that are also grappling with the possibilities of gentrification but have become increasingly diverse, especially since the 1965 Immigration Act. This presentation will contribute to broader theoretical understandings of gentrification and how different racial and ethnic groups may have different experiences and interpretations of this phenomenon.

References

Key Words:
ethnic enclaves, gentrification, neighborhood change, revitalization, community

COMMUNITY DEVELOPMENT SYSTEM EVALUATION: THE KANSAS CITY CASE
Abstract ID: 696
Individual Paper Submission

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Successful community development produces physical assets that benefit local residents in surrounding neighborhoods. Such assets may include housing, commercial facilities, and social service centers. These developments fill a void left from Federal and state policy retrenchment away from urban place-based policy. Successful development requires connecting community developers (CDCs) with financial capital, political capital, and social capital that leads to successful outcomes. The community development system then is a description of the web of relationships necessary to produce development that potentially meets local needs. We hypothesize that weak development outcomes in Kansas City result from a weak community development system. Evaluation of the community development system will result in stories of failures and successes that will give community development planners new directions for local policy to improve systematic relationships in Kansas City.

We present descriptive statistics on the status of community development in Kansas City from 1990-2017 showing weak outcomes over the period. Using a series of structured interviews with key players in community development, we show that key elements of the community development system fell apart during the 2000’s. Changes in city leadership and the collapse of a housing agency created large
problems even before the recession hit in 2008. Aging organizational leadership and strong suburban tendencies continue to drain development capacity. Current efforts at geographic targeting have not yet achieved significant results. Recent successes include attracting a new source of financial capital for urban redevelopment as well as a new initiative to increase training opportunities for neighborhoods. Policy directions for the future include continuing a focus on regional equity to get resources to areas of greater need and generating local redistributive funds to meet demands created by further Federal and State policy retrenchment after the 2016 election. Results from this case study reflect what community development planners face in many “weak-market” cities.

References


Key Words:
community development, capacity building, urban policy, CDCs, regional evaluation

EMERGING STRATEGIC SITES: NEIGHBORHOOD SOCIOECONOMIC CHANGE IN EMERGING GLOBAL CITIES OF THE U.S.

Abstract ID: 698
Individual Paper Submission

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Over the course of the 1960s and 1970s, capital was able to unmoor itself from constraints placed upon it by nation-states in the immediate post-World War II period, leaving urban areas around the world subject to rapidly shifting currents of investment and disinvestment. The resulting global economic restructuring has led to varying levels of economic, social, physical, and political restructuring in different regions. The nature of the restructuring occurring in a region is dependent upon its articulation with global flows of people and capital, and its place in a network of cities and regions; that is, upon its existence as a world or global city (Friedmann & Wolff, 2006; Sassen, 2005). Olds and Yeung (2004) extended this idea and generated a typology of global cities that consists of three types: hyper global cities, emerging global cities, and global city-states. They argued that there has been a research focus on hyper global cities that has ignored the other types. While emerging global cities are not major sources of development capital, they are locations for the investment of capital, destinations for migrants, and distribution centers for goods and services.
It is the argument of this paper that as emerging “strategic sites” (Sassen, 2005) for both capital and those struggling under and against it, understanding the processes of change in these cities is vital for urban planners and activists. Some of these processes can be identified using quantitative methods, and as such this research paper investigates one of the seven organizing hypotheses of the global city model (Sassen, 2005) within the context of emerging global cities in the United States: increasing levels of “spatial and socio-economic inequality” (p. 30). Of particular interest in emerging global cities are processes of social polarization, continued impoverishment, and gentrification. The following research questions are posed, using a framework originally utilized by Kitchen and Williams (2009).

1. What kind of socioeconomic change has occurred in neighborhoods of different socioeconomic status within emerging global cities in the United States?
2. What are the socioeconomic determinants of these changes?
3. What are the geographies of these socioeconomic changes within United States emerging global cities?

Six study areas are examined to answer these questions: Baltimore; Denver; Milwaukee; Raleigh; San Diego; and Tampa. All six cities are classified by the Globalization and World Cities Research Network (GaWC, n.d.) as Beta or Gamma world cities, a classification Olds and Yeung (2004) equate with their emerging global cities type. Neighborhoods, operationalized as census tracts, in the six cities are analyzed for the years 1990, 2000, and 2010 using socioeconomic data normalized to 2010 census tract boundaries by the Neighborhood Change Database. Following the methodology used by Kitchen and Williams (2009), all neighborhoods that have sufficient data for all three Census years will be identified and have a socioeconomic status generated for 1990. Principal component analysis (PCA) will then be utilized to identify what socioeconomic changes occurred and the determinants of those changes. ArcMap will then be used to map the changes that have occurred.

The results of this study will demonstrate the socioeconomic changes that have occurred in neighborhoods of important emerging nodes in the global economy. They will demonstrate both general trends in all six cities, while also demonstrating the different patterns in each of them. These results are useful to planners and activists alike because they can help identify the processes and locations of change with which planners must contend in some of our growing cities. In essence, this paper seeks to identify emerging strategic sites within emerging global cities.

References

Key Words:
DISPLACED DEMAND AND HOUSING SHORTAGE: EVIDENCE ON THE REDISTRIBUTION OF HOUSING OPPORTUNITY IN U.S. METROPOLITAN AREAS, 2000 TO 2015

Abstract ID: 700
Individual Paper Submission

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An acute housing shortage is afflicting many metropolitan areas, particularly those in coastal regions and where population is growing. The large Millennial generation at the normal age for household formation, typically in rental units, and in addition the financial crisis leading into the Great Recession spurred a downturn in homeownership rates that was accompanied by a massive shift of “diverted homeowners” into rental housing (Myers et al 2016). Housing supply has been unusually slow to ramp up to meet the resultant, growing needs for multifamily housing.

Current methods have proven inadequate for measuring the shortage of housing, especially for rental units potentially available to lower-income households. The conventional measure of housing demand can be an incomplete measure of demand because it only captures a depressed end result of housing shortage. Not accounted for is the gap between expected and actual numbers of occupied housing units. Under conditions of shortage, there are many potential renters whose needs cannot be observed. When we speak of the percentage of renters who suffer a payment burden, not included are the potentially large number of households displaced from the housing market in the competition for a limited supply. This underestimate based on observed housing availability requires a more inclusive method. This paper extends recent research by estimating the potential housing needs in the 100 largest metropolitan areas. Based on the population residing in each area in 2015, we calculate how many owned and rented units would be expected had occupancy patterns continued at the rates prevailing in 2000, a time that is widely considered to represent the last “normal” period of housing market conditions, i.e., preceding the housing bubble, foreclosure crisis, Great Recession, and the slow housing market recovery after 2010. Population is broken down by age and race/ethnicity, while housing types are broken down by tenure, single-family/multifamily, and head or non-head status. Redistributional consequences are examined along each of these demographic and housing segments.

Our previous analysis for Los Angeles found only small increase in the number of renters compared to what would have been expected, but that small change masks a very large transfer of expected homeowners into renting and, hence, a very large displacement of expected renters out of renting and into nonhousehold status. Even though the total number of renters has held fairly steady, beneath the surface is a violent churn and intense competition that is driving up rents and forcing out others. Some quantity of expected households have been displaced—either forced to double up, remain living with parents or roommates, or otherwise dissolve.

This paper has four objectives. First, we seek to map the prevalence of this rental displacement through a comparison of the 100 largest metro areas. Second, we will estimate how much the variation in this displacement depends on the effects of housing construction shortfalls (multifamily or total) relative to employment growth, or, separately, how much rental displacement depends on rising rents relative to
incomes. Third, we will estimate how much additional construction in each metro area would have been required to minimize the estimated displacement effects. Fourth, we will compute a total housing need that equals the additional required construction plus the number of rental households that are paying more than 30% of their income on rent.

Ultimately, we hope that this experimental development of a broader method of housing needs analysis can contribute to current debates about the housing crisis in America. We may discover how much housing needs have been underestimated by only focusing on the survived households, and we may also learn how important is maintaining the proper balance between new construction and employment growth.

References


Key Words:
Housing Demand, Displacement, Household Formation, Homeownership Rate

COMPLEXITY AND CONSENSUS OF THE ELDERLY PEOPLE’S DAILY TRAJECTORIES BASED ON GPS TRACKING: A CASE STUDY IN THE PUBLIC HOUSING COMMUNITY IN SHANGHAI
Abstract ID: 710
Individual Paper Submission

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Problems
The body function of the elderly declines during the aging process, that usually leads directly to the social network shrinking and physical activities diminished. As vast majority of Chinese elderly people travel by walking in daily life, the built environment and supportive services nearby in the community and surroundings are critical.

Although research increasingly suggests that the built environment can affect people's behavior (Pietrzyk-Kaszynska, A., Czepkiewicz, M., Kronenberg, J., 2017, Ekkel, E. D., de Vries, S., 2017), there
is always a shortage of short term sampling interval. Meanwhile, the selected specific target places are often identified by preconceived hypothesis, rarely show the will of the elderly themselves. In this study, we invited 76 elderly residents from a typical public housing community in the center city of Shanghai as follow samples during 102 days, which took respondent driven sampling, (RDS) (Heckthorn D., 2001) avoiding sampling error here compared with snow-ball sampling or convenience sampling approach. The study tried to find out: What are the major factors that affect daily travel decisions? Are there any preferences in different group of gender and age? How to promote the elderly to engage in more physical activities by improving settings?

Methods
The database consists of two major parts: 1) A pre-study and an explanatory questionnaire. The questionnaires contain the basic information of participants, a survey of willingness related to daily travel before the experiment, and some supplementary questions after the tracking observation. 2) The GPS records obtain from virtue of smartphones lasted 102 days. The accelerometers and GPS Module measured activities and locations every 3 seconds. A cell phone application was developed to collect the GPS data produced by smartphones among the 76 participants (mean age=70.1, SD=7.7). In light of using smartphone GPS tracking, we explored the spatio-temporal distribution of the movement. Data analysis conducted by Random Decision Forests of Python package (Ho, Tin Kam, 1995, de Ona, J., de Ona, R., Lopez, G., 2016).

Findings
Based on more than 38 million GPS records after data cleaning, we complete a preliminary description of complexity and consensus the elderly residents daily travel. Through cluster analysis of stay, we identify the undetected point of interesting (POI) inside and outside of the neighborhood. Through interactive analysis of questionnaire statistics and GIS, we distinguish there purposeful travel and random travel. By measurement of the travel range and physical activities frequency, we observe there is a similar descending tendency in both young old and very old group. Female group appears to be more active. Clearly purposeful travel, random travel and multipurpose travel are discriminated by random decision forests model. Zero entropy stands for absolute certainty, higher value accounts for more mobility and possibility that extremely correlated with quality of life.

Relevance
The analysis results were predominately associated with built residential areas. This makes significant sense for improving the elderly-adaptability of built environment through planning process. Through the analysis of recreational travel, we get a further understanding of the influence factors in the built environment that promote the physical activity of the elderly. By analyzing the frequent POI, planners gain awareness of the priorities of public service configuration during the ongoing large-scale urban renewal in Chinese cities. Furthermore, model add basic personal information and atmospheric conditions parameters in this study present an accurate and effective approach in elderly’s behavior in the neighborhood.

References
THE SPATIAL CONTEXT OF AGING-IN-PLACE: BUILT-ENVIRONMENT CHARACTERISTICS OF THE AGING NEIGHBORHOODS IN CANADA

Abstract ID: 712
Individual Paper Submission

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Population aging is spatially differentiated. From a planning perspective, it is important to examine what types of neighborhoods are expected to age substantially, how to meet the changing demands of the aging population at the local scale, and how to address the different challenges of aging-in-place in various neighborhood contexts (Hodge, 2008). Despite growing research interest, studies of the spatial patterns of aging often take quite different focuses and sometimes arrive at contradicting conclusions: demographic studies pointed out that places with a high percentage of older people are often not where aged population increases most, rather, they tend to be places where younger people continuously move out and relatively immobile seniors are left behind (e.g. Frey, 2006); studies on elder migration suggest that older adults are highly mobile and many move for amenity or assistance, such as to relocate in neighborhoods where they have established social networks (e.g. Davies & James, 2011); while the aging-in-place literature emphasizes that a majority of older people prefer to remain in their own homes as they age, hence, the high home-ownership of older people implies that most neighborhoods will be steadily aging (e.g. Thomas & Blanchard, 2009).

This paper therefore analyzes different types of aging neighborhoods and examines the built-environment characteristics of each type of aging neighborhood across Canada. In particular, it answers the following questions: (1) how can we classify and characterize the different types of aging neighborhoods, and (2) given the varied built-environment characteristics in different types of neighborhoods, what are the unique challenges of facilitating aging-in-place across neighborhood contexts? Using data from the most recent three census cycles (2001-2011) at the most detailed geographical scale available (the Dissemination Area level), this paper (1) maps the spatial patterns of aging and moving, (2) analyzes the typology of aging neighborhoods based on the age-structure of all the neighborhoods across Canada, with clustering analysis, and (3) characterizes the neighborhood contexts of the different types of neighborhoods by comparing their local built environment characteristics and their changing housing conditions and affordability.

The empirical analysis identifies a clear typology of neighborhood age-structure and provides a nuanced understanding of the concept of aging-in-place. Based on the analysis, two types of neighborhoods are expected to age extensively: the mature-stage neighborhood characterized by high percentages of mature-stage families and non-movers, and the old neighborhood with high concentration of older adults, especially the oldest old. Furthermore, this study offers insights on the unique challenges of planning for aging-in-place in different neighborhood contexts: for vulnerable low income renters in neighborhoods...
with high concentration of older adults, planning policies need to emphasize the housing and financial security and to avoid potential displacement of low-income older adults due to the rising living cost in these neighborhoods; for steadily aging mature neighborhoods, planning policies for need to identify the emerging needs of the aging population, which are associated with the changing needs at different life-stages, enable housing mobility for older people who need alternative housing options.

References

Key Words:
aging-in-place, built environment, neighborhood planning, age-friendly communities, housing

TIME TO CHANGE OR TIME TO PERSEVERE? THINKING ABOUT HOUSING, MOBILITY AND SOCIAL FUNCTION OF URBAN PROPERTY IN BRAZIL
Abstract ID: 720
Individual Paper Submission

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At a time when Brazil is being shaken by social, economic, political and ethical crisis, it is questioned what advances have been made to reduce inequalities, and what should be changed, on the one hand, and what should be maintained, on the other. Focusing on the right to cities (Lefebvre, 2006), and the unequal conditions of access to housing and urban services, the key question proposed for discussion is whether advances in urban planning should be discarded, considering that they support the full exercise of the right to the city by the less favored classes. The issue is prompted by events that occurred in 2016, especially the proposal of Provisional Measure n.759/2016, by the federal government.

To begin the discussion, it is proposed to remember that the Brazilian federal constitution, which has been in force since 1988, defends the improvement of social conditions, not the maintenance of the status quo. However, considering the condition of late modernity in Brazil and the current set of socioeconomic and political forces, it is evident the simultaneous existence of two major lines of national projects. One of them has a constitutional base and proposes the implementation of an interventionist social state, inductor and enforcer of public policies. The other project seeks the implementation of a minimum state (Simini, Laisner, 2015). The contrast between the interventions of these two opposing projects is very visible in Brazilian metropolitan areas. These spaces are examples of an era when the human rights have moved centre stage both politically and ethically as Harvey (2008) says. There are not only inequalities, but also a confrontation between situations of poverty and places of high technology and development (Rolnik, 2015).
Since 2003 in Brazil, Lula’s government has developed programs that have fostered social inclusion, as well as several other issues, such as popular participation in urban planning, promoting actions to reduce social and environmental injustices, and housing deficiency. To discuss the validity of social programs for urban problems in the metropolitan context, we use the case of the metropolitan region of Curitiba. This city, which has been considered a model of ecological and people-centered urbanism since the 1980s, is currently the center of a metropolitan region that constitutes a challenge for urban planning, due to problems such as demographic growth, economic inequality, unemployment, deficiencies in basic sanitation, irregular occupation and urban sprawl. Despite the metropolitan challenges, the city of Curitiba continues to be awarded by national and international institutions, being the fifth economic force and the third largest automotive pole in the country (COMECE, 2017). The hypothesis is that it is necessary to continue social policies, especially for housing, infrastructure and urban services. The results show the differences between the situation in 2003 and currently. The methodology used is hypothetical-deductive. Being quantitative, but also applying qualitative criteria for reading the urban space, the study develops a comparison between the location and the number of low-income housing. It also considers the quality of the urban space near mobility axis (land use and occupation, density, environmental factors, mobility modals). The results point to divergences between planners and public administration and confirm the hypothesis that there is no equitable distribution of equipment of daily use for the lower income population. The issue includes, for example, the unequal distribution of public transportation in relation to the location of dwelling.

References


Key Words:
Urban planning; housing inequalities; mobility conditions; participatory planning.

IMPACT OF CRIME ON HOUSING PRICE: A LONGITUDINAL ANALYSIS OF THE CITY OF MIAMI
Abstract ID: 730
Individual Paper Submission

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What impact does crime have on housing prices? Although economic development literature highlights the detrimental effects of crime on housing price and neighborhood quality, existing studies on the relationship show mixed results. In the context of Jacksonville, Lynch and Rasmussen (2010) argue that crime had no impact on house prices overall, but homes were highly discounted in high crime areas. Ihlanfeldt and Mayock (2010) found that only robbery and aggravated assault crimes exerted an influence upon neighborhood housing values. Pope (2008) found that sex offender’s presence reduced housing prices in the neighborhood by 2.3%. Tita et al. (2006) argue that the average impacts of crime
rates on house prices are misleading. They show that crime is capitalized at different rates for poor, middle class and wealthy neighborhoods and that violent crime has the greatest impact.

In this paper, I extend the literature on the relationship between crime and housing price across neighborhoods, using the case of the City of Miami. I have created a unique dataset of police events across the city from 2009 to 2015 (provided by the City of Miami’s police department). The data allows to extend the investigation on relationship between crime and housing price in three important ways. First, crime is disaggregated to the census tract level, which is a much finer geography of crime incidences than available through the FBI Uniform Crime Reports (UCR) (which are at city or county levels). The data allow to parse the neighborhood level effects of crime. Second, the longitudinal data allows examining impact of different types of crimes (e.g. property crime and violent crime). Third, the data are disaggregated into groups based on per capita income of the census tract, thus separating the socio-economic effects.

Dynamic panel models with system Generalized Method of Moments (GMM) will be used to examine the effect of crime rates on housing prices at the census tract level. The system GMM approach is advantageous in that it is able to effectively address the endogeneity problem of crime. The endogeneity problem had been raised by several researchers before, including Ihlanfeldt and Mayock (2010) and Hendey et al. (2016). Longitudinal GIS analysis of the crime hotspots would be conducted across different neighborhoods with high-, moderate-, and low-income neighborhoods (as given by the household income). Weisburd (2015, p. 133) had suggested a “law of crime concentration” at micro places (or hotspots), whereby crime is concentrated within defined microgeographic units. The overall impact of the FBI’s Part I Crimes are first analyzed for their impact on housing price; then the crimes are disaggregated to examine the specific impacts of property crimes and violent crimes on housing price.

References


Key Words:
Housing, City of Miami, Crime Incidence

THE PARTIAL URBANIZATION PHENOMENON IN DEVELOPED REGIONS OF CHINA: A CASE STUDY OF CHANGSHOU CITY
Abstract ID: 742
Lightning Research Presentation

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Semi-urbanized areas are places outside of urban areas that have both urban and rural land uses and are usually created by the development of industrial manufacturing in rural areas. Semi-urbanization has become a global phenomenon. Under the influence of globalization, the phenomenon of semi-urbanization is particularly prominent, such as Southeast Asia, East Asia and China's coastal areas. Semi-urbanization has obvious transitional and dynamic. The phenomenon of semi-urbanization has gradually become the focus of urban researchers. Changshou City is located in the south of Jiangsu Province, one of the most economically developed areas in China. Urban and rural economic structure and spatial landscape increasingly convergence. Taking Changshou City as an example, this paper makes an empirical study on the phenomenon of semi-urbanization and hope to provide some reference and suggestions for the healthy development of urbanization in other similar areas. Research shows that the semi-urbanized area in Changshu is characterized by the increase of non-agricultural industries, namely the expansion of manufacturing and mixed land uses. The major problems are the dispersed rural locations of new factories and poor land use management. Improved land use control and the integration of industrial and residential land uses are required for the healthy development of these partially urbanized areas.

References


Key Words:
Semi-urbanization, Developed region, China, Changshu City

DO HOUSING DOWNTURNS HELP POLITICAL CHALLENGERS WIN ELECTIONS?
EVIDENCE FROM MARICOPA COUNTY, ARIZONA
Abstract ID: 753
Individual Paper Submission

This session gathers together papers which seek to fill the widening gap between our understanding of electoral politics and the production of housing. While the United States is increasingly divided, housing politics do not easily map onto partisan politics and standard political ideologies. Moreover, there has been little research to date on the relationship between the two, especially beyond growth-specific votes. Does partisanship affect whether places build housing? Do housing problems alter elections? Can we learn more about why people vote for or against housing development?

Objectives:
- How housing development and electoral politics are linked

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The recent U.S. economic recession and foreclosure crisis had diverse effects on neighborhood and local dynamics. Neighborhoods that had concentrated foreclosures experienced increases in rentals, declines in property values, and upticks in crime. Municipal resources and revenues declined in localities with hard hit neighborhoods, pushing a few to file for bankruptcy. An understudied outcome of housing downturns is how their diverse social and economic aftershocks affect local voting behaviors, which affect what planners are able to accomplish in their communities.

Existing research focuses on the link between housing dynamics and voter turnout and tests the theory of whether economic adversity increases or decreases incentives to vote. Diverse empirical evidence shows that more distressed neighborhoods may have lower voter turnout, due in part to social disruptions faced by these residents, which pose barriers to voting (e.g., Estrada-Correa and Johnson 2012). Voter turnout also typically is higher among homeowners, because their investment interests and lower residential mobility increase incentives to vote (Fischel 2005). There is reason to believe that neighborhood distress may actually increase homeowners’ dissatisfaction with their neighborhood conditions and incentives to vote, compared to homeowners in other areas (e.g., Manturuk et al. 2009). Yet, we still lack a clear understanding of how housing downturns affect other voting outcomes, like partisan support.

This research helps to answer this question by using econometric modeling to explore links among neighborhood housing market dynamics, voter turnout, and the change in the margin of victory for Democrats and Republicans between the 2008 and the 2012 presidential elections in Maricopa County, Arizona. We expect to find lower voter turnout but larger partisan shifts in more economically disadvantaged neighborhoods, because these voters may blame incumbents for their problems and desire a leadership change. We also expect to find that the receipt of aid from funds like the Neighborhood Stabilization Program helps to soften residents’ blame of incumbents and mediate their support for political challengers.

Overall, this research will help build theory on the link between housing market dynamics and politics. This research also will provide insight into how housing downturns affect local voting behavior, which shapes the political context of planning.

References


Key Words: housing, foreclosure, neighborhoods, politics, voting
ESTABLISHING A COMMUNITY LAND TRUST: THE ROLE OF LOCAL GOVERNMENT

Abstract ID: 761
Pre-Organized Session: Development pressure in the context of abandonment: Tensions in collective property ownership, public benefit and entrepreneurial urbanism

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Community land trusts (CLTs) have gained significant ground over the past two decades as a model that effectively creates permanently affordable housing and community development. As planners concern themselves with ensuring lasting community assets for lower income families and communities marginalized by the market, the governance and membership structure of the “classic” CLT model establishes strong community control of land (Davis 2010). CLTs do not operationalize community control by the legal requirement of bylaws constituting a membership alone. Community control of land is best actualized by resident engagement activity that supplements corporate membership (Rosenberg and Yuen 2013, Thaden 2012). Moreover, options for elected engagement bolster resident betterment, control and asset preservation (Lowe and Thaden 2016). The question this paper raises is: how does the role of the municipality (dominant, supportive/adversarial etc.) influence CLT formation, operation, stewardship? In a few places, municipal government rather than community involvement appears to be the primary driver in CLT formation. Alternatively, most CLT orientations towards engagement are significantly influenced by the broader temporal climate when the CLT was established as well as by the local socio-political environment in which the CLT must operate. Through multiple case-studies, this paper provides recommendations relevant to planning practice and policy development as it illuminates upon the contributions of CLTs to resident engagement, how CLTs come into existence (municipal driven and community driven), and the ways that formation influences the potential for expanding permanent affordable housing and social control of land.

References

Key Words:
community land trust, permanent affordable housing, resident engagement

GROWING CIVIC CAPACITY WITH ABANDONED PROPERTY: LAND BANK FORMATION IN THE CONTEXT OF AUSTERITY

Abstract ID: 762
Pre-Organized Session: Development pressure in the context of abandonment: Tensions in collective property ownership, public benefit and entrepreneurial urbanism

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In the absence of strong partnering organizations, can a land bank serve as the catalyst for institutional and civil society engagement with the problem of abandonment? Dewar (2009) has shown that land banks thrive when used as part of an overall development strategy, in partnership with active local housing development efforts. This paper explores a land bank created by the city government of a small city, located in a state engaged in extreme austerity tactics (e.g. a state-wide 2 percent cap on residential property taxes), with still nascent housing and community development activities. The City of Muncie, Indiana, has undertaken several iterations of land bank formation with the first two attempts embedded in city government and the third initiated as a non-profit 501 c 3 public-private partnership. Moreover, corruption scandals at other land bank operators in the state, and within the current city administration, have created a fraught context for establishing public oversight of abandoned property. Finally, strategic vision has been a challenge. A tension has immureased between using the land bank for targeted downtown property acquisition for redevelopment and using it to remediate the widely dispersed abandoned properties that effect nearly every neighborhood – 62 percent of all houses in Muncie are located within 300 feet an abandoned property (City of Muncie History Preservation and Rehabilitation Commission 2017). Through more than one year of action research, the author, who is the founding head of the board of directors of the non-profit land bank, documents the process of starting the organization. This effort is not only one of deriving best practices and plans for abandoned property, it is also an exercise in building new collective capacity for action. As Sagert (2004) has argued, “a decentralized, market-driven environment requires citizens who can work together, identify their shared interests and act collectively to achieve goals” (p.2). The ongoing work of forging connections among the myriad governmental, philanthropic and community-based actors is an exercise in growing civic capacity in the context of austerity and market-driven development. The City of Muncie serves as an instructive case, as the number of land banks has grown as a result of the 2008 financial crisis, with many located in smaller towns with little community development capacity (Alexander 2015, p. 15).

References


Key Words:
Land Bank, Civic Capacity, Austerity, Entrepreneurial Urbanism, Public Private Partnership

COMMUNITY CONTROL, CONTRACTING, AND DEVELOPMENT: LESSONS FROM AN ACTIVIST COMMUNITY LAND TRUST

Abstract ID: 763
Pre-Organized Session: Development pressure in the context of abandonment: Tensions in collective property ownership, public benefit and entrepreneurial urbanism
Vacant and abandoned properties have had severe impacts on municipalities, neighborhoods, and residents; lost tax revenue, increased public safety costs, increased crime, decreasing property values, and increased risk to public health have created the need for programs tailored to a city’s market conditions (Evidence Matters, 2014). When pursued, these programs are often developed by municipal officials in partnership with both the private and nonprofit sectors, relying primarily on professionals to determine the most feasible course of action for lower-income residents and communities (Swanstrom, Chapple, and Immergluck, 2009). While this may be a suitable arrangement in some cases, this paper asks and answers a different question: what can professionals and government officials learn from activists that have addressed the issues of vacancy and abandonment? Using key informant interviews and archival sources, the paper traces the course of the Chicago Anti-Eviction Campaign from a resistance movement trying to keep borrowers and tenants in their homes through direct action to an organization that has parlayed its successful activism into the creation of a community land trust (CLT). This analysis relies on Roy’s (2005) conception of urban informality, likening Chicago’s South Side in the wake of the 2008 financial crisis as an “unplannable” (p. 147) space, and argues for looking to those occupying this space for lessons that are suited to the given circumstances of the affected communities. The goal of this paper is to encourage planners, policymakers, and practitioners to view CLTs as something more than a technical solution to affordable housing; instead, CLTs have the potential to be viewed as a site of political contention where the challenges facing communities can become clearer. The movement from the technical to the political recasts the idea of the city-CLT relationship as a “partnership” (Davis and Jacobus, 2008) into one where practitioners and local officials can learn valuable lessons from grassroots struggle. These lessons are evident in a recent pilot program unveiled by Chicago Mayor Rahm Emanuel, which embraces several aspects of the Campaign’s approach to abandonment, and the relationship between the Chicago Anti-Eviction Campaign and the Cook County Land Bank.

References

Key Words:
community land trus, land bank, local government, activism, abandonment

NEIGHBORHOOD SPILLOVERS PRODUCED BY HOUSING UNITS IN POOR PHYSICAL CONDITION
Abstract ID: 795
Individual Paper Submission

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This article provides an empirical test of what to many may seem an obvious proposition: housing units in poor physical condition negatively impact their neighborhoods. Obvious though it may be, the specific types of harm that these units produce and the manner through which these harms are communicated has received little empirical attention to date. In cities across the post-industrial rustbelt, the physical decay of the housing stock has implications both for these place’s ability to raise tax revenue and for the demands placed on them for expenditures to manage widespread blight and abandonment. Improving our understanding of the neighborhood dynamics of housing units showing external signs of disrepair can help planners in these cities design programs to address the problems they create.

In this paper, I use data from Cleveland, OH to examine the impact that homes in poor physical condition have on their neighborhood. In the summer of 2015, a Cleveland-based nonprofit, the Thriving Communities Institute, conducted a property conditions inventory where the assessed the external physical condition of every structure in the city. I combine these data with information on home sales and structure characteristics to test the impact that proximity to homes in poor physical condition have on unit-level outcomes. I test two specific questions. The first is: what impact does exposure to housing units in poor physical condition have on residential sales prices? The second is: does exposure to poor conditioned housing increases the likelihood that a given unit is itself in poor physical condition?

I find that units in poor physical condition have only a modest direct impact on the sales prices of nearby houses. I estimate several specifications and find that only when a unit in disrepair is within 250 feet of a sale does it have a discernable negative impact on prices. In each of these specifications, however, the condition of the sold structure is, not surprisingly, a strong and consistent predictor of sales prices. In my second model, I find evidence that exposure to poor conditioned units, holding other unit and neighborhood characteristics constant, increases the likelihood of a given unit exhibiting external signs of disrepair. Although I lack the necessary data for a full causal test, taken together these findings provide evidence of an indirect path through which poor housing conditions impact neighborhood property values. That is, units in poor physical condition may trigger a cycle of mutual disinvestment which ultimately lowers the condition of the housing stock neighborhood-wide. Ultimately, houses located near units in disrepair will sell at a discount, but do so because they are themselves more likely to be in poor physical condition.

References

Key Words:
Housing, Physical Condition, Decline, Neighborhood Effects

GLOBAL HOMESHARING AND LOCAL HOUSING MARKETS: HOW SHOULD URBAN PLANNERS RESPOND TO AIRBNB?
Abstract ID: 798
‘Holiday’ homesharing via online platforms such as Airbnb can bring new income for ‘hosts’ and their
neighbourhoods, but illegal tourist lodgings in residential settings present health and safety risks, and put
pressure on local housing supply (Lee, 2016). Understanding and responding to these risks without
extinguishing potential benefits or impinging on property rights (Palombo, 2015), is a growing problem
for city planners throughout the world. This paper addresses this problem by examining how Airbnb is
penetrating local housing markets in six very different cities, and comparing how urban planners in these
cities have begun to respond. Each city (Lisbon, San Francisco, New York, Vancouver, Hong Kong and
Sydney) represents different underlying housing system and market dynamics (for instance, drivers of
demand for permanent and short term rental accommodation; pre-existence of second home/residential
tourism; physical structure of the dwelling stock; urban/suburban/neighbourhood characteristics;
housing tenure composition and residential tenancy laws). Focusing specifically on the manifestation of
Airbnb as the largest global platform for online homesharing, the paper asks:

a) whether different housing market dynamics influence the ways in which online holiday homesharing
impacts on local neighbourhoods and affordable housing supply;
b) how local authorities and urban planners are responding to online homesharing practices; and,
c) how effective are these responses, with respect to initial evidence of compliance (eg. registrations,
growth of listings), or the composition (whole homes versus rooms and shared rooms) and duration
(average availability of listings, and estimated periods of stay).

Sources include detailed Airbnb listings data (2015-2017), local housing market information, and city
planning policies/regulations governing short term rental housing overall or homesharing in
particular. Our initial research in Sydney has highlighted the importance of the state of the private rental
market in determining the likely nature of the impacts (Gurran and Phibbs, 2017). It also finds that
impacts can change in sub-markets across the city.

The paper concludes by highlighting emerging research and policy priorities for designing urban
regulations which maximise economic opportunities from online home-sharing while managing risks for
local neighbourhoods and housing markets.

References

• Nicole Gurran & Peter Phibbs (2017) When Tourists Move In: How Should Urban Planners
  Respond to Airbnb?, Journal of the American Planning Association, 83:1, 80-92, DOI:
  10.1080/01944363.2016.1249011

Key Words:
Homesharing, Airbnb, Short-term rentals, Sharing economy, Local housing markets
In work recently published in a special issue on location affordability in Housing Policy Debate, we analyzed 81 shrinking cities to determine how location affordability differs across various neighborhoods. Our results suggested that households in declining neighborhoods, as compared to stable or redeveloping neighborhoods, face the greatest affordability challenges in shrinking cities. Furthermore, in declining neighborhoods, virtually all of the additional affordability challenges encountered can be accounted for by differences in transportation affordability rather than housing. However, there was little research to either validate or suggest bias in the LAI data for shrinking cities or specific neighborhood types within those cities. Thus, we embarked on a second project aimed at remodeling housing and transportation affordability for shrinking cities using secondary data and changing some of the assumptions of the LAI dataset; this work was presented at ACSP 2016 and is currently in press. We follow this analysis by conducting a household survey in Cleveland, Ohio, a prototypical shrinking city, to glean a more accurate understanding of both housing and transportation costs for different household types living in different neighborhood types within Cleveland.

Preliminary results from the survey research support and extend our previous findings, suggesting that the housing estimates of the LAI appear more reliable than the transportation estimates, and that the LAI likely overestimates both types of costs. We also find that fewer than 10% of households in our survey sample resemble any of the LAI’s pre-defined household types, although our sample closely matches the population according to census data. This finding also complicates interpretation of the index. These are other survey results are included in our findings.

This work is funded by the National Institute of Transportation and Cities (NITC), with match from the Cleveland Regional Transit Authority, the University of Utah, and Cleveland State University. The research seeks to determine how best to measure location affordability in shrinking cities, and how those measurements could be used by policymakers and planners to inform local transportation planning and improve livability.

References

THE PRICE OF OPPORTUNITY: LAND PRICES AND OPPORTUNITY IN NEW YORK CITY

Abstract ID: 815
Individual Paper Submission

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Land is significantly more expensive in some neighborhoods than others. Housing policy makers determining where to build affordable housing therefore face a difficult choice: build more units of affordable housing in lower-income neighborhoods where land is cheaper, or fewer units in higher-cost neighborhoods where land is more expensive. This question has become particularly important due to new evidence about how “high opportunity” neighborhoods can improve the long-run educational and economic outcomes of children. This paper suggests a framework for tackling this question by exploring how land prices, and therefore the costs of building affordable housing, vary within New York City. It then maps those land prices onto measures of neighborhood opportunity. It estimates land prices through an analysis of properties purchased and then shortly after demolished (i.e., teardown properties), and estimates opportunity by measuring violent crime rates in a property’s census tract, the performance of the zoned elementary school, distance to a subway station, and census tract poverty rates. It uses a hedonic regression to determine how these opportunity measures are capitalized into land prices, and uses existing literature on opportunity to estimate benefits from living in higher opportunity neighborhoods. By maximizing the distance between land costs and benefits, we can identify census tracts offering “opportunity bargains.” Our analysis suggests a method for policy makers to choose the most efficient neighborhoods to locate affordable housing and get the most “opportunity” for the city’s dollar.

References


Key Words:
Opportunity, Housing, Neighborhoods
COMING TO MATTER, BREAKING THE NORMS: INFORMAL BUILDING PRACTICES OF EVERYDAY LIFE

Abstract ID: 817
Pre-Organized Session: Managing Informality II- Land and Development

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a. Central theme
Seen from a formal standpoint, informal urban practices – street vending, building alterations, temporary uses of public space and the like – are negatively and divisively labeled. It is not so relevant, from this perspective, understanding how informality occurs empirically, why and how it is produced in everyday life spaces. Quite in contrast, this paper invites attention to material objects and physical structures, as they are in fact used in their specific context, as culturally embedded agents working with particular social constituencies.

Informal building practices are here understood as socio-material processes of cultural embodiment and differentiation. And urban architecture is not considered just as ‘models and drawings’ provided with stylistic coherence and presuming normative compliance, but also as a collective crafting ‘undergoing a bewildering number of transformations’ (Latour and Yaneva, p.85) once buildings and spaces are immersed in the flow of everyday life.

b. Methodology
Largely inspired by Actor-Network theory and assemblage thinking, the paper acknowledges the materiality of buildings not as passive or inert but as a field of power and cultural relations (Lieto and Beauregard, 2016), where humans and things collaborate and produce socio-spatial arrangements that variously respond to forms of cultural capital, organizational memories, material knowledge and tacit rules of conduct in everyday life settings (de Certeau, 1984). These cultural embodiments provide the metrics and forms of living spaces that are negotiated and produced by different actors, humans and non-humans, assembling in places. Potentially involved, and open to discovery, are asymmetrical relationships with formal institutions and procedures, with the balance of power going to one or the other depending on site and context.

Hardly investigated in a systematic fashion, the webs of material alterations challenge the entrenched idea of the building as static matter regulated by official rules and doctrines. Buildings and built up spaces can be ‘elastic’ within certain limits: they expand, stretch, squeeze and distort according to social, economic, cultural and technological aspects that inform the production of space and place. In this sense, they may exceed the normative grip of planning and architecture as regulated process and finite physical form. The challenge is to discover the ingenuities, idiosyncrasies, and overall patterns that follow on actual urbanism(s) as a way of life.

To develop these arguments, the paper presents two examples taken from different contexts – building alterations of old residential buildings in Napoli’s historical center and transitory uses of sidewalks in Washington Heights (Manhattan).

c. Relevance for planning scholarship
The idea of ‘elasticity’ is quite fitting those urban environments where diverse populations meet up, adapt and overcome the practical challenges of living with physical arrangements that typically originated for purposes and populations no longer on the scene. To handle the discontinuity are rituals, stories, habits, and affective atmospheres that confront a larger order of social structures and – often


defunct – notions of procedures and ways of life. In the process there is a straddling between homogeneity once assumed and difference that has come to be, formality in what was envisioned and informality as it has come to pass.

In this perspective, informal building practices help planners and architects to rethink rules and urban codes in the face of constant change and adaptation of living spaces to everyday urban cultures.

References


Key Words: informality, materiality

"WE'LL BELIEVE IT WHEN WE SEE IT": OPPORTUNITIES AND CHALLENGES IN RESIDENT-LED PRESERVATION OF AFFORDABLE HOUSING

Abstract ID: 827
Individual Paper Submission

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Over the past decade, an increasing number of the deep subsidies that created or redeveloped affordable housing between the late 1960s and 1980s have expired, putting not only the residents of those buildings at risk, but the difficult to replace hard units (Schwartz 2015, Reina and Begley 2014). At the same time, many cities have experienced increased demand for new, highly-amenzited rental and for-sale units at the neighborhood level. As a result, many of these older subsidized buildings, as well as unsubsidized, or market-affordable, units have been lost, changing the opportunities for low- and moderate-income households to stay or move into neighborhoods with access to jobs, schools and transit. Increasingly local and state governments have developed initiatives to preserve affordable housing using local and federal funding sources and programs such as the Rental Assistance Demonstration Program, local housing trust funds, and information and data networks (Treskon and McTarnaghan 2016, Scally 2012).

In Washington, DC a combination of programs, laws and traditions have created a tenant-led preservation policy that has preserved the affordability of tens of thousands of units as limited equity cooperatives or rental units since the early 1980s. The District’s unique Tenant Opportunity to Purchase Act (TOPA), which gives tenants the right of first refusal when a building is for sale, is a significant – if imperfect – tool for tenant-based preservation (O'Toole and Jones 2009). However, the District’s $100 million annual allocation in the local Housing Production Trust Fund and funding of tenant organizers and housing counselors using Community Development Block Grant (CDBG) has made just as significant an impact in keeping tenants a lead or equal partner roles with the city government, nonprofit developers and private funders as TOPA (Howell 2016). Thus, while TOPA offers access to the market, it is the financing and network tools that often play an outsized role in the way that preservation occurs in Washington, DC.
Tenant-led preservation has created significant opportunities and challenges both in the fight to initially preserve their communities and the on-going effort to maintain them. This paper uses in-depth interviews with residents, organizers and local and federal agency staff; observation of tenant meetings, housing rallies, public hearings, and advocacy meetings; and content analysis of meeting agendas and media to investigate the ways that preservation focused by tenant empowerment can be both problematic and highly beneficial for tenants. Specifically, this paper finds that this type of preservation requires significant levels of access to funding, expert knowledge and time. At the same time, it enables residents to build stronger communities through control over space, knowledge of the existing residents and ground-based problem identification. This case suggests that the orientation toward a tenant-based preservation policy, including sustained funding and technical assistance, can be a strategy for long range affordability with lower turnover and higher tenant satisfaction than in buildings in which tenants have had limited – if any – control over their building’s preservation.

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Key Words:
Affordable Housing Preservation, Gentrification, Local Government, Tenant Organizing

THE SELF-SUFFICIENCY MANDATE OF PUBLIC HOUSING

Abstract ID: 838
Individual Paper Submission

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The Family Self-Sufficiency program, Resident Opportunities for Self-Sufficiency, HOPE VI Community Supportive Services, Jobs Plus, Moving to Work, and Choice Neighborhoods all have self-sufficiency mandates but how did local housing authorities move from providing a “safe and decent home” to “resident self-sufficiency”? Largely beginning in the 1980s and expanded during the 1990s as part of welfare reform, housing authorities continue to assume greater responsibility for increasing the economic mobility of their non-elderly/non-disabled populations (Rosenthal, 2007; Shroder, 2002). Although definitions of “self-sufficiency” and the populations subject to the intervention vary by program, most focus on reducing welfare dependence including use of low-income assisted housing.
Most participation in self-sufficiency programming has been voluntary but several Moving to Work authorities have instituted policies that make work mandatory and some of these also require participation in self-sufficiency programming (Webb, Frescoln, & Rohe, 2015). The 2002 Millennial Housing Commission proposed to make housing subsidies conditioned on employment. Are local housing authorities prepared to assume this responsibility?

This paper traces the evolution of low-income assisted housing and its self-sufficiency mandate and asks:

1. Why did policy makers (Congress & HUD) establish a resident self-sufficiency mandate within low-income assisted housing?
2. Is this an appropriate role for a local housing authority?
3. What are the relative strengths and challenges of a local housing authority assuming this role?

We use Congressional testimony, Federal Register documentation, US Housing and Urban Development (HUD) Notifications of Funding Availability, HUD program documentation, Government Accountability Office reports, Congressional Research Service reports, and other publicly available reports (e.g. evaluations of these programs) to answer these questions.

As Congress once again seeks to reform welfare by requiring employment in exchange for benefits, we must consider public housing and its role in, and capacity to, increase resident self-sufficiency (Falk, McCarty, & Aussenberg, 2014; Fischer, 2016). In reviewing the history of self-sufficiency programming in housing, we make recommendations about potential new directions in programming and ways to strengthen future resident self-sufficiency interventions.

References


Key Words:
public housing, self-sufficiency, work requirements, welfare reform

URBAN CONSERVATION FOR CULTURAL HERITAGE? SOCIOPOLITICAL STRUGGLES IN "DEVELOPMENT WITH DIGNITY" FOR SEOUL’S LAST SHANTYTOWN
Abstract ID: 842
Individual Paper Submission

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Many established cities that have achieved urban growth and addressed subsequent socioeconomic issues through urban renewal are confronted with the scars of the developmentalist past. Consequently, preservation/conversation-oriented regeneration methods recognizing “soft” intangible aspects in urban life, utilizing existing neighborhood assets, and ensuring a more inclusive decision-making process are being sought as local government initiatives for urban redevelopment. Contemporary and historical case studies provide a foundation for research that links preservation to urban politics, urban development, and now as a community development tool (Ryberg-Webster & Kinahan, 2014), calling for more conscious integration that considers issues of sustainability and equity – including, the preservation of community character as an advocacy tool. However, the notion of social preservation as an investment into the past and present (Brown-Saracino, 2009) becomes contested when development is being intermingled with community-level concerns (Stone & Stoker, 2015) and residents, scholars, developers, and planning authorities have misaligned visions. Thus, this paper will look into how urban conservation takes on a renewed outlook on the modernity and conception of the city for just revitalization and collective governance, raising the initial question: How is the notion of ‘authenticity’ and ‘authentic neighborhoods’ play a role in conservation-based redevelopment, and how can different interpretations and clashes be mediated?

Using a grounded theory approach, the paper looks into the case of paradigm shifts and urban regeneration attempts happening in Seoul, Korea, by assessing the ongoing discussion of its first preservation/conservation-based project in Baeksa Village, known as the city’s “last” urban daldongnae ("moonrise village"), or shantytown. In 2011, the Seoul Metropolitan Government announced its plans for “development with dignity,” emphasizing the importance of cultural heritage and post-redevelopment ‘quality of life’ benefits for marginalized neighborhoods. ‘Dignity’ is associated with identities, aspirations, and discomforts in which for a renewed human development approach actors and interest groups debate and dispute the available development options (Castells & Himanen, 2014). In the case of Baeksa Village, there has been more dispute and too less debate on what aspects of the “present” should be continued and what changes can be reconciled, prohibiting the essential transition from past to future (Myers & Kitsuse, 2000). Further, I argue that the lingering legacy of growth goals and power relations play an influential role in conceptualizing ‘alternative’ outlooks and projecting a more ‘democratic’ profile in urban development. The goal of this paper is to provide a preliminary empirical analysis of the sociopolitical struggles behind the Baeksa project, and how urban conservation as a “placekeeping” tool to preserve cultural heritage and authenticity could be sociopolitical itself. By developing a research agenda for this timely yet under-researched topic, it is anticipated that by looking into the political economy of spatial transformation in postindustrial Seoul, inferences can be drawn for other future revitalization plans in contested environments in a more universally applicable context.

References


Key Words:
Urban conservation, Affect, Collective governance, Urban regeneration, Placekeeping

COMMUNITY LAND TRUSTS IN CONTEXT: THE IMPACT OF MUNICIPAL SPONSORSHIP
Abstract ID: 844
Pre-Organized Session: Development pressure in the context of abandonment: Tensions in collective property ownership, public benefit and entrepreneurial urbanism

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Community Land Trusts (CLT’s), usually seen as an outgrowth of the Civil Rights Movement, were for their early U.S. practitioners an answer to rural and primarily Black poverty in the South. The model symbolized a non-speculative form of land tenure that could, through a clearly defined participatory governance structure, support small-scale agriculture and autonomous control of local resources (Davis, 2010; International Independence Institute, 1972). Nonetheless, this template saw little expansion in the late 60’s or 70’s; in fact, CLTs have primarily grown in number since the late 1980’s, and not in rural areas, but urban ones (Davis, 2010, Sungu-Eryilmaz & Greenstein, 2007; Miller, 2015). Two national surveys of CLTs show them to have mushroomed in number since the turn of the 21st century, reaching over 250 today; municipal support, it seems, accounts for the larger part of CLT growth (Miller, 2015; Thaden, 2012; Sungu-Eryilmaz & Greenstein, 2007). Using case studies in Portland (OR) and Minneapolis, this paper will look at the ways municipal sponsorship has impacted the work of urban CLTs. The CLT’s investigated in this paper have historically focused on preserving affordable homeownership in gentrifying neighborhoods. However, our findings show that, in a post-recession climate, funding for such work is scarce and CLT's are instead being offered municipal dollars to reorient themselves toward development work, including in commercial areas. In each city, local conditions seem to be driving this shift; in Minneapolis, population growth goals are driving how CLTs are functioning, and in Portland the tight housing market and low inventory of affordable housing is being addressed, in part, by encouraging CLTs to develop new affordable housing.

References

Key Words:
Community Land Trust, local government, affordable homeownership, community development

BRINGING RESIDENTS BACK IN. UNDERSTANDING THE POSITION OF SELF-BUILD HOUSING IN THE NETHERLANDS
Abstract ID: 845
Poster

BOSSUYT, Daniel [university of amsterdam, gpio] daanbossuyt91@gmail.com, presenting author

This paper studies the position of self-build housing in the Netherlands and investigates the conditions for integrating it as a type of housing provision within the mainstream housing. Formal governance arrangements face increasing difficulties in satisfying the demand for housing that is affordable, of good quality and attentive to residents’ needs. Self-build housing as well as other ‘resident-led’ or collaborative forms of housing provision gain increasing attention in academic and policy circles and are argued to represent a variety of self-organization in urban development. It entails that residents obtain responsibility for, and control over the development of their own dwelling. The assumption is that dwellers’ control of housing production improves individual and social well-being.

The government of the Netherlands has sought to further self-building since 2001. Although some municipalities have been successful in promoting self-build, its share has only increased since 2013 and its overall share still remains marginal in international respect. Local planning and governance context appear to affect self-building and its mainstreaming potential, yet this theme remains under researched.

The Dutch housing provision context is heavily structured and institutionalized, which renders it a particularly fascinating case to investigate resident-led housing provision. Planning and housing practices alike are marked by comprehensiveness and a large degree of government regulation, leading to a supply-led model of housing provision. Since the second World War housing has been provided through close-knit institutional consortia of municipalities, housing corporations and large developers. Residents were never seen as producers of housing but as consumers, this holds particularly true for lower and middle incomes in urban areas.

This paper sets out to understand the position of self-building in the Netherlands. The paper makes use of a regime analysis of norms, rules and procedures surrounding self-build and a case-study of Almere Homeruskwartier, where self-build has been the cornerstone of a residential land development plan. It maps formal and informal institutional arrangements with respect to self-build housing over time; demonstrates how these affect the practice of self-building and investigates the conditions under which self-build can become mainstreamed as a mode of housing provision. Data is drawn from a desk research of policy reports and academic literature between October 2016 and May 2017.

The paper shows that municipal land release and residential land development practices are oriented around close cooperation between authorities, housing corporations and project developers. It argues that the viability of self-build depends on a reconfiguration of residents as commissioners within these organizations. This is argued to be a necessary condition for the emergence of a self-build housing regime.
Some researchers have claimed that suburban sprawl in American cities is declining. These researchers argue that young generations and the retired baby boomers have moved back to cities searching for walkable urban neighborhoods with access to a variety of amenities (Gallagher 2013). Florida (2012) claims that jobs are returning to cities attracting “creative class” employees with preference to urban living. Katz (2013) argues that the cities are the next revolutionary engines as to promote economic prosperity and investments have been and should be made to the cities to make the urban living more desirable. To meet the increasing demands for urban living, Leinberger (2009) argues that there are growing number of developers, investors, and planners making efforts to build walkable urban developments over the traditional suburban developments. Because these literatures use cases solely from the US, it is important to investigate whether such growing trend can be found in other countries. This study investigates whether suburban sprawl is declining in Canadian cities, the neighboring country of the US. Investigating suburban sprawl in Canadian cities is timely and important in that it will fill in the research gaps in the field of urban growth management of Canada, and test the universality of the recent trend.

The main research questions this paper aims to answer is: “Did suburban sprawl decline as the result of densification of inner city in major Canadian Metropolitan Areas (CMA) in the 2000s compared to the 1990s? If so, how did the housing affordability change along with the trend?” If a metro area successfully managed to promote infill and compact developments in the 2000s, we expect to see significant increase in the density change in “Inner City” areas, and significant decrease in the suburbs in “City Edge” and “Outer City” areas. Densification may influence the housing affordability contributing to the changing trend. For many years, housing affordability has been known be a significant factor attracting people to the suburbs (R. W. Burchell and Mukherji 2003; R. Burchell et al.)
What we hope to find from this study is that whether this trend continues to be the case in Canadian metros.

To answer the research questions, this study employs Ordinary Least Square regression models using dependent variables representing physical growth pattern (e.g., urban changes, population, population density) and housing affordability (e.g., housing value/income, population spending more than 30% of their income on housing), and independent variables consisting of locational dummy variables representing City Center, Inner City, City Edge, and Outer City areas and temporal dummy variable indicating the changes between 1990 and 2000 and between 2000 and 2010. Interaction terms were introduced in the models to examine whether the changes in the dependent variables were significant in different locations. A total of 6 regression models were run for each of the 11 metropolitan areas, and the modeling outcomes were compared to identify the lagging and leading metros in the sprawl declining trend.

References


Key Words:
Suburban Sprawl, Densification, Housing Affordability, Canada

PERFORMANCE ANALYSIS OF THE AFFORDABLE HOUSING PROGRAMS IN DALLAS FORT WORTH METROPOLIS
Abstract ID: 871
Individual Paper Submission

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Transportation expenditures are the second-largest spending category after housing for a typical American household. Looking solely at housing costs is a misleading measure of affordability and a disservice to low-income families (Lipman, 2005; Hamidi & Ewing, 2015). A recent study by the co-authors, found that, households in 44% of all Multifamily Section 8 properties in the nation, spend on average more than 15 percent of their income on transportation costs, making these properties effectively unaffordable. According to this methodology, more than 73% of Section 8 Multifamily properties in Dallas Fort Worth (DFW) are unaffordable (Hamidi et al., 2016).
Yet there is little understanding on the affordability and effectiveness of other rental assistance programs. This proposal seeks to address these gaps by developing an innovative approach to evaluate affordability of major state and federal rental assistance programs in the Dallas-Fort Worth metropolitan area. We use disaggregated data at the property level and measure built environment variables around each property. We start with a comprehensive data collection of the major state and federal housing assistant programs in DFW region. We then geocode them using xy coordinates and create a GIS map of all properties. Based on the nature of the programs we compute housing costs to evaluate housing affordability of these properties. For transportation affordability, we use the same methodology as the Hamidi et al’s earlier study and estimate household transportation costs for a typical household that qualifies under these programs using solid transportation costs modeling tailored for low-income households. This study sheds light on the relative merit of each program in ensuring affordability when factoring in transportation costs.

This study provides recommendations to further federal and state initiatives in coordinating housing and transportation and is designed to inform regional and local planners on location-efficient investments. Informed by our findings and interviews with experts in the nation, we propose a list of policy implications on how to integrate the value of location in the concept of affordability and various affordable programs designs. Depending on the type of rental assistance programs, the policies could range from how to incentivize location efficient investments to how to discourage investments in inaccessible low opportunity areas.

References


Key Words:
Housing Affordability, Rental Assistance Programs, Transportation Affordability

A PICTURE OF CHOICE NEIGHBORHOODS: CAN CHOICE NEIGHBORHOODS TRIGGER REVITALIZATION IN DISTRESSED COMMUNITIES?

Abstract ID: 873
Individual Paper Submission

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Mixed-income developments have been a dominant paradigm in revitalization of distressed neighborhoods by improving social networks between different income groups (Joseph et al., 2007). Since the mid-1990s, policy makers and local developers have noticed to mixed-income development as a tool for addressing urban poverty and inner city redevelopment. Therefore, the Housing Opportunities for People Everywhere program (HOPE VI), administered by the U.S. Department of Housing and Urban Development (HUD), was introduced in 1993 to replace or rehabilitate distressed public housing through mixed-income development approach. While HOPE VI funded directly over $6.7 billion to 261
public housing sites in 129 cities between 1993 and 2010 to create mixed-income communities with innovative and comprehensive techniques, the program has been criticized by its negative impacts on families forcibly relocated and displaced by the program (Goetz, 2010, Varady et al., 2005).

HUD, in 2010, introduced Choice Neighborhoods Initiative (Choice), a new federal funding program for neighborhood revitalization, aimed to build upon HOPE VI by addressing a broader range of socio-economic issues. Choice maintains the advantages of HOPE VI such as public-private partnerships, mixed financing, and one-on-one replacement policy. Moreover, it extends eligibility beyond public housing to privately-owned and federally subsidized developments. It also differs from HOPE VI by expanding funding target from housing to neighborhood surrounding the target development to allow more comprehensive revitalization. Choice promotes participation of different organizations, agencies, and institutions working throughout the neighborhood for housing development, social services, education, employment, public safety, and revitalization of commercial infrastructure (Pendall et al., 2015). Choice funded total $633 million to 22 projects between 2010 and 2016.

This study is motivated by the question of whether Choice works better than HOPE VI in terms of mixed-income development and neighborhood revitalization. What benefits do residents get from Choice compared to HOPE VI? How is the governance structure of Choice different from the one of HOPE VI? While limited studies have descriptively addressed the five Choice projects implemented in the first stage of Choice Neighborhoods Implementation Grants (Pendall et al., 2013, Pendall et al., 2015), this study contributes to the literature in two different ways. First, we address all 22 Choice projects in terms of their governance structure, fund, development scale, and geographic characteristics, which allows us for comparison analyses with HOPE VI. We examine each project’s characteristics and mixed-income development approaches by collecting data from HUD reports, web search and newspaper articles. Second, we deeply focus on a case project in Avondale neighborhood in Cincinnati, OH which is led by a national non-profit organization (The Community Builders) in collaboration with a national hospital (Cincinnati Children’s Hospital Medical Center), local organizations (Avondale Community Development Corporation and the Urban League), a public school district (Cincinnati Public Schools), the Cincinnati Police Department and others. We address wide range of topics including the overall process and collaboration with various organizations, roles of each organization, and income mixing and economic development strategies by examining existing documents, observing committee meetings, and conducting semi-structured interviews with key stakeholders.

References

Key Words:
SOCIAL VULNERABILITY AND LOCAL REPRESENTATION IN DISASTER RECOVERY

Abstract ID: 875
Individual Paper Submission

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On September 13th, 2008 Hurricane Ike caused damage to more than 75% of the residential structures in Galveston, Texas including 942 units in the Island’s four public housing developments. The demolished housing units were located in some of the lowest income and heavily minority neighborhoods of the Island. Despite concerns from housing advocates, in January 2009 Galveston Housing Authority (GHA) decided to demolish these sites. Through a conciliation agreement GHA committed to one-for-one replacement of the public housing units; however that commitment remained only partially met six years later. This failure, despite clear support by policy framework and funding for rebuilding, highlights some of the consequences of social vulnerability for access to local post-disaster decision making processes which shape recovery outcomes for different groups.

Our qualitative analysis of the competing local policy arguments over affordable housing in Galveston, each one claiming to pursue the best outcomes for the poor in the void created by physical removal of more than half of those resident, demonstrate how and why public housing units was only partially rebuilt after six years despite the legal commitment, federal policy and requirements, and existing funding. We found that the predominantly African-American and low income former residents of the four demolished public housing developments had little effective political representation in the local policy debates over rebuilding plans and the future of affordable housing in Galveston. Consequently, the void created by lack of displaced residents’ voice provided an exceptional opportunity for various local political and economic agendas to frame their conflicting affordable housing plans as benefiting the poor while pursuing different goals. The impact of this representation void was exacerbated in Galveston due to the physical displacement of large groups the former residents from the island after demolishing four complexes.

References


Key Words:
public housing, social vulnerability, local representation, disaster, exclusion
DISPARITIES OF GETTING IN AND OUT OF HOUSING: DOES HOUSING DISCRIMINATION TRANSLETE TO POOR HOME AND NEIGHBORHOOD CONDITIONS, HOUSING AND FOOD INSECURITY, AND DISTRESSED MENTAL HEALTH?

Abstract ID: 876
Individual Paper Submission

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Even with fair housing and anti-discrimination policies in place for more than forty years, equal housing opportunities remain unequal in Wisconsin and one of the most segregated metropolitan areas in the nation: Milwaukee. A root cause of spatial racial segregation is housing discrimination (Wyly & Hammel, 2004; Goetz, 2015). Housing discrimination is the unequal and unfair treatment of individuals or groups when they get in and out of housing due to their social or economic characteristics. It ranges from steering away individuals seeking a home to unfairly evicting them. The most vulnerable individuals are low income, Non-White, women, and the disabled. Recent evidence suggests that these individuals are more likely to suffer from discrimination, live in disadvantaged housing and neighborhood conditions, undergo financial hardship to secure their home and food, and experience poorer health (Raja et al., 2008; Narine & Shobe, 2014; Greenberg et al., 2016). However, research to understand the extent and the mechanisms on how different experiences of housing discrimination relates with neighborhood disadvantages, housing and food insecurity, and mental health disparities is lacking.

My study is among the first to advance understanding on the role of housing discrimination on environmental, social and mental health disparities in Wisconsin and Milwaukee, its largest metropolis. I assess housing discrimination as two separate events: 1) the unfair treatment when getting housing and 2) the disparate event of an eviction. Using data collected between 2009 and 2011 from the Survey of the Health of Wisconsin (SHOW), I examine self-reported incidences of unfair treatment when getting housing at the state level (n=1667). Using data from the Milwaukee Area Renters Study (MARS), collected during the same time period, I examine disparate events of evictions in Milwaukee (n=1773), previously suggested by Greenberg et al. (2016).

I examine each housing discrimination event through separate nested multi-variable regression models and control for potential confounders, such as demographic and socioeconomic characteristics, to evaluate whether individuals who experienced discrimination when getting housing or when getting evicted are more likely to: 1) live in poor housing and neighborhoods, 2) experience housing and food insecurity, and 3) suffer mental distress - specifically anxiety or depression. Moderating effects of the housing and neighborhood environment, and housing and food insecurity are also explored in the pathway between housing discrimination and mental health. Expected results suggest influential effects of housing discrimination on housing and neighborhood disadvantages and how these are associated with mental health status. Findings from this study will provide valuable information to advance fair housing advocacy and direct efforts to expand social and health equity. It will also provide grounds to build new approaches to address gaps in housing policy, planning and program development.

References
One result of climate change is more summer heat waves (extended periods of hot temperatures) that influence economies, ecosystems and human health (Wolf et. al, 2010). The urban heat island effect intensifies local impacts of heat waves by increasing afternoon and night time temperatures (Habeeb, et.al, 2015). The well-being of people living in such conditions is linked to external risks, the social landscape of inequality, and community resources (Wolf et. al, 2010). We hypothesize that low-income seniors who live in urban areas are particularly vulnerable to the extent that they are physically frail, socially isolated, exposed to poor living conditions indoors and outdoors, and have limited problem knowledge. Disentangling the relative roles of building systems, local microclimate, social context, and individual agency requires that we analyze these aspects simultaneously (Allegrini, et.al 2013). This research therefore jointly studies buildings, residents, and neighborhoods in pursuit of theoretical insights and practical solutions to current urban heat challenges.

Our study site houses a senior population in a group of public housing buildings with varied levels of natural ventilation and air conditioning, located in Elizabeth, NJ; the city with the worst air pollution in the state due to its proximity to oil refineries, Newark airport, NJ Turnpike, and the Port of Newark and New York (NJDEP, 2013). Residents at this site cope with potentially significant tradeoffs when deciding whether to open the windows, use air conditioning, or relocate to cooler locations during heat waves. We recruited 24 senior households to participate in a summer-long study during which we deployed sensors to monitor environmental conditions (indoor and outdoor air temperatures, relative humidity, PM2.5, CO\textsubscript{2}) and coping strategies (air conditioner use, window operation, occupancy). We performed baseline interviews regarding household conditions, health status, social networks, and typical coping strategies, and we followed up during hot days with brief phone interviews to determine
what actions they took. We also interviewed building managers and social services personnel, and mapped relevant neighborhood assets.

Our findings show that (1) many seniors fail to use air conditioning even when it is available in their apartment, due to cost and comfort concerns; (2) relocating to outdoor shaded areas is popular in locations where it is available and viewed as safe; (3) many seniors, however, do not have access to such locations so they gather in air-conditioned common areas within their home buildings; and (4) those seniors with robust social and familial networks enjoy more options and greater effective mobility to help cope with heat waves. More broadly, these findings suggest that long-term adaptation and resilience to climate change benefit from an integrated resident-to-building-to-neighborhood evaluation; and that stand-alone examination of either human capital or buildings does not grasp significant interrelations developed in the urban context. This research was funded by NSF grant AGS-1645786.

References

- New Jersey Department of Environmental Protection Air Quality Report (2013).

Key Words:
Heat waves, Seniors, Social networks, Microclimate, Buildings

INVESTIGATING PERCEPTIONS AND REALITIES OF LIVING IN AN AGING-FRIENDLY SUBURBAN MULTIFAMILY COMMUNITY IN THE U.S.
Abstract ID: 881
Individual Paper Submission

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American older adults aged 65 and over make their later-life moving decisions generally based on housing affordability and living expenses, home/room layout or design, availability of amenities and services in the neighborhood, and proximity to their families/relatives and friends. The age-friendly city and community (AFCC) policy models, notably the AARP

Livability Index (AARP Public Policy Institute, 2015), consider these factors (except the proximity to families and friends) when they attempt to measure the extent to which a place is aging-friendly. Based on a case of Cincinnati (Hamilton County, Ohio), this study qualitatively investigates perceptions and realities of living in an aging-friendly community. A preceded quantitative examination found that suburbs are – historically and still today – the most prominent residential location choices of older American adults. In the AFCC policy models, however, higher density (urban) areas are assessed as more “livable” or aging-friendly, while multifamily housing is called for to satisfy the anticipated increase in demand for it from the aging population
Two suburban multifamily communities (apartment complexes) in Cincinnati, known as naturally occurring retirement communities (NORCs), were selected as cases to be analyzed and compared. They satisfy the necessary conditions for investigation as aging-friendly communities, conditions such as a high percentage of older adults in these communities and the surrounding areas, locations within close distances to amenities/services, and difference of market rates (affordability) between the two. The present in-depth analysis of these communities will reduce the research gap in the AFCC literature and policy movement, which is currently represented by the lack of empirical evidence at the level of the individual to assess the AFCC policy models. By investigating perceptions and realities of living in these communities, this qualitative study aims to identify how aging-friendly residential environments aid in improving the aging processes of individual older adults. The theoretical models that help interpret the results include the residential normalcy model (Golant, 2012) and the later-life migration decision model (Bradley & Longino, 2009) from, respectively, environmental gerontology and social geography.

This research project employed a case study approach, whereby the logic used in selecting the cases (the two communities/sites) was guided by the preceding quantitative analysis in order to investigate perceptions and realities of living in an aging-friendly community. This study analyzed online resident reviews, semi-structured key informant interviews, and field notes from observations conducted in both communities. A multi-phased qualitative data set was analyzed to discover emerging patterns across the data. As the basic approach to data analysis, a framework close to grounded theory is selected, which can establish theoretical concepts and their interrelations. While the concepts were partly viewed from the AFCC movement and aging in place perspectives, all data was considered potentially and theoretically relevant (Greenfield, 2014).

Physical and social characteristics of these apartment complexes, as different from the neighborhood (locational) characteristics, would have more implications for older adults to age actively and healthily in their places though they would have clear limits. As evidenced from the interviews, severe and chronic health conditions cannot be accommodated in the “regular” places, so aging in place should realistically be a goal for the relatively healthy seniors. Meanwhile, as supported from one of the cases/communities, a kids-friendly residential environment can be beneficial as well to seniors who are physically and cognitively more limited. As indicated from the resident reviews, the perceptions about these communities are frequently expressed with phrases such as “a sense of community,” “a great community,” and “friendly community and neighbors.” These tell us how important these intangible traits are for the residents when they assess the livability of their multifamily communities, and the older adult residents would be more likely to benefit from these factors. Although the intangible characteristics are difficult to measure or foster, multifamily communities, especially with less formal (e.g., financial) resources, would need to make creative efforts to nurture these aspects in order to become more aging-friendly in this era of rapid population aging.

References
RESIDENTIAL MOBILITY AND PERMANENT DISPLACEMENT AFTER DISASTERS: A SYSTEMATIC LITERATURE REVIEW

Abstract ID: 888
Individual Paper Submission

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Residential mobility after disaster is a process that changes neighborhoods as well as lives of residents. It not only imposes a burden on residents but also postpones long-term recovery plan when governments focus only on short-term displacement, not considering transition between immediate shelter and permanent housing (Levine, Esnard, & Sapat, 2007). Local governments carry out mobility-based projects in the context of long-term disaster recovery to send evacuees to safer places. However, relocation cannot be an ultimate answer in that it remains matters of how at-risk places can be safer from disaster and livable environments. In addition, residential mobility disproportionately occurred by neighborhood characteristics. Underserved neighborhoods located in physically vulnerable areas are likely to be more damaged by extreme disaster events (Van Zandt et al., 2012; Zhang & Peacock, 2009), causing an acute relocation of vulnerable populations. Moreover, the vast literature on the residential mobility and dislocation of low-income households, including those displaced by market forces (e.g., gentrification) or public policy (e.g., voucher holders), indicates that housing markets offer few and poorly distributed options for low-income households, restricting their choices to substandard units and neighborhoods with conditions no better than those they left (Skobba & Goetz, 2013; Van Zandt, 2007).

The purpose of this paper is to conduct a systematic literature review of studies between 1980 to 2016 regarding residential mobility and permanent displacement after disasters. This paper focuses on understanding of (1) what factors drive residential mobility after extreme disaster events, (2) what kinds of data sources have been used to identify residential mobility and permanent displacement, (3) what patterns of displacement are found from each case, and (4) what consequences are caused by displacement to both households and neighborhoods?

Peer reviewed publications are identified through Web of Science, EBSCO, ProQuest, Scopus, and JSTOR, then the study conducts a formal, systematic literature review with five steps: search the literature; screen for inclusion; assess quality; extract data; and analyze and synthesize data. Using a list of a priori criteria, keywords reviews identified 1290 articles in total at the first step of screen for inclusion. In addition, title reviews, abstract reviews and full text reviews were followed through logical exclusion process, and 42 articles were selected as a final review list to conduct data extraction. This paper will discuss a brief overview of the review process of studies, comprehensive findings from the systematic literature review, and implications and suggestions for residential mobility research. This paper expects to contribute planners to get a better understanding of current studies in residential mobility after disasters, especially focusing on socio-economic causes and effects. Although researchers have offered significant contributions in environment-migration scholarship in diverse disciplines in
both theoretically and empirically, research on residential relocation as a long-term disaster recovery and community resilience strategies has not yet much done. In this respect, this study may give a comprehensive view of the dynamics of residential mobility and neighborhood change in the context of urban resilience.

References

Key Words:
Residential mobility, Displacement, Disasters, Resilience, Vulnerability

PROSPEROUS SHRINKING CITIES: OXYMORON OR REALITY?
Abstract ID: 895
Individual Paper Submission

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In the last decade, shrinking cities have emerged as an important, and quickly growing, focus of academic inquiry. However, the precise definition of a shrinking city remains a hotly debated topic. What constitutes as a shrinking city varies widely depending on the choice of the parameters of the formal definition and its operationalization. While few would argue that Detroit is shrinking, other places that have lost population, like Chicago and Boston, are more difficult to categorize. Once viewed as temporary stage of cyclical growth, shrinking cities are increasingly viewed as a permanent symptom of globalization (Martinez-Fernandez, Audirac, Fol, & Cunningham-Sabot, 2012). As a result, a growing number of academics have called for policymakers to concentrate efforts on increasing the wellbeing of residents in shrinking cities, rather than pursuing population growth (Hollander, 2010; Pallagst et al., 2009; Rieniets, 2009). Weaver et al. (2017) determined that places with shrinking populations that have not experienced atypical increases of concentrated disadvantage can potentially have high levels of social wellbeing. With that in mind, this study explores the operationalization of various definitions of urban shrinkage from the literature and the relationship between population loss and prosperity to shed light on three important questions: Is there such a thing as a prosperous shrinking city? If so, where? And under what conditions do shrinking cities succeed?

Using data from the 1980 to 2010 US decennial censuses and American Community Surveys five-year estimates, every city (with a minimum population of 10,000) in the United States is examined. Results demonstrate the wide variation amongst shrinking city operationalization approaches in the academic literature. Depending on the adopted approach, the proportion of cities that are shrinking in the United States can vary from 8% to 42%. Similarly, the number of prosperous shrinking cities varies from 35 to
552. Multivariate regression analysis is used to examine these trends and the conditions necessary for simultaneous prosperity and population decline. Examining the prosperity, severity, and persistence of shrinkage as well as inequality and talent clustering in shrinking cities, this research concludes that talent (bachelor’s degree or higher) is the strongest and most significant predictor of economic prosperity in shrinking cities. This held true for the overall model as well as models stratified by city size (all models had $R^2$ greater than 0.775). Persistence (temporal length of population loss) had no effect in any of the models and the effect of severity (proportion of population lost) was negligible. Inequality, measured by Gini coefficient, was negative and significant in all but the large city model. Examining the geography of prosperous shrinking cities by census division, shrinking cities in the Middle Atlantic and Pacific census divisions were found to be most likely to be prosperous.

This paper makes three key contributions to the field: (1) it provides key empirical insight to the terminology debate within the shrinking cities literature, (2) it presents an up-to-date analysis of the extent of urban shrinkage in the United States, and (3) it advances our understanding of the potential for shrinking cities to prosper by demonstrating that shrinking cities with high proportion of educated residents (talent) and low income inequality (Gini) located in the Middle Atlantic and Pacific census divisions are most likely to be prosperous.

References

Key Words:
shrinking cities, urban decline, demographic change, economic prosperity

**SPATIAL PREFERENCE FOR POST DISASTER RECOVERY: VACANT LOTS AFTER HURRICANE IKE IN GALVESTON, TEXAS**

Abstract ID: 900

Poster

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Increases in vacant lots are typically a repeated circumstance after a hurricane event. Reuse of vacant properties, post-disaster can increase the chance of urban economic growth (Pagano & Bowman, 2000) and shorten recovery time. However, the speed of neighborhood recovery to disaster event can be uneven and some neighborhoods lag behind (Van Zandt et al., 2012). For these neighborhoods, vacant lots can exist many years after a disaster or never recover.

The goal of this research is to visualize the vacancy condition pre-and post-disaster and the recovery speed of vacant lots after the flooding, examining Hurricane Ike’s impacts in 2008. The City of Galveston, Texas, the most urbanized barrier islands in the U.S. (Van Zandt et al., 2012), was selected for the research area. This research identifies the spatial disparity of emergent vacant lots before and directly after floods. The resultant vacant lots from the flood damage cause by Ike are distinguished from preexisting vacant lots through use of annual land-use data from 2007 to 2009 which measured previous land-use types. From 2010 to 2016, the length of vacancy and redeveloped land-use types were measured for the resultant vacant lots.

Eight years after Hurricane Ike, many vacant lots have not yet recovered. The lack of private and public resources is the main factor hindering recovery speed (Van Zandt et al., 2012). For example, the low-income or minority neighborhoods are located lower-lying portions of the city which were heavily flooded, while other parts of the city were unaffected. The prevailing negative spillover effect from resultant vacant lots also accelerated the tendency of clustering vacant parcels (Zhang, 2012). This research exposes clusters of non-recovered vacant lots, and analyzes their length of vacancy based on neighborhood-scaled spatial characteristics focusing on factors that hinder recovery speed. The length of vacancy is significantly increased by the number of adjacent vacant lots, previous non-residential land-use types, and dominant neighborhood land-use types. Findings of this study can be used to improve disaster recovery plans. More specifically, the ability to recognize and manage areas prone to long term dislocation and account for the emptying out of parcels after hurricanes are improved. Moreover, the time series spatial data can be a starting point for longitudinal models and simulations, such as spatial regression and land use prediction models.

References

Key Words:
Hurricane, Flooding, Vacant Lots, Neighborhood Decline, Recovery

PACKED IN AND PUSHED OUT: CAUSES AND CONSEQUENCES OF THE HOUSING SHORTFALL IN US METRO AREAS
Abstract ID: 904
Individual Paper Submission
The most economically successful cities in the US have been running a deficit of housing construction since the 1980s, and residents are paying the price. The sharp downturn in construction after the housing boom and bust of the 2000s has only exacerbated the affordable housing crisis. Since the nosedive in housing construction, people seeking homes have relied more and more on existing housing. Yet as people remain longer in their homes and move less often, fewer existing housing units are released onto the market. With fewer new homes built and fewer existing homes released onto the market, the amount of housing available for sale or for rent on the market has barely expanded, and has even declined in some areas. In these constrained and increasingly expensive housing markets, demand for housing has grown considerably, despite declining immigration and domestic migration, reduced household formation, and stagnant incomes. Sustained growth has been fueled by natural increases from a larger young generation growing up and entering the housing market, and by older adults living longer and aging in place.

In this paper, I examine the underlying sources of demand growth and housing supply constraints in US metropolitan statistical areas from 1990 to 2015, using IPUMS microdata for the 1990, 2000, and 2010 Censuses and the 2006-2015 American Community Surveys, as well as CDC National Vital Statistics System mortality data and IRS SOI Tax Stats migration data. I observe the various sources of growth in housing demand, including natural increases in the adult population through larger generations and longer life expectancies, in addition to the more commonly-studied migration, household formation, and changes in income. To understand sources of supply constraints, I measure the number of housing units available on the market within a year, whether recently built or recently turned over. I analyze changes in housing turnover and construction, taking tenure conversions into account to compare changes in the number of units for sale and for rent. I then assess the severity of the housing shortfall in different types of metro areas across the US, comparing the contributions of internal demand growth, migration, declines in housing construction, and reduced mobility to the housing affordability crisis. I find that demand growth from natural increases and fewer vacancies of existing homes play important roles in the housing shortfall. Though largely invisible, internal growth from natural increases and the inertia of people remaining longer in their homes have placed tremendous pressure on urban housing markets. Finally, I discuss the consequences of the housing shortfall for housing prices and housing affordability, and the implications for planners.

References

Key Words:
- housing, housing affordability, demography, inequality, regional change
UNDERSTANDING THE EDUCATIONAL IMPACTS OF SHRINKING CITIES

Abstract ID: 910
Individual Paper Submission

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Research in the United States and Europe has grappled with defining, measuring, and mitigating the shrinking of cities. Scholars have looked at issues of economic and industrial decline, population loss, housing and land vacancy, and urban design in these legacy cities (Mallach, 2012; Pallagst et al., 2009). Much of the professional-oriented literature emphasizes city “right-sizing” and promotes policies to manage “smart decline” (Hollander & Németh, 2011; Hummel, 2015). Recently, many school districts also invoke a narrative of “right-sizing,” and turn to school closures, as they struggle to manage constrained budgets, declining enrollments, deteriorating and underutilized buildings, and poor academic performance. These closures are controversial, and studies have shown that they disproportionately and negatively impact low-income communities and communities of color (Sunderman & Payne, 2009).

Although cities and school districts grapple with similar processes and invoke similar narratives, scholarship and practice remain silo-ed, limiting our understanding of how the economic, demographic, and spatial dynamics of shrinking cities affect public education. This paper begins to address this gap, using two approaches.

First, based on a systematic scan of the U.S. shrinking cities literature, I identify 85 shrinking cities. I then use data from the U.S. Census, American Community Survey, and the National Center for Education Statistics, and provide a descriptive analysis of population and school enrollment trends in these cities from 1990 to 2015. I address questions including: Does loss in school-aged population accompany total population loss? Are school districts in shrinking cities experiencing rates of enrollment decline similar to total or school-aged population decline? What are the changes in racial/ethnic and socioeconomic characteristics of school district students when a city and/or school district experiences shrinking?

Second, I focus specifically on the issue of public school closures. Through a systematic media scan, I establish the prevalence of school closures across these 85 cities. I then draw on data from an in-depth study of newspaper media coverage of school closures in 12 cities between 2005 and 2013. I present an analysis of the extent to which the discourse of school closures is tied to that of shrinking cities, “right-sizing,” and other demographic shifts.

This analysis reveals many dimensions of the educational implications of shrinking cities. This paper contributes to knowledge that advances the theoretical frameworks and empirical efforts in shrinking city scholarship, particularly with regards to social justice. When we center schools in shrinking cities research, new questions emerge about equitable access to public resources – specifically public education – in these legacy cities.

References

The intensification of displacement processes in Detroit's non-gentrifying neighborhoods

Abstract ID: 971
Pre-Organized Session: Preserving Housing in Detroit's Weak Market Conditions

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Urban scholars continue to be concerned about low- and moderate-income households’ right to remain in places experiencing the in-migration of affluent white households and rapidly rising home values. Destination cities like New York and Los Angeles continue to experience rising rent levels, pushing housing out-of-reach for many long-term residents and leading to forced evictions for others (Newman & Wyly, 2006). While the linkage between gentrification and displacement is established, albeit debated in the literature, we argue the search for gentrification as an index of displacement is limiting in the context of research on so-called “shrinking cities.”

Some US shrinking cities currently exhibit the surface characteristics of gentrification, particularly the appearance of high-end lofts and retail outlets. These phenomena, and the investment activities from which they arise, contribute to the rise of property values in geographically concentrated parts of shrinking cities. The number of affordable housing units in these areas has declined to some extent, but shrinking cities continue to be defined by depressed property values and high levels of housing vacancy (Dewar & Thomas, 2012). Media and some scholarly observers posit that if gentrification is not currently occurring in shrinking cities, it is an inevitable outcome if local policies are not adopted to preserve affordable housing (Doucet & Smit, 2006). We agree pressures on affordable housing should be monitored, but we find that real estate investment and public policy already displace large numbers of vulnerable, predominantly African-American residents from non-gentrifying neighborhoods in shrinking cities.

Using Detroit as a case study, we examine the relationship between urban policy and real estate investment and how the two interact to exacerbate housing insecurity and displacement processes in Detroit’s non-gentrifying neighborhoods. We draw on real estate transaction records and court records of landlord-initiated eviction proceedings in Detroit over the past decade to identify and quantify two stages of dispossession. The first stage being the dispossession of homeowners via foreclosure, whereby...
federal, state and local policies collectively function to displace long-term residents and transfer their properties to speculative investors in bulk at enormous discounts. The second stage involves the exploitative and predatory investment practices of property investors, many of whom trade in land contracts, a problematic form of seller-financing linked to past forms of racialized exploitation (Satter, 2009).

We find that that since 2005, roughly 80,000 homes were repossessed and sold to investors, 28,000 of them being sold to investors purchasing 50 or more properties. In examining the practices of these investors, we detail how their business models are often predicated on profiting off of low-income residents with limited housing options. In terms of the displacement generated by investor practices, we find that more than one-quarter of foreclosures acquired by investors were linked to eviction proceedings. Many properties were repeatedly linked to evictions, consistent with the expected business practices of contract sellers and predatory landlords.

In the view of recent accounts of investment patterns in Detroit, the city’s neighborhoods remain isolated from the positive impacts of current investments (e.g., Reese et al., 2017), but this interpretation of investment in Detroit in particular, and shrinking cities in general, does not take into account the varieties of investment that take place within these cities, the different ways in which investors leverage low-value real estate, the policy matrix that drives the supply of low-priced properties, and the geographies of displacement they produce. This paper contributes to the literatures of gentrification and shrinking cities by illuminating markets of dispossession that grow precisely because of, not despite, pressures on real estate prices.

References

Key Words:
Detroit, gentrification, displacement, shrinking cities

**CAN HOUSEHOLDS INVEST IN SOCIAL CAPITAL TO ACHIEVE BETTER RECOVERY OUTCOMES? A CASE STUDY OF 2012 SUPERSTORM SANDY**

Abstract ID: 981

Individual Paper Submission

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With global climate change and rapid development in environmentally vulnerable areas, the planning field is facing the challenge of building resilient communities that can withstand more frequent and severe disasters. In recent years, a growing number of studies disclosed the critical role of social capital in community post-disaster recovery. Social capital, typically defined as the ties and connections among social units, can be utilized to obtain usable concrete resources needed for recovery (Aldrich & Meyer, 2015). Inferring from that, individuals and communities can actively invest and grow these capitals so that they can draw upon them in a disaster situation.

Some evidence from empirical observations shows that different types of social capital differ in their functionality. Social capital has been categorized as bonding, linking, and bridging capitals, with bonding capital being the close ties with family, friends, and other emotionally close groups; linking capital being weak ties with social groups; and bridging capital being vertical ties with higher institutionalized power or authority gradients (Aldrich & Meyer, 2015). In post-disaster recovery, the most commonly available social capital is the bonding capital while the linking capital provides more opportunities and information to obtain resource for recovery and relying on bonding capital may mean less likely to obtain government aid through the bridging capital.

It should be noted that many of these studies analyzed social capital at a fairly large scale, i.e. at regional, neighborhood, and community levels (Nakagawa & Shaw, 2004). For instance, Aldrich (2011) studied how stronger networks accelerate disaster recovery by paired-comparisons of two similar neighborhoods after Kobe earthquake (Aldrich, 2011). Chamlee-Wright and Storr generated a semi-structured interview to examine the role of social capital as community-level collective narratives, and they found it enhances the community’s capacity to recover after hurricane Katrina (Chamlee-Wright & Storr, 2011). In contrast, there are few empirical-quantitative studies have been undertaken so far. Aldrich (2011) used the number of nonprofit organizations as the measurement of social capital on community level. In general, there has been a long lack of individual-level studies in this area, whether qualitative or quantitative.

This paper fills the gap by conducting a quantitative analysis on the relationship between social capital and household recovery status over time. Through repeated random sample surveys of 1,795 households in New York City after 2012 Hurricane Sandy, we collected information on household’s social capital and recovery status in 2015 and 2016. We analyzed the changes in household’s social capital over time, and empirically tested the correlations between social capital and self-reported recovery outcome. Preliminary results show that after a disaster, social capital does change over time, and social capital is a significant predictor of post-disaster recovery at the household level. This research provides evidence that building up social capital could potentially enhance post-disaster recovery outcomes.

References

Key Words:
household recovery, resilience, social capital, disasters, hurricane Sandy
BEYOND GENTRIFICATION: SHIFTING NEIGHBORHOOD HIERARCHIES IN AMERICAN METROPOLITAN AREAS

Abstract ID: 988
Individual Paper Submission

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I explore understandings about the recent revival of many American central cities and whether represent a structural change in the urban hierarchy of places or is gentrification an isolated phenomenon? Alan Ehrenhalt sees recent trends in the revitalization of central cities as a structural change in the way wealthy Americans make residential choices. I explore these competing hypotheses with a sample of the fifty largest metropolitan areas in the US. If Ehrenhalt is correct, then it is reasonable to expect that formerly disadvantaged neighborhoods may become high-opportunity areas and formerly middle-class suburban communities may continue to decline. We then explore the policy implications of a changing Metropolitan hierarchy and what it means for urban policy going forward.

I find evidence of significant convergence between suburban and central city hierarchies in two thirds of the metro areas in the sample. I also find significant heterogeneity in the changes between 1980 and 2015. Despite the dynamic nature of many metros, a significant share rust belt metro area hierarchies remained striking static during the study period. I then explore hypothesis about how and why metro areas display these very different patterns.

References

Key Words:
Gentrification, Inequality, Neighborhood Change

EVALUATING THE QUALITY OF CONSOLIDATED HOUSING PLANS

EVALUATING THE QUALITY OF CONSOLIDATED HOUSING PLANS

Abstract ID: 990
Individual Paper Submission

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Housing plays a central role in connecting individual, family, and society in human life. Provide decent housing at an affordable price, in a suitable living environment is the ultimate goal of housing policy in the United States, as well as many other countries. The U.S. Department of Housing and Urban Development (HUD) creates a financial mechanism that requires the submission of a Consolidated Housing Plan to support affordable housing development and other housing-related activity in a city, as
a condition of receiving funding through the Community Development Block Grant (CDBG) and HOME Investment Partnership (HOME) funds. These funds are used to support the proposed affordable housing development agenda of the local jurisdiction. The plan plays a crucial role in increasing affordable housing choice and quality for local people, especially for low-income households. Yet little research undertakes an evaluation of plan quality for Consolidated Housing Plans. Only two studies that tackled the housing issue in plan evaluation literature were found in a thorough literature search, and the most recent one was published a decade ago. More importantly, Consolidated Plan quality has never been assessed.

This research develops evaluation criteria by which Consolidated Housing Plans may be assessed, based on a thorough review of best practices identified in the housing literature. It then randomly chooses about 100 cities from the 500 largest U.S. cities for evaluation of the city’s Consolidate Housing Plan. Using the criteria developed through the literature search, we will evaluate these plans to validate the criteria and describe major variations across Consolidated Housing Plans. The development of housing plan evaluation criteria is the first step towards assessing the impact of Consolidated Housing Plans on the production of affordable housing, as well the location of affordable housing development in areas of high opportunity and low vulnerability to hazards and disasters. The results are expected to create guidelines not only for policy makers but also for local authorities and researchers in supporting the development of affordable housing and community resilience.

References

Key Words:
Consolidated Plan, Plan Evaluation, Affordable Housing

THE EFFECT OF HOUSEHOLD DEBT AND WEALTH ON SUBSEQUENT TENURE CHOICE
Abstract ID: 991
Individual Paper Submission

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The purchase of a home is the largest investment made by most American families, and home equity is the largest component of family wealth. Homeownership, an essential part of the “American Dream,” has not only been a financial goal for many American families but is also central to U.S. housing policy.
Scholars have long documented the social and economic merits of homeownership and explored the factors that influence access to it. However, despite the abundance of literature on homeownership and housing tenure choice, there lacks a study that focuses on whether and how debt and wealth influences a household’s decision to own or rent a home. This paper explores the effect of household debt and wealth on subsequent tenure choice. Using 2004 and 2008 panel data from the Survey of Income and Program Participation (SIPP), this study attempted to identify the causal effect of household debt and wealth on household’s decision to change tenure choice by examining what factors influenced transition from homeowner to renter or from renter to homeowner. Data analysis shows that household debt, household wealth, and household income play a significant role in household’s change in tenure choice – owners becoming renters and renters becoming homeowners. However, it also found that while household secured debt doesn’t have an effect on the homeowner to renter transition, it has a significant impact on renters to become homeowners, especially among minorities. Higher educational attainment also increases the likelihood of homeowner to become renters but it doesn’t help renters to become homeowners. Race is not a factor for the owner to renter transition but minority renters are less likely to become homeowners compared with their white counterparts.

References

Key Words:
Homeownership, Tenure Choice, Housing Policy

THE TIES THAT BIND: CONNECTING SMALL SCALE ACTION PROJECTS FOR LONG TERM GAINS
Abstract ID: 1004
Individual Paper Submission

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This article describes the organic development of a four-phased action research project over an eight-year period. The project results from close partnership between university faculty, graduate students, and residents of a low-income neighborhood in West Charlotte, Reid Park. This community-university partnership has produced several tangible benefits on the ground, the most significant being a $600,000 investment by Mecklenburg County Park and Recreation to build a new park within the community. Our work demonstrates the power of implementing multiple cycles of action research to achieve larger scale outcomes for community partners. The purpose of the article is to share how we progressed from a place of low neighborhood participation to a place where neighborhood residents realized their vision for a new park. By applying the work of Bodorkos and Pataki’s (2009), we show how each of our four phases of action research built on the previous phase to increase participation and power within the neighborhood. Our intention is to share the four phases of this model for possible replication in settings
like Reid Park, a neighborhood characterized by low initial participation, a median household income of less than $30,00, and has a population that is predominantly Black with noticeable inequality in education, municipal funding, and access to jobs.

This paper covers a process that evolved over several years of continued partnership starting in 2009 and is ongoing between the Charlotte Action Research Project (CHARP) at UNC Charlotte and the Reid Park Neighborhood. Through this community-university partnership we have integrated teaching and research at the university with neighborhood action. This is an example of how planning education can include community-based research to increase the benefits for our local communities with limited power (Stoecker, Loving, Reddy, & Bollig, 2010).

References


Key Words:
participatory planning, action research, community-university partnerships, Parks, community power

LEGAL WEED AND RACE: AN EXAMINATION OF HIRING PRACTICES AND LOCATION CHARACTERISTICS OF MARIJUANA DISPENSARIES IN DENVER, SEATTLE, AND PORTLAND
Abstract ID: 1014
Individual Paper Submission

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Legalized, recreational marijuana is increasingly becoming big business in states such as Washington, Oregon, and Colorado. Indeed, Colorado alone collected over $10 million in marijuana taxes, licenses, and fees just in January 2016*. However, prior to the legalization of marijuana, black-Americans and, specifically, black-American communities, were disproportionately targeted and adversely affected by drug laws. Thus, with the emergence of a booming legal marijuana industry, it is important to consider how black Americans fare in this new enterprise. The purpose of this study is to evaluate the presence of black Americans in the marijuana industry.
We take two approaches to evaluate the role of race in the legal marijuana industry and consider the case study sites of Denver, CO; Seattle, WA; and Portland, OR. First, we evaluate whether legal marijuana dispensaries are spatially associated with drug-related arrests (and of blacks, particularly) via spatial analysis techniques (spatial regressions and kernel analysis). Specifically, we examine the proximity of dispensaries to areas previously characterized by high drug-related arrests. Second, we use semi-structured interviews and surveys to examine the hiring practices and attitudes of dispensary owners and managers. This highlights whether potential biases and practices operate to limit the participation of black-Americans in marijuana businesses. Preliminary results for both questions point to the need for: a) more dispersed locations for dispensaries to economically assist under-served communities; and b) more explicit attention to hiring practices that may diversify the marijuana industry. We discuss the implications of our preliminary results for policies, businesses, and communities.

*Colorado Department of Revenue. 2016. “Marijuana Tax Data”.

References

Key Words:
Marijuana, Race, Community Development, Hiring Practices

BUILDING TOGETHER: EVALUATING CULTURALLY APPROPRIATE HOUSING FOR SUSTAINABLE INDIGENOUS COMMUNITIES
Abstract ID: 1047
Individual Paper Submission

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Housing and community development deficiencies are key contributors to the ongoing systemic marginalization of First Nations peoples in Canada. As a variety of fields begin to recognize and address health and wellbeing outcome gaps faced by First Nations peoples, housing inadequacy and inappropriateness are widely described as causes. Understanding of existing housing systems- processes, designs, implementations strategies and outcomes- is mediated by national-level data collection and evaluation. Matrices, and evaluators are from outside of First Nations, representatives of the colonial system responsible for developing the deficient systems being measured. The objectives of this knowledge synthesis paper are to uncover possible alternative strategies- focused on lived experiences,
preferences and priorities of Indigenous peoples through a review of current knowledge and literature addressing:

1. Understandings and applications of Indigenous knowledge systems, values and cultural practices in the design and implementation of housing systems;
2. The development, implementation and assessment of data matrices and whether these are inclusive of Indigenous ways of knowing;
3. Global measures of housing for marginalized communities focusing on holistic understandings of housing outcomes; and
4. Innovative projects being undertaken with Indigenous communities to address housing inadequacy and cultural appropriateness.

Methodology
Post-colonial housing design and community development systems in Canada are examined, to understand the development of existing and historical evaluation strategies. A further review of housing outcome assessments is conducted in grey and academic literature, first within Canada and then globally. Data collection matrices are coded thematically (motive for evaluation, evaluator, flexibility of data collection tool, data ownership, etc.) and grouped to understand existing variation and innovation within the field.

Housing policy is contrasted with Indigenous knowledge systems; building on the work of Indigenous planning and other anti-colonial process focused theorists, gaps between practice and theory in Indigenous community development are explored isolating potential for localized, community-developed tools countering traditional colonial policy and evaluation systems.

Findings
Existing housing policy and evaluation strategies in Canada were developed as a response to growing urban- and suburbanization. Core Housing Need was refined to reflect changing understandings of minimally acceptable housing in this context, with a focus on affordability to determine households in need of housing subsidies.

Mirroring the export of suburban housing designs, housing policy and evaluations were also imposed on remote and isolated First Nations, ignorant of local context and culture, as an assimilative tool-preparing First Nations peoples for life in the Canadian mainstream.

Alternative policies and processes are being implemented in other post-colonial contexts recognizing housing satisfaction and cultural safety as critical elements of sustainable communities. Disruptions are analyzed to demonstrate ways in which changing evaluation strategies impacts housing systems, built form and health and wellbeing outcomes.

Relevance
This project clarifies the role of Indigenous knowledge systems in housing and community development policy and practice, creating equitable and sustainable outcomes. Identifying existing gaps in theory and practice informs recommendations to practitioners across disciplines engaged in community development, contributing to the broader process of reconciliation happening in Canada. Housing shifts from site of assimilation to cultural regeneration, unlocking the emancipatory potential of planning through the recognition of the unique contexts and culture of remote and isolated First Nations.

References

Key Words:
Indigenous, First Nations, Housing, Collaborative planning, Evaluation

THE GEOGRAPHY OF OPPORTUNITY: NEIGHBORHOOD DISTRESS AND CLUSTERED ABANDONMENT
Abstract ID: 1059
Poster

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Wilson and Kelling’s (1982) Broken Windows Theory suggests that clustering of abandoned areas can potentially occur due to increased negative perceptions. The means by which this abandonment spreads out and influences neighborhoods still requires further studies for a many reasons. First, perceptions on neighborhood abandonment may differ by the historical context of neighborhoods. Second, availability of abandoned properties to be redeveloped or re-greened may not be the same across differing neighborhoods. Third, the impact of the repurposing method for each abandoned property may differ by the condition of each neighborhood. For example, distressed neighborhoods are prone to disadvantaging residents through limited access to infrastructure, healthy foods and/or educational facilities.

This research examines the relationship between areas experiencing significant clustering of abandoned lots and distressed neighborhoods. Specifically, the size and ownership type of abandoned properties are examined if they tend to typify distressed neighborhoods. When a parcel is excessively large or too small, it is likely to stay vacant and not be well managed (Schenk 1978). Relatedly, when a parcel is owned by a passive owner – either publicly or privately owned, the land is likely to be economically productive (Adams et al. 2002). Minneapolis, MN was chosen as a study area to test the hypothesis. Conducting hot spot analyses using Getis-Ord Gi* statistics, this study visually identifies hot spots and cold spots of where abandonment occurs and where privately or publicly owned abandoned lots tend to cluster. Then, the spatial characteristics around each type of abandonment are compared, using neighborhood attributes at the Census Block Group level. Neighborhoods with dispersed versus clustered vacancy are compared to identify the differences in neighborhoods’ social, locational, functional, and economic conditions. Correlational measurements between abandonment and neighborhood distress levels are also examined using standardized educational, employment, and poverty status as variables for distress.

Primarily results show that abandonment weighted by the size of vacant properties appears to be clustered. Social characteristics such as education, poverty, income and unemployment level showed
significant association with clustered abandonment. When comparing overall neighborhood distress and abandonment levels, the correlation was significant (r=0.377, p<0.00) whereas the difference between dispersed and clustered abandonments was not. This study points out the potential of inequality issues in regards to neighborhood abandonment. While abandonment may be an opportunity for low-income neighborhoods to gain environmental justice by reusing vacant properties, it is still debatable whether if, realistically, privately-owned properties clustered in distressed neighborhoods have a potential to become repurposed (i.e. as green infrastructure) for the city.

References

Key Words:
Abandonment, Neighborhood distress, Hot spot analysis

KRIGING FOR COMMUNITY DEVELOPMENT: BUILDING INSTITUTIONAL CAPACITY THROUGH THE APPLICATION OF A QUANTITATIVE METHOD FOR NEIGHBORHOOD HOUSING ASSESSMENT

Abstract ID: 1073
Individual Paper Submission

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For many years, Buffalo’s West Side has been one of its most impoverished neighborhoods. Recently, however, the neighborhood has begun to see an increase in economic investment as higher-income residents who are attracted to the urban amenities of the nearby upscale Elmwood Village have sought out adjacent, lower-priced neighborhoods further west. The resurgence of Buffalo’s real estate market is well-documented in the local media, but despite an explosion of urban amenities driving economic revitalization in Buffalo’s downtown and adjacent neighborhoods, the growth is highly uneven and structural problems remain in many distressed residential neighborhoods. In particular, the West Side faces new challenges as demand for housing puts pressure on the neighborhood’s housing market and drives up housing costs. Left out of the discourse of the economic resurgence, low-income communities such as the West Side and community-based organizations (CBOs) working to improve them are often left to fight against the externalities of uneven, amenity-driven growth alone.

Democratic access to key spatial knowledge and information is crucial to promoting inclusive urban growth, but CBOs face constraints with respect to data access, financial resources, and technical expertise (Sawicki & Craig, 1996). Specifically, many CBOs struggle to implement successful, data-driven strategies for combatting neighborhood change due to challenges such as lack of appropriate,
accessible data for their neighborhoods; limited access to expensive hardware and software required for spatial data analysis; and inadequate human capital for interpreting and translating data into sustainable community development strategies (Kingsley, Coulton, & Pettit, 2014). Detailed, up-to-date property information is central to the needs of many CBOs working at the front lines of housing and neighborhood change. While many cities have successfully implemented large-scale, democratic property inventories to identify issues related to subpar property conditions, vacancy, and housing abandonment, replicating such efforts at a community scale is prohibitively expensive.

This paper will expand upon a community geography exercise in which researchers affiliated with SUNY Buffalo State’s Geography and Planning Department collaborated with a community-based non-profit organization oriented towards housing issues to conduct a property condition inventory of the neighborhood in an effort to leverage community data to affect positive change. Partnering with the university provided the student manpower, computer hardware and software, and technical expertise needed to undertake such a project and this partnership was a first step towards bridging the data gap in a resource-constrained community. However, while community geography seeks to establish a flat power structure between community groups and technical partners (Robinson, Block, & Rees, 2016), we contend that such collaborations are not fully sustainable due to the power relations embedded in such university-community partnerships, the short attention spans of academic researchers, and challenges in collaborating with a diverse set of partners.

Here, we seek to further advance this effort to democratize data by drawing upon analytical methods in the community geographer’s toolkit to economizing on the time and effort needed to collect satisfactory property condition information that can be used to track this key indicator of neighborhood change. We present a framework in which the geostatistical method kriging can be used to interpolate property conditions for an entire neighborhood by utilizing just a strategic sample of field-surveyed properties. Compared to conducting a full neighborhood survey, such a sampling strategy would allow communities to more cheaply and easily maintain up-to-date property condition databases independent of an anchor-based technical partner.

By reducing the time and human capital required to track a key indicator of neighborhood change over time, the method presented in this paper may help build local capacity so that resource-strained communities and CBOs may more effectively address the challenges brought about by uneven, amenity-driven urban growth. As U.S. cities and communities face an uncertain future with respect to federal funding opportunities and data access for community-based initiatives, innovate methods such as these are needed to ensure that community planning practitioners are equipped with the knowledge and information needed to promote sustainable, inclusive, and equitable urban growth.

References

Key Words:
Quantitative methods, Community development, Housing
THE POLITICS OF COMMUNITY MEDIA IN THE POST-DISASTER CITY
Abstract ID: 1077
Individual Paper Submission

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When a city experiences disaster, inequality and marginalization become more pronounced as different groups of people compete for limited resources to recover and rebuild. While contemporary mainstream media reports an array of narratives about the calamity, it may still ignore a variety of perspectives and the lived experiences of minority populations. Various analyses show that mainstream media often misrepresents or diminishes individuals and groups based on distinctions of class, race, ethnicity, gender, and lifestyle. This occurred after Hurricane Katrina, when mainstream news outlets told a racialized story of the disaster aftermath in which African-American residents were “looting” the city while white residents were “finding” food and provisions in local stores. This creates a biased knowledge base about the events before, during, immediately following, and long after the disaster.

Accordingly, disaster in the city can trigger new formats of expression to amplify voice and resistance in the city also known as community media. Creators of community media construct discursive spaces for groups and individuals disregarded by dominant media institutions and practices (Howley, 2010). Most importantly, community media may help certain social and physical communities with empowerment and the self-determination of their futures. As information communication technologies (ICTs) become more accessible, community media becomes easier to produce and disseminate, and it manifests in varied forms with diverse purposes. But, how exactly do informal or formal collectives use community media in the aftermath of a disaster during immediate recovery and longer-term rebuilding? And what type of symbolic power (visibility) does community media have? Under what circumstances does it translate into material gains for a group or neighborhood (access to money, policy victories, etc.)?

This project investigates community media in post-Katrina New Orleans (2005) and post-Sandy New York City (2012). It is a comparative case study of various grassroots media initiatives including low-powered FM radio, Wifi mesh networks, social networking sites, citizen journalism, blogging, and participatory documentaries in New Orleans (NOLA) and New York City (NYC). Given that more than ten years have passed since Katrina, a retrospective analysis of the ongoing community media efforts and their effects on recovery in NOLA will allow me to frame and theorize the influence of community media on rebuilding in NYC. From 2005 to 2012, new media tools and social-networking sites have advanced enormously. I will treat the evolving nature of ICTs in these two cases as a continuum to better understand the shifting community media landscape in disaster recovery and rebuilding. This research project is primarily concerned with understanding the origins, sponsorship, intentions, and results of community media. Therefore, the differentiation in technological platforms among community media programs is not the primary variable of interest, but I am analyzing the relationship that these technologies have with the community media makers’ goals and outcomes.

This research engages and contributes to three theoretical debates. First, the study investigates if and how community media form a platform for minority populations to amplify voice and resistance, as well as facilitate collective actions in the aftermath of disaster. Second, this project aims to better understand the important relationship between communication and community. It challenges the ongoing debate about the concept of community in the digital era since few researchers have explored this question when physical surroundings and homes are destroyed or made uninhabitable due to disaster. Third, this
dissertation provides new insights about how the presence and different grassroots uses of ICTs contribute to community resiliency directly after as well as years after the disaster.

References

Key Words:
media, disaster, resilience, participation, communication

GROCERY STORE PROXIMITY AND WORKFORCE HOUSING IN OKLAHOMA: DO ALL RESIDENTS ENJOY THE SAME OPPORTUNITY TO ACCESS FRESH VEGETABLES AND FRUITS?
Abstract ID: 1082
Individual Paper Submission

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Background
Access to opportunity is increasingly seen as an important component of quality of life for residents of publicly subsidized housing in the United States (Lens 2015). Local amenities such as parks, trails, health care, and shopping constitute components of the material and social aspects of place that support and enable individuals to live a healthy life (Lawrence, 2005). Food environments, such as grocery stores, farmers’ markets, convenience stores, and food trucks comprise increasingly scrutinized components of neighborhood well-being because of the relationship between their availability and food security and various indicators of well-being (Glanz, Sallis, Saelens, & Frank, 2005).

This is particularly true in low-income communities where housing is often publicly subsidized and the ability to obtain components of a healthy diet may be compromised. Families in some of these neighborhoods are sometimes not able to consistently get enough food despite supportive programs (Gaddis, Lian, Watts, and Thompson, 2015). Youth in these communities may be particularly vulnerable to food insecurity, particularly children of larger families who lack local social support systems (Nebbitt, Lombe, Chu, Sinha, & Tirmazi, 2016). Understanding how grocery stores are situated in relation to affordable housing will help planners and policy makers better understand how one component of the build environment, food access, may disproportionately impact communities differently.

Method
To understand the relationship between workforce housing location, the availability of fresh vegetables and fruit, and community characteristics I utilize data on the spatial location of publicly subsidized housing sites and grocery stores operating in the state of Oklahoma in 2015. I map the location of 1,438
workforce housing sites of different types (e.g. single family home, apartment) and sizes (number of bedrooms) built through various mechanisms including Low Income Housing Tax Credits and other programs administered by the Oklahoma Housing Finance Authority as well as programs financed using Section 515 Rural Rental Housing Loans administered by the United States Department of Agriculture. I pair this information with the location of all 587 grocery stores operating in the state of Oklahoma in 2015 and data from the 2014 American Community Survey. I visited each grocery store site to confirm store location, operation, and space dedicated to the provision of fresh vegetables and fruit. I paced off each area and standardized those measurements into square feet. Each grocery store and housing site is categorized using Census data according to racial, ethnic, and income characteristics of the nearby community.

Key Findings and Recommendations.
This project is currently ongoing. Based on previous research I hypothesize that the availability of fresh produce is likely to be lower in low income, rural communities as well as low-income, non-white communities located in urban settings. Given spatial disparities in the arrangement of grocery stores, designers of the built environment may need to find ways to incentivize brick-and-mortar stores or other food outlets into affordable housing communities, develop innovative strategies to support locally cultivated food, or focus more intently on integrating workforce housing into areas with supportive nutritional environments.

References

Key Words:
Food systems, Housing, Public Health, Spatial Inequality

“WE ALL SHOULD BE ENVIRONMENTALLY CONSCIOUS OF OUR EVERYDAY ACTIONS” THE URBAN POOR IN MEXICO CITY’S COLONIAS POPULARES ARE SUSTAINABLE USERS OF WATER AND ENERGY
Abstract ID: 1092
Poster

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Two-thirds of Mexico City’s residents live in shared self-help housing units in low-to-moderate income settlements, known as “colonias populares” (Connolly,2009). Self-help housing in colonias populares
has the side effect of reducing per-capita energy and water usage because a higher number of families live in a shared building (Ramesh et al., 2010). However, there is a poor understanding of the extent to which people in low-to-moderate income settlements use energy and water and thus contribute to GHG emissions (Sullivan and Ward, 2012; Bredenoord et al., 2014). The central research question of this article is, therefore: what are the resource use and attending GHG emissions of low-to-moderate income residents in colonias populares in Mexico City? To address the research question, the author randomly conducted 110 household resource usage surveys in Isidro Fabela, a colonia popular located in Mexico City. Questionnaires explored how much families pay for their electricity, gas, and water bills. The survey also analyzed the characteristic of low-income households’ everyday practices of energy and water usage. The study suggests that the majority of residents use electricity-saving lighting bulbs and that some have acquired electricity-saving refrigerators. None of the surveyed households have any air conditioning system which in turn suggests that residents take advantage of Mexico City’s temperate weather, natural daylighting and ventilation. Also, residents appear to be environmentally aware of the Mexico City’s water crisis, as some of the participants expressed in their interviews, “Because we have a trickle, we all save water.” In Mexico City, low-income settlements have a timely limited access to potable water, from 6 am to 1 pm; therefore, residents store water in tanks or buckets (Castro, 2004). Nearly all residents conduct water-saving everyday practices: most participants save and recycle water from the laundry. By taking five-minute showers, residents save gas and water. Furthermore, some residents shower by using buckets of hot water that they heat in the stove. Residents expressed their interest in acquiring energy-efficient technologies, particularly solar water heaters, to save gas and water. Also, almost all residents separate household solid waste into inorganics and organics which they give to solid waste trucks for municipal recycling. The study suggests that the poorest families not only classify household waste but also sell materials such as plastics, paper, and steel to local recycling centers to have a secondary income. As one of the most disadvantaged participants expressed in her interview, “Solid waste is not trash, it is a valuable recycling material.”

To assess how sustainable, resource-efficient users, are the residents of Isidro Fabela compared to others upper-income residents in Mexico City, the author analyzed statistics of water and energy usage and solid waste generation. The comparison suggests that low-income families in Isidro Fabela considerably use fewer resources and produce less solid waste than upper-income residents in Mexico City. The study concludes that the urban poor in colonias populares are not only sustainable users of water and energy but that are also environmentally aware of their impact. As one female head of family stated, “We all should be environmentally conscious of our everyday actions.” The author found that poorest families conduct more resource-saving strategies to pay less for their bills. The author concludes that environmental education strategies policies can strengthen people’s environmental consciousness, regardless their social status. Also, energy-efficient technologies, such as solar water heaters, could serve to reduce energy use and improve living conditions and at the same time reduce energy and water costs (Sullivan and Ward, 2012). Technology financing should be available to low-income families, to make technological innovations available for the urban poor living in colonias populares (Ward et al., 2015).

References


Key Words:
energy and water usage, household solid waste management, environmental consciousness, sustainable users, colonias populares

THE CASE OF THE VANISHING SOCIAL PROPERTY: HOW SOCIAL HOUSING IN CANADA IS CHANGING PROPERTY RELATIONS

Abstract ID: 1093
Individual Paper Submission

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Social property offers an alternative to private property, and provides a framework for challenging private property’s normative presence in neoliberal policy. Social housing, as a form of social property, has been removed from the private market in order to address a social purpose. However, when the funding and policy frameworks surrounding social housing change and affect how housing providers operate, is social housing still social property? Understanding the shifting relationship between housing and property is important in creating policies and programs that will benefit society as a whole. Davis (1991) suggests that social property must have a collective form of organization and a “‘social’ limit on one or more of the entrepreneurial interests that owner-occupiers typically have in domestic property” (67). Castel (2002) argues that social property is similar to private property, but that it is a way of “making available to non-property owners a type of asset that was not the direct possession of a private holding or patrimony, but a right of access to collective goods and services which had a social purpose: ensuring the security—the social security—of the members of a modern society” (319). In both cases social property acts to provide a form of collective security, and to make property available to a larger groups of people beyond simply those who already have access to private property.

Housing affordability continues to be an important topic in Canada. Whether about potential housing bubbles in Vancouver and Toronto that limit middle class access to housing or local approaches to addressing homelessness, debates about how to best ensure access to housing and address housing need are ongoing. Rolnik (2013) notes that housing is no longer considered to be a social good, but is now increasingly privatized and commodified. This is part of the neoliberal rollback of the welfare state, which involves a marketization of governance and a withdrawal of supports for collective endeavors (Peck, Theodore and Brenner 2009; Weber 2002).

This paper examines the case of social housing in Canada, which is currently undergoing a radical shift in funding and provision. Historically funding was provided through operating agreements between the housing provider and the federal government. Today these agreements are expiring, and the funding is not being replaced. As a result, housing providers are changing how they provide low-cost housing. Through interviews conducted in Manitoba, Canada, I examine the challenges and opportunities that housing providers face as their agreements end, how they are changing their operations to meet and address their new context, and how these changes in social housing provision affect understandings of social housing as social property. The interviews show that, although still retaining some of the
characteristics of social property, housing providers are, sometimes by choice and sometimes not, moving towards providing a form of housing that is closer to private property than social property.

References


Key Words:
Social housing, Canada, property

CO-OPTING THE GROWTH MACHINE: ARE LABOR UNIONS USING ENVIRONMENTAL LAWS TO PROMOTE EQUITABLE GROWTH?

The California Environmental Quality Act (CEQA), was enacted in 1970 to protect the state’s natural resources and communities. CEQA has since been blamed for rising home prices, increased development uncertainty and slower development times in California. Many argue that CEQA deters much-needed development in the state by allowing project opponents broad grounds under which to litigate a project. Environmental Impact Reviews (EIRs) prompt litigation more often than other CEQA planning documents, and only 43% of EIRs survive in court (Holland & Knight 2015). To this end, many developers have sought ways to circumvent the law and related litigation or otherwise avoid the delays and costs associated with compliance (Holland & Knight, 2015; Barbour & Teitz, 2005). Our research examines whether negotiated contracts with labor unions, called project labor agreements (PLAs), enable developers to neutralize one key opponent. This paper suggests that labor unions use CEQA against developers, through the threat of environmental lawsuits, to ensure that urban development projects produce union construction jobs. Construction labor unions appear to be leveraging CEQA and the growth machine for union member benefits, paving the way for project approval and construction to proceed (Molotch, 1976).

PLAs are collective bargaining construction agreements between project developers or contractors and labor unions (U.S. General Accounting Office 1998). Under PLAs, unions give up their right to strike, with provisions for avoiding disputes and resolution, under threat of penalties (Belman & Bodah, 2010). In exchange for additional certainty, the project owners and/or contractors commit to hiring a minimum percentage from the union dispatch list, mandating union worker hiring. Further, all the jobs produced meet union labor standards which ensures higher wages and representation for all workers. These
stipulations improve job quality and make union contractors more competitive in the bidding process (Langworthy, 1995).

While project labor agreements have become common in urban development, no research has yet examined their role in the development approval process, and how unions gain leverage over developers to draw them to the negotiating table. Therefore, this research is the first to examine whether and how CEQA affords project opponents leverage to gain benefits, through the ability to broadly sue developers and raise development uncertainty.

Therefore, we ask:

Does the presence of a project labor agreement affect the likelihood of CEQA litigation? 
Does the presence of a project labor agreement alter the time to project approval under CEQA?

To address these questions, we examine whether projects governed by a project labor agreement face less litigation and/or a shorter time to project completion. This process involves matching CEQA EIR documents to legal petitions across the state from 2010-2012. Petition documents most often do not call out the associated EIR by name. Therefore, the petition-EIR matching process includes referencing court records and other project documents to ensure that petitions are properly matched. We then use media mentions to triangulate the presence or absence of a PLA or CBA that was negotiated during development. We individually scraped media mentions from the Internet using Google searches for each of the 1,234 projects in our sample. Our preliminary findings, based on a proof of concept of the five highest population cities in California, suggest that labor unions may be effectively using CEQA to secure project labor agreements. In the proof of concept exercise, a chi-squared statistic of 6.57 with a p-value of 0.01 was calculated for litigated projects with PLAs suggesting that PLAs are affecting the CEQA development process in a non-random way. Data suggests that PLAs have the potential to change the planning and development process, providing a venue other than CEQA litigation for public scrutiny. When assessed in terms of the growth machine, this suggests that CEQA affords unions leverage in the development process, but promising local benefits to unions in the form of PLAs may be an effective way for the growth machine to co-opt potential opposition.

References
- Holland & Knight (2015). In the name of the environment: How litigation abuse under the California Environmental Quality Act undermines California’s environmental, social equity and economic priorities.

Key Words:
Project labor agreement, growth machine, environmental review, community benefits, equitable growth
A monumental new urban renewal phase occurred during the late 20th and early 21st centuries in the United States (US). With an influx of white residents and capital investments, many urban “no go” black ghettos were transformed into hip, cool places filled with chic restaurants, trendy bars, and high-priced apartment buildings (Freeman and Cai 2015; Hyra 2012). In several US cities, once impoverished, inner city African American neighborhoods have become mixed-income, mixed-race gilded ghettos. Derek Hyra’s new book Race, Class, and Politics in the Cappuccino City (University of Chicago Press 2017) uncovers the powerful economic and political forces including the legacy of racial tensions, emerging racial tolerance, and new urban living preferences driving the transition of the dark ghetto to the gilded ghetto.

Through an extensive 6-year ethnographic study, Hyra experiences and captures the economic transformation of Washington, DC’s Shaw/U Street neighborhood, a historic African American community. His work explains how gentrification forces originating outside and within the neighborhood collectively facilitate the community’s revitalization and its political and cultural consequences. His analysis reveals the on-the-ground realities of mixed-income living. Specifically, he unpacks the tensions between the new and old, white and black, rich and poor, and gay and straight. While, on many levels, tolerance for diversity is greater than ever, these traditional social divides still help to explain today’s urban community change narrative. The book articulates several interesting and connected concepts such as living the wire, political and cultural displacement, and diversity segregation that explain how preexisting inequalities are exacerbated, not alleviated, in this mixed-income, mixed-race community. More importantly this research outlines a new urban paradigm, the cappuccino city, to explicate important redevelopment characteristics, dynamics, and patterns that appear to various extents in advanced service sector economy cities.

While this book is packed with rich theoretical contributions, it offers many points of contention with the mainstream urban redevelopment literature. For instance, it argues that in some circumstances black branding might not slow down the gentrification process but rather accelerate it. Moreover, the book claims that an iconic ghetto trope, that is the association of blackness with crime, poverty, and danger (Anderson 2012), attracts some young white Millennials to transitioning neighborhoods. Lastly, the study claims that mixed-income neighborhoods, without meaningful social interactions across race and class, might not be as beneficial for low-income people as was once theorized.

This roundtable will consist of Derek Hyra, four discussants, who will critique the book from a variety of disciplinary perspectives, and a moderator. The discussants, leading gentrification, neighborhood development, housing, and poverty scholars, include Lisa Bates, associate professor, at Portland State University’s Toulan School of Urban Studies and Planning; Ingrid Gould Ellen, professor, at New York University’s Wagner School; Lance Freeman, professor, at Columbia University’s Urban Planning Program; Edward Goetz, professor, at the University of Minnesota’s Humphrey School of Public Affairs; and Paul Jargowsky, professor, at Rutgers University’s Department of Public Policy and
Administration. The roundtable will be moderated by Willow Lung-Amam, assistant professor, at the University of Maryland’s Urban Planning Program. Each of these scholars brings a unique perspective to the discussion and they will comment on the book’s utility and shortcoming in helping to advance urban planning theory and practice in the domains of poverty, neighborhood change, affordable housing, and mixed-income, mixed-race communities.

Given the reach of the book and depth of the discussants, the discussion will cover numerous neighborhood redevelopment challenges that will be of interest to an urban planning audience, regardless of their familiarity with Derek Hyra’s new book. This session will advance a much-needed dialogue about the dynamics driving contemporary gentrification and their consequences. The roundtable will also facilitate a meaningful conversation about effective ways to plan for and produce equitable neighborhood growth.

References

Key Words:
Cappuccino City, Gentrification, Neighborhood Change, Mixed-Income Neighborhoods, Race

THE HOUSING CHOICE VOUCHER PROGRAM AND ITS RECIPIENTS’ OPPORTUNITIES FROM THEIR NEIGHBORHOOD
Abstract ID: 1109
Individual Paper Submission

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The Housing Choice Voucher (HCV) program has been a major affordable housing program that helped low-income renters to find a decent housing unit on the private market. The program recipients can live in any rental unit that meets the minimum quality of the U.S. Housing and Urban Development (HUD) and that charges a lower rent than the payment standard, which is the maximum subsidy that a local housing authority set based on HUD’s Fair Market Rent (FMR).

This study answers the three following research questions. First, what is the opportunity neighborhood? The study synthesizes previous literature to establish an idea of what opportunity areas are. Second, are there any constraints on the HCV program beneficiaries to apply the subsidy to find an ideal unit? To be specific, the research answers whether the maximum rent limit and the threshold of the income eligibility of the program discourage the mobility of voucher recipients. The study visually displays the locations of the HCV program tenants’ choice with the median rent and the median income for census block groups. Additionally, the research discovers if there is any objection to affordable housing that the general public and existing residents have. The study synthesizes previous studies that have explored stereotypes against affordable housing programs and low-income housing development.
Also, the research analyzes legal actions, such as anti-discrimination laws based on tenants’ source of income. Third, does the voucher subsidy lead the program’s recipients to opportunity areas? The study displays clusters of the two groups – HCV and HCV waitlist households. The advanced hot-spot analysis shows clusterings of the two comparison groups. Also, the study demonstrates the neighborhood opportunities with the clusters that the hot-spot analysis identified.

The study would significantly contribute to the understanding of the HCV program. Firstly, many previous scholars defined opportunities in neighborhoods, and this study would contribute to the existing literature by analyzing previous studies regarding the degree to which affordable housing program units are properly sited in high opportunity areas. Secondly, the study reveals that the criteria of the HCV program, such as the rent levels and the income standards of the program, create some constraints to the program recipients. Also, the study finds psychological barriers by existing residents and the lack of legislation that helps to protect HCV recipients from unfair treatment on the private market. This study would contribute to the HCV program by identifying the obstacles that prevent voucher recipients from exploring high opportunity areas. Thirdly, this study shows that the both groups – current beneficiaries and waitlisted households – live in geographically similar places based on the locations of the clustering. Specifically, the study visually shows the neighborhood opportunity that the HCV recipients have, in comparison with the opportunity that the voucher waitlist households have. The clustering analysis will allow a better understanding of strengths and weaknesses of the voucher program, as to leading voucher recipients to high opportunity areas.

The comparison of the neighborhood opportunity and the clustering analysis of the households of the HCV program and the program waitlist were conducted based in Harris County, Texas. This study would help to better understand opportunities and constraints of the HCV program, which would affect the both current voucher recipients and future beneficiaries.

References

Key Words:
Housing Choice Voucher, Recipients, Waitlist, Neighborhood Opportunity, Constraints

INSTITUTIONAL APPROACH TO THE RECENT FORM OF GENTRIFICATION IN WEST LOOP, CHICAGO
Abstract ID: 1115
Poster
My goal is to understand this urban development and change as financialized market and actors’ outcome through supply-side account of gentrification theory by using historical institutional and political economic approach.

I will investigate the fundamental changes in real estate supply and demand reshaping geography of gentrification, which have resulted from (1) the institutional and structural reforms of markets and policies, (2) the problematic behaviors of financial institutions and real estate developers, (3) the characteristics of financial capital and (4) the transformed role of the local government facilitating these urban development and dynamics. These causal forces of restructuring housing market and urban development led to new forms of economic development and gentrification have driven by global financialization as a new regime of accumulation. My study will be using a theoretical framework of examining the organizational structure and institutions on property (urban) development in Chicago, particularly focusing on West Loop area (Ball 1998). Institutional approach is necessary because of the complexity of development processes and the need to avoid missing out on key links in understanding how and why a particular project took place (Ball 1998, Healey 1992, Healey and Barrett 1990). Particularly, theory of structurer of building provision focuses on the network of organization (i.e., specific firms) and markets involved in a particular form of building provision is the ‘structure’ of that provision. There is no dichotomy between agency and structure. Therefore, organizations and markets are both part of structures of provision, because of the two way influence of each on the other. In addition, a structure of building provision refers to the contemporary network of relationships associated with the provision of particular types of building at specific points in time emphasizing the temporality of the network and process. However, structure of building provision is not a complete theory in itself. Therefore, this theory can be utilized as a conceptual device of framing out my research focus and direction as incorporating institutions into analyses of the development process.

By using theories of institutions in property research, these theories would help me understand the role of actors and their behaviors for property development. For instance, several development projects have completed by a form of joint venture partnership between local real estate developer and financial institution. By adopting the information theory and minimizing transaction cost theory of institutions to interpret this new trend, we can understand it as institutional investors’ hedge a risk of buyer as a weaker position in the market by becoming a seller position and, for developer, as minimizing transaction cost for development project and operating more and bigger projects; financial investor does not have to manage property for a long-run and need local real estate market knowledge and experts (Ball 1998, Macho-Stadler and Perez-Castrillo 1997). This partnership can be understood as an exchange of financial capital source and local tacit knowledge between a localized real estate actor and a globalized financial actor reducing cost and risk at the same time. An environment of property development engaging in both financial and real estate market has accelerated and facilitated the current contemporary mixed-use development in inner-city space as an exemplary form of post-industrial urban restructuring.

References
As the housing market recovers from the foreclosure crisis, many studies have found that recovery has been uneven (Pfeiffer and Molina 2013). Additionally, several recent studies have examined how real estate investors can influence housing market recovery at the neighborhood level (Herbert, Lew, & Sanchez-Moyano, 2013, Pfeiffer & Molina, 2013). Investors can impede neighborhood recovery by purchasing an REO property at a low price and leaving it unused in hopes of appreciation in the distant future. But certain investor actions may benefit struggling neighborhoods. There is evidence that REO property investors will renovate properties if there is a financial incentive to do so (Immergluck & Law, 2014), and investors may purchase distressed REO properties in high foreclosure neighborhoods that mortgage lenders are unwilling to finance for owner-occupied households (Herbert et al., 2013; McSherry, 2010). But identifying an investor’s intentions prior to purchasing a property remains difficult, and little is known about why investors choose to purchase certain properties.

This study builds on previous work that identified neighborhood characteristics of investor activity in the Chicago region (McMillan and Chakraborty 2016). It found that REO properties in urban core and inner ring neighborhoods with high African American populations were more likely to be purchased by investors. This study identifies clustering patterns of investor activity in Chicago’s largely African American southern suburbs that cannot be explained by foreclosure rate, home value, or race and ethnicity.

Through interviews with real estate professionals, local government officials, and nonprofit workers, this study will seek to examine what characteristics unavailable or untested during previous rounds of analysis may have led to high rates of investor activity. The questions of this analysis are identified as: (1) What local conditions attract investment in REO properties, and do they differ from investment in typical (non-REO) properties? (2) how can investors be classified based on their motivations and impact on their communities; and (3) what can communities do to attract homebuyers and investors that contribute to neighborhood restoration and discourage property investors that exacerbate neighborhood distress?

The study is expected to identify important factors that planners and policymakers must consider when planning for housing recovery at the neighborhood level. A preliminary analysis of factors, for example, finds that small-scale investors are more likely to purchase properties in neighborhoods with low REO rates, and that small-scale investors are less likely to hold a property for an extended period.
REFERENCES


Key Words:
Housing, Foreclosure, real estate

KEEP LOW-INCOME FAMILIES IN MEXICO CITY’S COLONIAS POPULARES TO SUPPORT A MORE SUSTAINABLE AND JUST CITY

Abstract ID: 1118
Lightning Research Presentation

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In Mexico City, the housing stock in low-income settlements, known as colonias populares, has been developed largely through “self-help densification;” through gradual, collective and self-help efforts carried out by low-income families to address their housing requirements (Mathey, 1992). “Self-help densification” refers to the process in which the households use their land more intensively over time. Over the past fifty years, residents in colonias populares have enlarged their homes by adding residential extensions and subdividing existing spaces to create separate living areas (Ward, 2012b). While self-help densification has made it possible for generations of low-income families to live in the city (Ward, 2012a), the urban poor are now at risk of losing their right to live in the city because of private-sector led densification. “Private sector-led densification” refers to the demolition of existing housing units that were initially constructed using self-help techniques and their replacement with new, taller buildings, from five- to twenty-story structures, built by private housing developers. However, the majority of residents of mid to high-rise residential buildings are upper-income residents, leading to the displacement of disadvantaged families to the outskirts of Mexico City (Connolly, 2009; Monkkonen, 2012). Although the redevelopment of the city could house a higher number residents, it is at odds with the colonias populares residents’ right to live in the city. The principal research question is to what extent does self-help densification in colonias populares support people’s right to live in the city? The supporting question is what the types of self-help densification taking place in these settlements are? To address research questions, the author conducted field research in Isidro Fabela, a colonia popular founded in the late 1960s, which is located in central Mexico City. Isidro Fabela is particularly well connected to Anillo Periferico, the major beltway of Mexico City, which has triggered private sector-led densification. To answer the supporting question, the author developed a typology of categories of self-help densification in Isidro Fabela. To do so, the author first conducted field observations on foot to get a sense of the architectural characteristics of the community. Then, the author systematically documented the types of materials employed, the subsequent modifications that people have made, and...
observations about particular deficiencies of the residential structures in six types of self-help densification (Ward et al., 2014). Because self-help builders did not always comply with building codes, such housing units have structural design deficiencies (Ben-Joseph and Szold, 2005). The author found severe shortcomings in the sanitation systems, in septic tanks, and the staircases that provide access to upper floors. To address the main research question, the author used the Intensive Case Study (ICS) Methodology developed by Ward et al. (2014) for analyzing six types of self-help densification in relation to the household organization. The author gathered stories of those who have lived, moved out, and remained in self-help housing units of colonias populares over the past five decades. The author found that the majority of the original residents, who initially occupied their lot, still live in self-help housing units accompanied by their adult children and their extended families (Ward, 2012a). For low-income households, the dwelling unit of their grandparents is a valuable building asset and perhaps the central patrimony of the family (Ward et al., 2014). The author concludes that it is not only more sustainable but just to support self-help densification in Mexico City’s colonias populares. Sustainable housing policymaking should, therefore, keep low-income families in the communities that they have gradually developed over time. Furthermore, housing rehab policies could serve to repair structural deficiencies and improve families’ quality of life (Ward et al., 2015).

References

Key Words:
Self-help densification, Private-sector-led densification, The right to live in the city, Sustainable and just city, Colonias populares

POLICY MOBILITIES AND MUTATIONS IN THE MOVING TO WORK DEMONSTRATION
Abstract ID: 1124
Individual Paper Submission

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Within the last six years, researchers have increasingly drawn on policy mobilities to understand “globally circulating urban policies, policy models, and policy knowledge (McCann 2011). Policy mobilities research emerged from policy transfer studies, and sought to bring an interdisciplinary – though heavily spatial – understanding of how policies move and mutate between places (Temenos and Baker 2015). To date, researchers have examined policy mobilities in a number of contexts, including substance abuse rehabilitation, ‘smart’ cities, and zero-tolerance policing (McCann 2008; Swanson 2013; Crivello 2014).
Since its creation by Congress in 1996, the Moving to Work demonstration (MTW) has provided participating public housing authorities the flexibility to innovate in meeting local housing needs. The program provides agencies with two flexibilities: the ability to request waivers from certain HUD regulations, and to shift funding between accounts. Currently 39 agencies are participating in Moving to Work, and another 100 will join within the next five years.

This paper examines policy mobilities in the Moving to Work demonstration. Despite providing agencies with wide latitude to innovate, many agencies have implemented the same policies as others (Webb, Frescoln, and Rohe 2015). For example, nearly 75 percent of participating agencies have increased supportive housing options – often in collaboration with local social service agencies, over half have altered how they inspect Section 8 voucher holders’ residences, and all have implemented some type of rent reform.

Drawing on interviews with staff at 20 MTW agencies, as well as content analysis of Plans and Reports submitted to the US Department of Housing and Urban Development, this paper examines policy mobilities across Moving to Work. While it examines the demonstration broadly, it focuses on three specific activities: time limits (implemented by 12 MTW agencies), work requirements (10 agencies), and expanding homeownership opportunities (12 agencies). Broadly, it seeks to answer the following questions:

- Why have some policies proven more popular for mobility within MTW?
- What are the processes by which MTW policies ‘move’ (that is, become mobile)?
- How are mobile policies modified to fit the local context?
- What challenges have agencies encountered in implementing mobile policies?

The paper has several implications for both research and practice. It contributes to a relatively new research field – policy mobilities – through an understudied context (the Moving to Work demonstration). MTW has received only scant attention in the literature, despite operating for nearly 20 years. Given the upcoming dramatic expansion of MTW, the research can also inform how the new agencies adopt policies already implemented by other MTW authorities.

References


Key Words:
Moving to Work, public housing, policy mobilities, policy transfer, housing policy
Ex-offender re-entry and reintegration are critical issues affecting cities and regions across the United States. The rapid rise in America’s prison population over the past half century is well documented (Mauer 2006; Alexander 2010; National Research Council 2014). Between 1925 and 2014, the U.S. adult prison population increased by 1603%-- with the vast majority of that growth occurring since 1975. However, despite its overall rampant growth, the total number of prisoners in the United States has been in decline since 2011, with the United States Department of Justice reporting that more than 650,000 ex-offenders are released from prison every year (approximately 10,000 ex-offenders reentering society on a weekly basis) (Department of Justice 2016).

Sociologists and criminologists have studied ex-offender re-entry and conclude that the formerly incarcerated experience extensive barriers and exclusions to safe and affordable housing, sustainable employment options, and place-based civic and economic opportunity structures (Pager 2008, Beckett and Herbert 2009, Alexander 2010, Heideman 2013; Pettit and Sykes 2015). In some states, even basic civil liberties, such as having the right to vote, are permanently revoked for certain felony crimes. Considering the dramatic rise in (de)incarceration rates across the United States, it seems logical that local planners would want to be aware of, if not outright proactive about, tackling ex-offender reintegration in the communities that they serve. Yet little scholarly attention has been paid to whether or how local planning departments support or inhibit community reentry and reintegration in the age of mass de-incarceration.

This exploratory study is based on a national survey of more than one hundred twenty (N=121) local Planning and Community Development Directors working in cities with a population of 50,000 or more in 2010. Its purpose was to understand whether and how local planning and community development departments engage with issues related to ex-offender re-entry and reintegration, in four areas of local planning practice: land use and zoning, housing, employment and economic development, and community engagement. The research was guided by four major research objectives: 1) to determine the extent to which local planning departments are aware of and considering ex-offender reentry a relevant planning issue; 2) to determine the extent to which these organizations’ daily practices either support or inhibit ex-offender reentry in four functional planning areas: zoning and land use planning; housing; economic development; and stakeholder engagement and collaboration; 3) to understand some of the social, political, economic, and cultural conditions that influence local planning departments’ awareness, willingness and ability to engage actively in ex-offender reintegration; and 4) to benchmark an initial set of “better practices” related to planning in the age of mass de-incarceration. Preliminary results suggest a wide range of knowledge and caring about these issues among Planning Directors, with a great many having no experience or involvement with them at all. Although many Directors reported nuanced understandings of how the zoning code either allowed for or prohibited housing available for ex-offenders, few appeared to think beyond the purely administrative sides of
these issues, and virtually no respondents reported engaging with ex-offenders, their families, or other stakeholders connected to the criminal justice system on local planning projects (an important exception being collaborations with the police). The paper concludes with suggestions for local planning practitioners who are interested in engaging with ex-offender reentry and reintegration in more substantive ways in the future.

References

Key Words:
ex-offenders, zoning, housing, employment, community engagement

HAS PHOENIX RISEN? EXAMINING THE REVITALIZATION OF DOWNTOWN PHOENIX
Abstract ID: 1149
Individual Paper Submission

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Since the 1990s, news articles have used a mythological bird to question the trajectory of Downtown Phoenix. After each major investment, a headline would ask “is Phoenix rising?,” only to find the answer in commonly held perceptions of the urban center as a ghost town outside of work hours, at best, or a dangerous, blighted core, at worst. However, the last decade has ushered in tremendous investment into the area, fundamentally changing its density, population base, and institutional assets. At the heart of these investments is Arizona State University’s downtown campus, including seven Schools with 15,000 students and more than 1,000 faculty and staff.

This study builds upon contextual knowledge of anchor institution models with a longitudinal assessment of revitalization in Downtown Phoenix. Through a national scan, I observed that university investments in downtowns represent a distinct area of anchor institution investment. In these instances, universities appear to invest more heavily in their own assets and infrastructure, leveraging their institutional population base as economic generators within struggling centers, as well as in adaptive reuse and rehabilitation to restore the urban fabric. Further, the university-city dynamic appears to be patently different from university-community relationships in other urban neighborhoods. Within downtowns, city departments and universities seem to collaborate significantly more than they do in other contexts. As the collective “nexus” of an urban locale, the downtown seems to more readily lend itself to shared visions and ownership (and in less overtly contentious ways).

This research engages these broad observations to focus more specifically on a story of town-gown revitalization in Downtown Phoenix. The primary research question is: How has Downtown Phoenix changed since 2000, with an emphasis on the people (demographic and socioeconomic change) and place (change in the built environment)? The research targets eight primary census tracts within the Downtown, including the ASU Downtown Campus tract, the Central Business District tract, and six
proximate tracts. The analysis draws from a diversity of data, including the Decennial Census and American Community Survey, historical aerials spanning twenty years, building permit and tax assessment data, and qualitative interviews with key informants. This mixed methods approach paints a rich picture of urban change in a downtown that has experienced a substantial rebirth over little more than a decade. It also generates new knowledge about city-university partnerships as a discrete anchor institution strategy.

References


Key Words: downtown revitalization, anchor institution, town-gown

PRESERVATION, NEW CONSTRUCTION, AND THE CHALLENGE OF DOING BOTH IN A WORLD OF LIMITED RESOURCES

Abstract ID: 1150
Individual Paper Submission

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There is an abundance of literature in economics, planning, and policy about the demand for affordable housing, the ability of rental subsidies to meet this demand, and the impact of subsidized housing on neighborhoods and household outcomes. To date, there is little research that focuses on the expiration of rental subsidies, and what that means for housing policy. The lack of literature on this topic is due to the fact that subsidy expirations are a relatively new phenomenon. However, going forward, planners will need to acknowledge the expirations of rental subsidies, including the scale and location of these expirations, because they will be faced with the decision about whether to devote limited resources to the preservation of existing subsidized units or the development of new ones.

The federal government finances over 4 million units of subsidized housing. In the 1960s, the government shifted from a public ownership model to a private one. Under this paradigm, private owners receive a subsidy to develop affordable housing and maintain it as such for a fixed period of time. At the end of that period, owners can renew the existing subsidy, apply for a new one, or exit all affordable housing programs. Incidentally, as the demand for rental units increased in the 2000s, and there were fewer private market affordable rental units, private owners of federally subsidized rental housing started to become eligible to exit HUD affordable housing programs, such as the Project-Based...
Section 8 Rental Assistance program. In the coming years, thousands of units developed through the Low Income Housing Tax Credit (LIHTC) program, the largest national affordable housing production program, will be eligible to exit the program and/or need major recapitalization. Meanwhile, HUD recently developed its Rental Assistance Demonstration program that allows Public Housing to access private financing and the LIHTC program. This means that the existing subsidized housing stock will increasingly be competing with new developments for the limited pool of resources used to finance affordable housing. In fact, many localities have already made the preservation of the existing affordable housing stock a cornerstone of their housing agenda.

This paper uses national tract level data on subsidized housing and expirations to: provide important context about the scale and location of subsidy expirations; identify tradeoffs associated with devoting resources toward preservation versus new construction; and offer insight into how preservation fits within the larger framework of how we address the demand for affordable housing.

References


Key Words:
Subsidized housing, Preservation, New Construction, Affordable Housing

THE RIGHT TO THE CITY: PARTICIPATORY PLANNING AND CITIZENSHIP IN THE FAVELA CIDADE DE DEUS, CAMPO GRANDE, BRAZIL

Abstract ID: 1151
Individual Paper Submission

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The problem of housing deficit permeates generations in Brazil. In 2014, according to the João Pinheiro Foundation, this number surpassed 6 million residences. The poorest sections of the population are hard hit by the lack of housing, and the favelas (the Brazilian term for the tightly packed self-built slums of the poor) are a product of this problem.

The Favela Cidade de Deus was formed in Campo Grande in 2008 due to its proximity to an old landfill - the main source of income for the residents while it was active. Families were relocated in the years
2010, 2011 and more recently in April 2016. Some of the new areas chosen by the municipality do not offer any basic urban infrastructure. The families were removed from a place marked by the lack of infrastructure and placed in a new area with similar poor conditions, demonstrating a great disregard on the part of the public sector with housing policies to the low income population.

The main objectives of the study are to motivate the community organization and participation in the management of the city and of the territories in which they are inserted, with the accomplishment of a technical analysis and diagnosis, using theoretical basis urban and environmental planning. We will explain the problems faced by the inhabitants of this irregular settlement and the sad repercussions of the relocation of these families. The study involves: A) Data collection; B) Identification of problems; C) Diagnosis and potentialities; D) Definition of guidelines for the elaboration of the Community Integrated Urbanization Plan; E) Presentation of the Integrated Urbanization Plan of the Favela Cidade de Deus.

The methodology of planning and action is based on literature review (researches in books, periodicals, maps, institutional and relevant sites for the theme) and field work (historical, physical / territorial, environmental and socioeconomic aspects). Participant observation is one of the techniques that will be used in data collection with the objective of providing participatory planning. The methodology of the participatory process starts from the understanding that community involvement is fundamental for the knowledge and appropriation of the collective space as a place of community life.

We will present the preliminary findings of this extraordinary exchange of experiences between the Cidade de Deus community and urban planning students from the Federal University of Mato Grosso do Sul. This community is situated in Campo Grande, capital of the state of Mato Grosso do Sul, west part of Brazil, border with Paraguay and Bolivia. This project aims the understanding of the reality by all the people involved, promoting integration between university and community, reaffirming the social role of the university, students, and urban planners. And it uses the application of theoretical knowledge and methods included in the disciplines of urban planning, regional planning, planning and environmental management. Thus, the project allows deep reflection on the socio-economic-environmental reality of the community. And because the theoretical knowledge has been tested in practice, they have the real potential to provide important input for the formulation of new knowledge and new practices.

It is urgent to change the reality of these families in Cidade de Deus and rethink the way the city has been built. These issues are the competence of urban planners. Thus, it is the university's role as a knowledge-producing entity to seek the inclusion of these people, being a support in the transformation of their reality at the same time that the university can be transformed by these families, in a relationship of dialogicity. Understanding urban planning in all its dimensions - social, territorial, urban and environmental -, especially in the favelas, where the residents are usually excluded from the city's production process, is fundamental for concentrating our actions in the fight for just and equitable cities for all.

References


Key Words:
Participatory Planning, Right to the city, Favela, Citizenship

USING DATA STORYTELLING TO BUTTRESS PLANNING RESEARCH PEDAGOGY
Abstract ID: 1156
Lightning Research Presentation

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The Problem
Planning programs are increasingly creating and funding opportunities for students to participate in the research process. Student responsibilities span research design, data collection + analysis, and publication. All too often, information does not appropriately reach places and people, and in many cases the very populations from where it was collected. Students need equal exposure to the cross-section of dissemination outlets which reflect how people around the world access, consume and act upon information.

The Precedence
Students understand the potential impact of data storytelling, as they are themselves consumers of various social media channels. Data storytelling teaches design tenets that give shape to quantitative and qualitative information, around which students can build and justify their ideas.

What is Data Storytelling
Beginning with principles of design and design thinking, data storytelling is a process by which students take information that has already been collected and begin to ask questions about communication and dissemination that extent beyond the research questions. Data narratives become a systematic tool that uses graphics to articulate a story. Through this process, students have to think through the audience and whose story is being told so that ultimately the uptake of data storytelling spurs action and encourages behavior change.

The Potential
Data storytelling embeds itself in the academic experience of planning students, mediating between fieldwork/data collection opportunities and capstone requirements. The learning process is aimed at empowering students to think critically about the influence a good narrative can have in an age of information overload; and equipping students with a visual acuity to organize and present information in compelling ways to reach diverse audiences globally.

The real power of data storytelling lies not just in reporting on past activity, but in buttressing decisions that drive future actions. However, knowing what the data is or is not saying is critical to creating ethical and accurate visualizations. The student experience becomes grounded in cultivating data literacies by developing design and data skills and communication tools that have global application toward a
compelling narrative. Along the journey, students become empathetic to data storytelling, so that they can generate diverse translations that overcome educational, literacy, cultural, and other divides.

Data Storytelling as an End to Business-As-Usual
Being able to tell stories with data is a critical skill in our world of ever-increasing data and desire for data-driven decision making. An effective data story can mean the difference between success and failure when it comes to communicating the findings of research, raising money for NGOs, presenting findings to donors, or simply communicating to diverse audiences around the world.

The power of data storytelling lies in students thinking through how data gets communicated across a broad cross-cultural audience both domestically and abroad, with the end game in mind that data has the transformative potential to change behavior with sustained impacts across diverse scales – and in doing so, students may learn to collect better data in the future.

References

Key Words:
Data Storytelling, Design Thinking, Pedagogy, Planning Research, Information Age

NEIGHBORHOOD WALKABILITY SCORE: A TALE OF TWO SOURCES
Abstract ID: 1174
Lightning Research Presentation

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Measuring walkability score is a vital tool that helps planners and decision makers to provide a better place to live. Neighborhood walkability may influence social interactions and public health factors including physical activity and obesity. However, defining walkability score for each neighborhood requires a comprehensive land use and network dataset including sidewalks, population density, job-housing balance, street design, and other built environment factors. Reviewing the previous studies indicated that walkability had been discussed in different terms such as accessibility, proximity, and suitability (Gilderbloom, Riggs, & Meares, 2015; Kim & Woo, 2016; Marshall, Brauer, & Frank, 2009). As definitions are different, methodologies and datasets which are implemented for walkability scores are varied. For example, the EPA National Walkability Index had been developed for each block group relative to all other block groups in the U.S. On the other hand, Walkscore™ used a patented system to calculate walkability score based on distance to facilities such as retail, educational, and recreational centers (Carr, Dunsiger, & Marcus, 2010; Duncan, Aldstadt, Whalen, Melly, & Gortmaker, 2011). The goal of this research is to obtain walkability scores for each block group that is based on two sources: Walkscore™ and EPA National Walkability Index. Then, this research investigates the differences between these two scores using spatial autocorrelation techniques in GIS. Finally, the relationship between built environment factors and walkability score are examined in different model
specifications. The results of these models quantify the correlation between Walkscore™ and EPA built environment indicators such as density, street intersection density, and land use diversity.

References


Key Words: Walkability, Walk Score, Accessibility, Built Environment

RATIONAL AND EQUITABLE: A FRAMEWORK FOR SOCIAL EQUITY IN DISTRESSED CITIES

Abstract ID: 1181
Individual Paper Submission

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American cities that have endured persistent population loss since the mid-1900s have an excess of everything: housing units, sidewalks, classroom building, roads, streetlights, et cetera. In these so-called shrinking cities, there is a greater supply of public infrastructure and built environment than demand - often to a great extent. The requirements placed upon local government in such cities are perhaps more than any elected body could possibly handle. Troubling as excess supply is, it is but a part of the story; the supply that remains often has not been properly maintained for decades. As population has fallen, tax revenues have dwindled. Disinvestment has become self-fulfilling in our Buffalos, Clevelands, and Detroits. Half measures in response - a little here, a little there - have availed nothing.

At the front lines of the problem with this surplus supply is the challenge of excessive housing supply. There too many homes chasing too few buyers, leaving thousands of properties to fall first into disrepair and eventually abandonment. Cash-strapped local governments face a confounding either-or decision: either rationally but inequitably invest what little they have in areas where a concentrated geographic focus might be catalytic, or equitably but irrationally deploy a worst-first strategy of spending scarce dollars where need is greatest but a rebound is nearly impossible. Neither having political appeal – rational but inequitable on one hand, and equitable but irrational on the other – the default adopted across the political landscape is to sprinkle a little everywhere. “If we can’t be smart,
and we can’t be fair” goes the reasoning, “we might as well be neither and least not make anyone mad.” Rationally, that can’t exist.

Emblematic of this is Buffalo, NY, a city with a deep economic and racial divide and uneven development. Today, massive public expenditures support new housing development in the downtown core and in the stronger areas of the city, and constitute what is seen as smart investment by politicians, and developers alike. But as two-thirds of Buffalo’s neighborhoods remain fallow, frustration with yet more inequity grows.

This paper poses a key research question: is a smart and fair outcome in America’s most challenged cities possible, given prevailing fiscal weakness, the politics of race and class, and the tools at our disposal? Using Buffalo, NY as a case study, we analyze the historic and current social, economic, and physical conditions of its neighborhoods and the approaches taken by Buffalo and similar cities. This is accomplished through analysis of multiple real property data, including real estate transactions, publicly-funded demolitions, public real property tax auctions, and a city-wide real property condition survey that clearly delineates the city’s various housing markets. From there, we examine the socio-economic and racial conditions in these neighborhoods before examining the current state of housing and neighborhood policy and investment.

From this picture of the City of Buffalo, we propose an imperfectly smart and imperfectly fair policy framework organized for strategic reinvestment in the immediate vicinity of a city’s most vital organs. This framework primes blocks showing incipient strength with the investments needed to become strong; blocks that are both vulnerable and recoverable with the means to stabilize; and the weakest with the tools to hold steady.

References

Key Words:
housing, weak markets, distressed neighborhoods, social equity, shrinking cities

PHYSICAL ACTIVITY IN LATINAS’ DAILY ROUTINES: THE ROLE OF CULTURAL AND GENDER IDENTITY AND NEIGHBORHOOD CHARACTERISTICS
Abstract ID: 1192
Lightning Research Presentation
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This research is an attempt to understand Latinas’ experiences in relation to physical activity. Research shows that Latinas engage in leisure time physical activity substantially less than non-Latino white women (47.8% compared to 29.2%, Larsen et al 2013). Research focusing on Latinas and physical activity also shows that cultural elements might explain the difference (D’Alonzo 2012). The emphasis on family in Latino culture has been reported as a potential point of intervention to improve physical activity among Latinas (Benitez et al 2016).

The purpose of this study is to explore Latinas’ gender identities, cultural identities, and daily routines in relation to physical activity and neighborhood characteristics.

We targeted first and second generation Latinas who have children younger than five, and who are residing with a partner, and who are living in San Fernando (a small city with 94% Latino population, surrounded by Los Angeles). We conducted 10 in depth interviews and 20 semi-structured interviews. Our interviews included questions about their gender and cultural identities. Time diaries were used to record their daily routines with reference to neighborhood characteristics.

The results of our in-depth interviews shows that respondents’ daily routines primarily consist of childcare and housework activities and that all respondents identified with a conventional gender role. All respondents include multi-generational family in their definition of their own conventional gender role and four respondents have extended family members involved in childcare. Although all 10 respondents have positive comments about their neighborhood safety, only one respondent has a formal exercise routine and total mention of formal and informal exercise is very low. The results of our semi-structured interviews further confirm patterns of how gender and cultural identities of Latinas shape their daily routines, which undermine their level of physical activity. An overwhelming emphasis on family related responsibilities in Latinas’ daily routines seems to provide an opportunity for intervention in order to help them integrate more physical activity to their daily routines in the form of family friendly physical activity in their neighborhoods.

Since approximations of requirements for physical activity are based on data from Caucasian men, this research might help understand how cultural variations can be addressed in physical activity recommendations in relation to neighborhood characteristics.

References

Key Words: Physical activity, Latinas, Cultural identity, Gender identity
STUDENTIFICATION, ANCHOR INSTITUTIONS, AND NEIGHBORHOOD CHANGE BETWEEN 1990 AND 2014

Abstract ID: 1194
Individual Paper Submission

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To date, the planning literature has favorably evaluated the phenomenon and impact of university-driven revitalization due to the positive evidence provided by cases such as the University of Pennsylvania’s West Philadelphia Initiatives and Case Western Reserve University’s University Circle efforts in the 1990s and early 2000s. Evidence of population growth, declining vacancy, increasing demand for retail, and home values after concerted efforts on behalf of anchor institutions for their surrounding communities has provided support to the anchor institution literature which makes broader claims about the potential of non-profits such as colleges, universities, hospitals, to support local development. An alternative theory is that the impact of university-driven revitalization may not be associated with the direct efforts of the anchor institution but by the increasing agglomerations of college-enrolled students and college-age students. The UK-based planning and human geography literature have documented that the presence of large densities of students often triggers a form of student-oriented gentrification or ‘studentification’ in many post-industrial communities.

This paper provides descriptive data of University of Pennsylvania campus adjacent census tracts between 1990 and 2014. This data was placed in a larger context of comparisons to patterns of neighborhood change around ten comparable, research-extensive universities in comparably sized cities during the same time period to identify similar patterns of change that were not only associated with comprehensive neighborhood revitalization plans, but changes in the composition of a university’s workforce, and comparable patterns of real estate speculation and student- and faculty-oriented luxury housing and retail adjacent to these university campuses. This paper will not explore the extent to which these developments were encouraged and assisted by each of the universities contained in the sample, but rather explore whether demographic data shows whether increasing agglomerations of 18-24, and 25-34-year-olds and college-enrolled students in areas surrounding research university campuses is associated with decreasing numbers of family households, African American, Latino, and low-income households when controlling for the number of students. Around the University of Pennsylvania, we found evidence of an increasing population, an increasing density of college students and 18-24-year-olds but also substantial decreases in the housing supply, supply of multi-family housing units, family households, households with children and most significantly, African American residents. Similar changes were found in several of our comparison cases.

In effect, this paper sets out to operationalize the idea of “studentification” in the U.S. context and complicate it with the history and dynamics of revitalization, displacement, and, race. In so doing, it becomes possible to reframe the discourse on anchor institutions within a larger understanding of urban inequality, economic and social exclusion. The anchor institution literature remains an important contribution for understanding modes of neighborhood regeneration but may also be assessed as contributing to disruptive patterns of change.

References


Key Words: neighborhood change, neighborhood revitalization, displacement, studentification, research universities

BRIDGING THE GAP: DIFFERENCES IN COMMUNITY BUILDING PLANS IN HOPE VI AND CHOICE NEIGHBORHOODS IN CHICAGO AND SEATTLE

Abstract ID: 1227
Individual Paper Submission

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The HOPE VI and Choice programs aim to rebuild public housing communities through both place-based and people-based strategies. Place-based goals combine subsidy policies with new urbanist designs to replace deteriorating public housing with mixed-income, mixed-density communities to revitalize the neighborhoods where these developments are located. People-based goals—in addition to attracting higher income people—also aim to promote the upward mobility of low-income residents through education, employment, and community building leveraged from the benefits of social capital (Joseph, Chaskin, & Webber, 2007). To achieve the people-based goals, HOPE VI requires housing authorities to incorporate support services to public housing residents that build and facilitate self-sufficiency. These support services include but are not limited to job training, health care, homeownership awareness, financial literacy classes and supplemental education opportunities.

Despite the aims of HOPE VI obtaining them remains elusive. Across HOPE VI redevelopment efforts in the U.S., people-based strategies frequently have not been effectively implemented, nor have they met the overall objectives of building self-sufficiency for low-income residents (Oakley, Fraser, & Bazuin, 2014). However, Choice (when implemented effectively) presents some promise in its implementation. Choice builds on the HOPE VI program by continuing mixed-financing and public-private partnerships to replace low-income housing, but now extends eligibility to privately owned subsidized developments. Moreover, Choice also extends the people-based policy with a more comprehensive approach to neighborhood support systems focused on housing, people, and places.

Research addresses the economic impacts, resident outcomes, policy misgivings of people-based strategies in HOPE VI, and implementation of people-based strategies in Choice (Urban Institute, 2013). However, limited research exists offering a comparison of the implementation of HOPE VI to Choice around people-based programming. Based on this gap in research, this paper asks the following primary research question: how does Choice reconcile implementation challenges of community building found in HOPE VI?

This paper examines this question through a comparative case study of HOPE VI and Choice planning efforts in Chicago and Seattle. Chicago has been plagued with ineffective integration of community building, while Seattle has been at the forefront of innovative participatory processes and integrated community building efforts (Reid, Liebow, & O'Malley, 2006; Joseph, 2010). Based on in-depth
interviews with actors involved in the planning process, as well as archival research, I suggest the lack of integration of community building is less of a problem of policy design and more an issue derived through differences in planning culture and accountability in the implementation process. A planning culture geared towards civic engagement fosters a collaborative environment between public and private actors, which facilitates more effective implementation of people-based programs and broader neighborhood community building for residents. This paper illustrates the lessons learned from Seattle that can be applied in cities similar to Chicago that have ongoing HOPE VI and Choice projects underway. This research also provides insights on a nascent housing policy in Choice, which will inform approaches to implementing affordable mixed income housing and promoting broader neighborhood revitalization in a way that promotes equity.

References


Key Words:
- Housing, Mixed-income, Choice, Implementation, Community

SOCIAL VULNERABILITY AND LOW-INCOME HOUSING PROGRAMS: EVALUATING THE CHALLENGES IN MULTI-HAZARD ENVIRONMENTS OF RAPIDLY GROWING METRO AREAS

Abstract ID: 1235
Individual Paper Submission

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Access to affordable housing is one of the key determinants of a household’s ability to withstand socio-economic stresses in urbanized areas. In recent decades the provisions for affordable housing in US cities have undergone significant policy changes. From public housing projects, we have gradually moved to market-dependent solutions such as Section 8 rental assistance vouchers and tax credit programs. Prior research has evaluated the efficacy of these housing programs in deconcentrating poverty as well as their influences on households and communities (Goetz 2005; Freeman 2003; Van Zandt and Mhatre 2009). However, very few studies have explored the extent to which these housing programs have affected the hazard exposure of vulnerable populations (e.g., Cutter et al. 2001; Houston et al. 2013). This paper hypothesizes that by ignoring the multi-hazard context of urban areas, subsidized low-income housing programs have failed to reduce the overall hazard exposure of socially vulnerable populations and this pattern is consistent irrespective of the planning and political context of the cities. It
adopts the framing of vulnerability production and environmental justice and evaluates this hypothesis on three rapidly growing coastal metro regions of the US (Boston, Miami, and Houston). By examining two of the most popular housing subsidy programs, Housing Choice Vouchers (HCV) and the Low Income Housing Tax Credit (LIHTC), this paper explores the ways in which these housing subsidies influenced neighborhood social vulnerability in the study cities between 2000 and 2010. It shows while these programs consider neighborhood socio-economic conditions in some cases, neither of them explicitly require the housing units to be located away from natural or technological hazards. Both natural and technological hazard exposures are measured at the census tract level using publicly available data from the U.S. Environmental Protection Agency (EPA) and Federal Emergency Management Agency (FEMA). Both of these housing programs were found to have contributed to a disproportionately high (relative to the overall population) presence of subsidized low-income housing units in both natural and technological hazard areas. However, the results of the spatial econometric analysis indicate that the supply-oriented subsidy provision of the LIHTC program significantly increases neighborhood social vulnerability when located in technological hazard areas. These findings warrant further scrutiny by planners when placing subsidized housing, particularly to evaluate how planning decisions like these may influence the hazard exposure of vulnerable populations and exacerbate environmental injustice. Finally, the limitations of market-dependent housing programs that lack adequate safeguards for avoiding hazardous areas are highlighted, and potential remedies are suggested.

References


Key Words:
Social Vulnerability, Housing subsidy, Low-income housing, Environmental Justice, Hazard Exposure

THE SPACE OF PLACE ATTACHMENT: BRAZILIAN INFORMAL SETTLEMENTS AND CRIME
Abstract ID: 1236
Individual Paper Submission

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Informal settlements face diverse challenges in the process of becoming a part of traditional urban development such as obtaining land tenure and access to basic services. In Brazil, such settlements are entitled favelas and house approximately 3.2 million households in over 6,000 communities generally characterised by lower socio-economic and educational conditions as well as insecure tenure and inadequate basic services. Within these constraints, several communities are nonetheless reported as thriving environments in a continuous process of self-construction aiming towards infrastructure upgrading and increasing social and economic activity while others retain environmental conditions which sustain pockets of violence.

This research looks at place attachment and its influence on the built space to understand how it relates to crime levels. Criteria to measure place attachment vary, and few studies have analysed which elements of informal settlements generate feelings of belonging and community, for instance. This paper will present an investigation of two questions: can certain household infrastructure in informal settlements be examined as indicators of place attachment and can such infrastructure lower criminal activity.

The paper will present the state of the art that led to identifying which characteristics may become proxies for place attachment in informal or self-built settlements. Subsequently, it will present the spatial and statistical correlation between basic services and crime within informal settlement communities in Fortaleza, the fifth largest city in Brazil. The data was obtained from a survey of approximately 45,000 households regarding infrastructure such as building materials, lighting, serviced water and sewage, sidewalks and pavement and number of rooms. Crime is represented by reported murder instances for the year of 2015. This research identified pockets of crime within informal neighbourhoods via cluster analysis on GIS and which conditions of the physical space enabled such violence. Additional analysis integrated availability of open spaces and transportation networks present in geographies with high murder rates.

Considering that Brazilian housing policy has largely consisted on replacing self-built informal communities with desolate low-income housing projects, it is valuable to look at the importance of space both to maintain social ties and as a manifestation of culture. In the pursuit of sustainable development, there is a growing need for a systematic study of potentials of settlements. Specific urban design features could be built upon or replicated to maintain vitality and community character, and thus more prone to withstand threats such as criminal activity.

References

Key Words: Place attachment, Informal Settlements, criminal science
Local historic districts that regulate the physical characteristics of a neighborhood to protect urban heritage are ubiquitous throughout the United States. Estimates of the number of local historic districts range from 5,000 to 7,000 across the country. Despite their widespread use, districts’ effect on the socioeconomic composition of neighborhoods is not well understood, particularly with regards to gentrification, defined here as a long-term increase in household incomes. The literature on historic districts and gentrification is limited to small-sample, single-city studies (Allison 2005; Coulson & Leichenko 2004), none of which find a causal relationship between preservation and gentrification. However, the literature also shows a strong and consistent correlation between higher increases in residential property values within historic districts as compared with properties in non-historic districts (Coulson & Lahr, 2005; Schaeffer & Millerick, 1991; Zahirovic-Herbert & Chatterjee, 2012).

The purpose of this study is track neighborhood change and gentrification in the historic districts of twenty-two of the largest cities in the United States between 1970 and 2010. With land use data, historic district boundaries, and decennial census data from each of the cities, it uses the double-decile difference (3-D) method (Landis 2015) to compare household income and median home value in census tracts that are majority historic districts with tracts that are majority non-historic. The preliminary findings of this work confirm the literature: household prices do increase more in predominantly historic census tracts as compared with predominantly non-historic census tracts, but household incomes do not necessarily increase to the same degree.

This work is important for planning scholarship because as cities continue to thrive and flourish, planners will be challenged to consider issues of preservation in the older neighborhoods of cities and would do well to be informed about the social implications of historic districting.

References


Key Words:
historic preservation, historic districts, gentrification, neighborhood change
THE SPATIAL JUSTICE IN NEIGHBOURHOOD GOVERNANCE - THE CASE OF LI-NONG LIVING QUARTER IN SHANGHAI

Abstract ID: 1252
Individual Paper Submission

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The research focuses on the spatial transformation and social structure evolution happened in the neighbourhoods at Shanghai central area. The living quarters which were built at the port opening period are always named LI-Nong in Shanghai. Under the rapid development and spatial transformation of the cities, most of the LI-Nong neighbourhoods have to face the challenges of re-construction or redevelopment because of their better location, and the inclusive problems between original-residents and migrations because of its lower fee of house rent. All of the social problems affect the ways of space application and distribution, and the spatial justice became a concerning issue in the complicated spatial transformation. This paper try to figure out the spatial meaning of justice in contemporary Shanghai.

The analysis consist of two aspects, which one we called ‘section analysis’, referring synchronic analysis related to spatial structure, the other one we called ‘trends analysis’, referring diachronic analysis related to transformation. In ‘section analysis’, this research reveals the neighbourhood’s condition coming under the visualized analysis based on the Fifth and the Sixth Census, such as the gender pattern, aging density and residential properties density. In ‘trends analysis’, this research refers the changes happened in past decade drawing on the trend-line comparing, such as the gender pattern, the migration of population, the incoming floating population, and the housing price. Furthermore, based on the Location Entropy analysis, Public Facilities Capacity Checking analysis and GIS Spatial analysis, the research reveals the change of spatial structure in the LI-Nong neighbourhoods, and the matching relation between spatial structure and social structure. Particularly, site questionnaire surveys are used to proof the result of section and trends analyses.

Based on the spatial analysis and statistic data analysis, the research argues that the diversity of neighbourhoods in Shanghai always focus on the Hukou identity, different income groups and aging problems, because the supply standards of basic education facilities, service facilities and traffic facilities are all different aiming at different groups, and they all have the characteristic of spatial proximity. Meanwhile, gender issue does not play a conflicting role in local governance, but a commercial role in place-marketing in Shanghai. Moreover, the research point out that the contradiction between the stability of space application and the fluidity of social structure are the key issue of spatial justice.

The discussion about the definition and principle of spatial justice are raised in the paper. Additionally, the research argues that the urban planning, as one spatial public policy in China, was expected to provide a mechanism of local governance for the neighbourhoods, however, was still too weak to be an effective means to strengthen the capability of local public and service. Finally, the main prospects of this research are to find concerning elements to construct the concept of ‘spatial justice’ in contemporary Chinese context. On the other hand, the research tries to construct a mechanism to deal with gender, aging, lower income groups, Hukou identity issues, through spatial strategy, and planning practice will be used as a negotiation channel.
This research can also be used as a lively Case teaching, because it includes a lot of highlight urban problems, and some relevant research methodologies. The most important thing is when we try to meet the needs of local governance, urban planning can be used as a tools of putting forward constructive opinions and consulting mechanism, not just give critique opinions and say no to authorities.

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Key Words:
Spatial justice, neighbour-hood, spatial analysis, urban planning, local governance

“THE RENT EATS FIRST”: COUNTY-LEVEL VARIATIONS IN HOUSING-COST BURDENS FOR LOW-INCOME HOUSEHOLDS

Abstract ID: 1274
Individual Paper Submission

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Nationwide, 62 percent of extremely-low-income households (those making less than 30% of Area Median Income, adjusted for family size), are severely cost-burdened – paying more than 50 percent of their income on rent. (Joice, 2014). However, among my sample of large urban counties, the percent of extremely low-income renter households who are extremely cost-burdened varies from over 79 percent (Solano County, California) to 48 percent (Westmoreland County, Pennsylvania). This study examines the geographic distribution of housing unaffordability for extremely-low and very-low income households, both over space and over time.

I use the nationwide 2009-2013 CHAS (Comprehensive Housing Affordability Strategy) data from HUD at the county level to estimate the percent of extremely-low-income renter households who are severely cost-burdened to approximate the “worst case housing needs”. I also calculate the percent of very-low income and low-income renter households with severe cost-burdens. I then explain the variations across places in the extent of cost burden using regression analyses and metropolitan fixed-effects. My independent variables include county land prices, socio-demographic variables, and measures of housing supply.

I also develop a panel data set for each county using data from the 1990 and 2000 CHAS special tabulations. In the paper, I explain changes in each county’s prevalence of severe cost-burden among 0-30 percent AMI renter households, as a function of various measures of housing supply changes such as
the elasticity of rental house construction and the disappearance of lower cost units. (Immergluck, 2016).

In the third part of the paper, I present some exploratory results from work connecting housing affordability data with the County Health Rankings Data. I show results linking higher housing costs burdens with changes in some different physical and mental health outcomes.

References


Key Words:
housing affordability, rental housing, housing supply, public health outcomes

SOCIAL NETWORKS AND RESIDENTIAL MOBILITY: THE EVIDENCE FROM THE MOVING TO OPPORTUNITY EXPERIMENT

Abstract ID: 1284
Individual Paper Submission

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Residential mobility is generally viewed as a way to the gap between one’s desired housing bundle and the actual housing bundle they consume. When current living arrangements become non-optimal, households make a decision to move. However, low-income families face constraints in the housing market. A lack of public transportation service, a limited affordable housing stock, and racial and economic discriminatory barriers have been factors that decrease housing options in locations offering greater access to social and economic opportunities. The vast body of literature that qualitatively addressed residential mobility of low-income households found that social networks is also the driving factor.

To meet basic needs that are necessary to maintain a daily life, low-income households often rely on social networks. In the absence of sufficient financial resources, social networks not only enable them to depend on their local friends and relatives in terms of job searches (Granovetter 1995) or temporary housing arrangements (Skobba and Goetz 2013), but also provide families with costly services, such as day-care and transportation (Dawkins 2006). Neighborhood social networks are based on informal channels of trust and repeated local social interaction, therefore difficult to replicate in new surroundings because of its tie to place. Moves to a new neighborhood tends to be discouraged by families who are expected to spend excessive time to re-establish new usable social networks.

Several studies regarding housing vouchers have examined mobility behavior focusing on social networks. Varady and Walker (2007) found that major factors determining location choices of housing voucher holders are proximity to friends and relatives, and those who moved close to their old neighborhoods were more satisfied. Findings come from the Moving to Opportunity (MTO) experiment
also demonstrate that social networks persisted at the core of most participants’ lives regardless of relocation. Most MTO participants initially gained access to low-poverty neighborhoods but lost access soon thereafter moving back to their original neighborhoods or similarly distressed (Briggs et al. 2010). However, no studies to date explore whether benefits of social resources are more important than kinship, and whether social networks in the old neighborhood and the past mobility affect current residential mobility.

Focusing on the MTO experiment, this paper addresses (1) how significant the effect of social networks on residential mobility is for low-income households when different aspects of social networks are separately controlled, and (2) how influential local social networks in the past is in current mobility behavior. I employ multinomial logit models to describe residential mobility of MTO households after their initial random assignment, in particular the first two mobility behaviors. Dependent variable is specified as whether the household moved back to the initial census tract, moved to a census tract nearby the initial census tract, or the household moved to a census tract far away from the initial census tract. The estimation is a function of (1) MTO treatment effects, (2) metropolitan controls, (3) household-level characteristics as the household’s life-cycle determinants, (4) neighborhood-level characteristics which are associated with perceived levels of neighborhood quality, and (5) measures of social networks that decompose into kinship/friendship, social cohesion, informal social control, and social resources. I find that MTO participants tend to spend a larger portion of their time in neighborhoods with high levels of local social networks, and show more leapfrog moves associated with social networks.

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Key Words:
- social networks, residential mobility, moving to opportunity

**HURRICANE SANDY’S IMPACT ON THE HOUSING MARKET IN NEW YORK CITY**

Abstract ID: 1287

Individual Paper Submission

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Natural disasters continue to increase in severity and frequency. Disaster impacts are due to interactions between hazard exposure, physical vulnerability, and social vulnerability. Natural disasters can both magnify and accelerate processes already occurring in communities. During the recovery process, the number and variety of wants, needs and decisions often compresses in time and space and may
exacerbate pre-existing trajectories related to housing type, housing tenure, and housing price. Differences in exposure, insurance, financing, and structural quality of homes may further widen gaps between population groups. We examine the housing market in New York City following the 2012 catastrophic Hurricane Sandy to answer the question, “Recovery for whom?”

Hurricane Sandy made landfall near Atlantic City, New Jersey on October 29, 2012 as a Category 2 hurricane. The storm surge brought extensive damage to much of the New York-New Jersey-Connecticut coastal area. Total direct economic damage caused by Sandy is estimated at $68 billion, making it the second costliest hurricane in the U.S., surpassed only by Katrina.

We assembled a large parcel-level dataset of housing transactions in New York City for the period of 2003 to 2015, along with rich geographic, socio-demographic data, as well as storm surge and damage data to the building structures caused by the hurricane. The housing sales data also provided information about types of housing sales and housing type change between sales. Our analysis is three folds. First, we used the difference-in-difference approach to identify the hurricane’s impact on the intensity of housing sales and types of sales. Second, we examined the market differences between neighborhoods affected by the storm and neighborhoods that were outside the direct damage areas. Third, we examined the temporal and spatial patterns of housing type changes (i.e. single family to multi-family or vice versa), and identified the hurricane’s effect on the pattern of such changes. While the analysis is still ongoing, our preliminary results suggested that Hurricane Sandy had an immediate effect on the volume of housing sales and, interestingly, the spike of housing market activities was mainly due to high volume of sales outside the direct damage area. In addition, we expect that Hurricane Sandy had long lasting effect on the neighborhood characteristics along the coast because the post-hurricane housing sales and housing type changes could filter certain types of housing out of the area.

References

Key Words: disaster recovery, disaster resilience, Hurricane Sandy, housing

FORCED EVICTIONS IN BRAZIL AND SOUTH AFRICA: NEGOTIATING MDG 7 AND GLOBALIZATION
Abstract ID: 1296
Individual Paper Submission

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The last of the named BRICS, South Africa was recognized as an emerging economy and aspiring global power shortly after it hosted the 2010 World Cup, a mega-event accompanied by large-scale displacement of impoverished residents. Since then, the South African government sanctioned a formal campaign to demolish informal settlements throughout the country and justified demolitions using the United Nations Millennium Development Goal 7D’s mandate for the “significant improvement in the lives of at least 100 million slum dwellers.”

Likewise, Brazil hosted the 2014 World Cup and reports of forced evictions preceding the event were widespread. Brazilian policy-makers, echoing their South African counterparts, asserted that the evictions were necessary to achieve the many economic benefits that the World Cup would undoubtedly bring Brazil. However, research has in fact demonstrated that modern mega-events often result in economic losses for the host cities and countries.

Conversely, both Brazil and South Africa have cultivated national identities that are based on inclusion; identities designed to transcend individual differences based on race and class. However, there is an inherent conflict between a national identity built on the concept of inclusion and a state-sanctioned campaign to cleanse the social heterogeneity of the urban landscape. Scholars have cited South African government policies that use MDG 7D to justify slum clearing through the use of forcible evictions resulting in massive resident displacement. The terminology “slum reduction” and “slum eradication” have become synonymous with demolition rather than increasing the quality of life for residents. Additionally, UN-Habitat and the Cities Alliance have claimed ignorance of slum clearance based on MDG 7D and have failed to provide corrective guidance concerning what scholars and activists state to be a willful misinterpretation.

Consequently, transformative redevelopment is an instrument by which both countries seek to attract foreign investment and solidify their own standing as a global power. Both countries justify forcible evictions and displacement as necessary negative externalities to mega-event planning, yet massive campaigns of displacement in Brazil and South Africa have outlived their respective events. In truth, Brazil and South Africa are attempting to negotiate a problematic dichotomy: re-engineering their urban landscapes to promote neoliberal inequalities, while simultaneously disavowing a post-colonial past rife with strict social stratifications.

This comparative case study will examine how Brazilian and South African development decision-makers reconcile inclusionary discourse and forced evictions. Interviews of key government, development, and finance informants will take place in Rio de Janeiro and Johannesburg. Key theories such as the “entrepreneurial city” and “imagined communities” will form the theoretical framework of the research. Ultimately, the research will reveal the potential ramifications of UN-Habitat’s and the Cities Alliance’s continued silence on the increasing exacerbation of inequality driven by neoliberal development in the Global South.

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- Harvey Molotch
- M. Huchzermeyer
- Zimbalist

Key Words:
Displacement, Evictions, South Africa, Brazil, Housing
SHOULD WE BE WORRIED ABOUT “OWNER UNOCCUPIED HOUSING” IN LARGE US CITIES?

Abstract ID: 1302
Individual Paper Submission

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As concerns related to housing shortages in urban cores mount in an increasing share of US cities, one of the obstacles to public support for increased market rate housing production is a perception that many new high-end housing units are sitting empty for most of the year. The phenomenon of what might be termed “owner unoccupied housing” differs from more familiar types of urban housing vacancy associated with weak overall housing demand in certain cities, particularly those that have experienced the most severe deindustrialization (Glaeser and Gyourko, 2005). It is instead more akin to the housing market dynamics long seen in scenic rural vacation destinations, where well-heeled owners use housing units as occasional retreats rather than permanent dwellings. However, the emergence of this phenomenon in cities is so recent that an authoritative book-length treatment of tourism and second homes scarcely a decade old brushed aside its urban manifestation as an insignificant phenomenon (Hall and Müller, 2004).

Recent media reports (Story and Saul, 2015) and scholarship (Sassen, 2014) alike have raised the specter of owner unoccupied housing (OUH in my coinage) contributing to the arrival of a footloose transnational class of global elites and an accompanying “expulsion” of the working class from global cities such as New York. However, what has been missing up to now, at least in the US context, has been empirical evidence about the prevalence of OUH and what types of neighborhoods are impacted. This study seeks to remedy that. It proceeds at three geographic scales: first, using the Census subcategory of “seasonal, recreational, or occasionally occupied” vacant housing, it ranks the 50 largest cities in the US. The nine cities ranking highest according to three metrics—OUH share of total housing stock, percent growth rate of OUH, and absolute number of OUH units—are then analyzed at the second geographic scale, the census tract level. Using simple mapping and descriptive statistics, the basic within-city patterns of where OUH clusters and where it is absent can be ascertained. Finally, American Housing Survey (AHS) microdata makes possible analysis at the third scale, that of individual housing units and the buildings that contain them.

While the nine cities with the highest OUH shares, growth rates, and magnitudes fall into several categories—global cities (such as New York), transnational hubs (such as Miami), regional destinations (such as Atlanta), and other (such as Phoenix)—some of the geographical patterns are striking. In general, OUH is intensely concentrated in a few census tracts in most of the cities, usually near downtowns or other amenity clusters, and largely absent elsewhere. OUH-heavy tracts have much whiter, older, more educated, and more affluent populations and less child-oriented households than the citywide averages. And OUH housing is disproportionately likely to be located in high-rise buildings in cities where this building form is common, such as New York City and Miami.

These empirical results suggest that far from pushing out working class populations, OUH housing instead is likely further adding pressure to housing prices in neighborhoods that are already largely out of reach to households in the bottom half of the income spectrum. The policy implications of such a finding, while tentative, are intriguing. In this paper I argue that we must at least consider the possibility that OUH constitutes, in effect, an economic export that a select group of cities can harness as a fiscal net benefit. Could it be that, when confined to what might be termed “global elite containment zones,” OUH is more of a solution than a problem for cities groaning under the pressures of income inequality and soaring housing prices?
RESIDENTIAL MOBILITY AND REFUGEE RESETTLEMENT: A CASE STUDY OF DENVER, COLORADO

Abstract ID: 1308
Individual Paper Submission

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This research aims at identifying the variables that lead to residential mobility among refugees who have resettled in Denver, Colorado, between 2011 and 2012 using a 5-year longitudinal survey data on their resettlement experience. Spatial autocorrelation analysis will be used to find a clustering and/or dispersed pattern of refugee housing and a regression model will be applied to analyzing their relocation pattern on a neighborhood level. The main research questions to be addressed include: what is the pattern of relocation among refugees? Why do refugees move within the urban area during resettlement? What is the relationship between resettlement outcomes (e.g., local integration level) and neighborhood characteristics? Refugees’ residential mobility will be analyzed and discussed in the context of maximizing their “right to the city” from the social justice perspective.

The results are expected to indicate a higher level of residential mobility among those who had lived in refugee camps where many refugees are generally reported to experience severe trauma. Moreover, results may show that resettlement outcomes depend largely on the final neighborhood of their choice where in most cases safety levels would be relatively high and school dropout rates would be low within the urban area. Since many refugees are known to end up in subsidized housing (e.g., public housing), their relocation pattern may demonstrate a high concentration in impoverished neighborhoods. The study results will be used in finding planning and policy implications in the Denver Metropolitan Area and adding an empirical study on social justice for forcibly displaced population and planning.

References

EXAMINING GEOGRAPHIES OF OPPORTUNITY FOR HOUSEHOLDS WITH LIMITED MEANS: AN INVESTIGATION OF TRANSIT ACCESSIBILITY AND HOUSING AFFORDABILITY IN EIGHT U.S. METROPOLITAN AREAS
Abstract ID: 1311
Individual Paper Submission

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Given recent trends suggesting that low- and moderate-income households are increasingly residing in suburban areas as opposed to urban centers (Kneebone & Berube, 2013), regional rail transit is increasingly framed as a means of maximizing ‘geographies of opportunity’ for low- and moderate-income households (Pendall et al., 2012). Given the costs associated with car ownership, and given that low-income households are much less likely to have access to private vehicles than more affluent households, public transit undoubtedly plays a vital role in providing access to resources that support financial and social well-being for those with limited means (Taylor & Morris, 2015). However, not until recently has the affordability of housing in transit-accessible areas been recognized as being equally integral. The present study incorporates both of these dynamics by conceptualizing geographies of opportunity as being bounded by two circumstances: 1) the ability to access employment opportunities via modes other than private auto (‘transit accessibility’) and 2) the ability to afford housing in transit-accessible areas, and thus benefit from the advantages conferred by access to transit (‘housing affordability’). Although growing concerns about direct and exclusionary displacement in transit-rich neighborhoods call into question the ability of those with limited means to benefit from transit access (Rayle, 2014), a ‘location efficiency narrative’ has recently emerged in the literature to suggest that displacement in transit-rich areas may be less of a threat than commonly thought when housing and transportation (‘H+T’) costs are considered in combination.

Yet it remains unclear whether this narrative is supported by on-the-ground empirics, especially given concerns about the robustness of conventional measures of housing affordability (Revington & Townsend, 2016), and the methods typically used to assess the relationship between affordability and transit accessibility. This study therefore takes as its starting point a puzzle about whether transit-rich neighborhoods are indeed more affordable, as a location efficiency approach would suggest, when affordability is examined using measures and methods that address key shortcomings in the literature. To address these shortcomings, I first introduce an improved ‘location-sensitive residual income’ (LSRI) measure, which accounts for the nuances of household composition, financial circumstances, and residential location to more accurately reflect the financial realities of low- and moderate-income households as they seek affordable housing. I then employ LSRI measures to investigate current geographies of opportunity in eight U.S. metros with recently-implemented regional rail transit. First, I assess the extent to which supplies of rental housing that are affordable for low- and moderate-income households are located in areas with high transit accessibility, defined as areas in which the number of jobs reachable by bus and/or rail transit within 45-minutes exceeds the metro-wide average. I then isolate the complex relationship between transit accessibility and affordability using a series of spatial


Key Words: refugee resettlement, residential mobility, right to the city, social justice, neighborhood effect
error and geographically-weighted regression models that control for key characteristics of the built and social environments, as well as for spatial dependence.

Results from both the global and local models indicate that geographies of opportunity as shaped by accessibility and affordability are surprisingly strong in several metros – Denver and Los Angeles most notably – but are quite weak others, including Seattle and Portland. While findings for some metros are largely consistent with a location efficiency narrative, results for a larger number challenge it, underscoring that high housing costs in transit-accessible areas cannot be assumed to be offset by lower transportation costs. Fine-grained analysis at the neighborhood (block group) level suggest that low- and moderate-income households are likely to experience widely varying geographies of opportunity across single metro areas depending on their income level and residential location. Findings thus provide important and insights for scholars and practitioners as they seek to examine housing affordability more precisely and to develop policy prescriptions aimed at creating housing stability in areas with both strong and weak geographies of opportunity.

References

Key Words:
housing affordability, transit accessibility, transit-induced gentrification, transportation justice, social equity

TENANT RISKS VS. MUNICIPAL REWARDS: CLUSTERING OF POST-2008 HOUSING CODE VIOLATIONS IN CHAMPAIGN, ILLINOIS AND MOVING TOWARDS A NEW ENFORCEMENT PARADIGM

Abstract ID: 1314
Individual Paper Submission

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The 2008 foreclosure crisis increased challenges faced by local governments in the U.S. to managing neighborhood vacancy and ensuring that residential housing stock meets minimum standards for human habitation (Lind, 2012). Municipal residential code enforcement practices vary across the U.S. Some communities practice proactive enforcement, implementing comprehensive annual rental registration
programs in attempts to better preserve housing stock as it ages, which also better preserves long-term local property tax revenue streams (Sloto, 2016). But investment property management is one of the biggest local businesses in many communities, and owner interests often dominate local politics and bias enforcement strategies. Observed negative outcomes in housing condition disproportionately affect low income residents through a combination of health hazards, increased energy bills and relocation costs. Property owners often argue that inspections add to the cost of housing which exacerbate housing affordability crises and availability. Overwhelmingly, municipal code enforcement departments do not keep data on pre- and post-enforcement rents, citywide tenant incomes, or the costs of repairs to property owners. Poor code enforcement practices both contribute to neighborhood inequality, and produce costly stagnation and litigation (Dorsey, 2005; Johnson, 2008).

What role do local governments have in the management of tenant-occupied residential properties to promote more inclusive and equitable cities? Do more tenant-based approaches to code enforcement provide a more cost-effective alternative to a universal annual rental registration program? Are nuisance litigation-based enforcement strategies enough to prevent financial institutions from recapturing properties via foreclosure or public bodies recapturing them via code liens in the wake of the 2008 foreclosure crisis?

This paper presents a spatial evaluation of code violation clustering in the City of Champaign, Illinois from 2007-2014, a typology of observed violations, and an evaluation of an alternate pilot rental registration program. Our findings show that code violations occurring in rental housing have significant impacts on residents’ health. Local housing code enforcement to date has produced a two-tiered rental housing system that places a higher cost burden and increased health risk on non-student family renters. This research demonstrates that creating a spatially targeted rental licensing system in partnership with tenants may help cities better promote equitable housing conditions for all local residents.

References

Key Words:
Housing – Code Enforcement, Nuisances, Foreclosure, Residential Real Estate, Local Municipal Government

INVISIBLE RIGHTS, HOUSING CODES AND AFFORDABLE HOUSING
Abstract ID: 1318
Individual Paper Submission

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Most low income tenants live in housing that is affordable due to its undesirable location, poor condition or a combination of the two. In states that provide few rights to tenants, such conditions can be abysmal. In this context, one of the main benefits to living in subsidized affordable housing can be the oversight of housing conditions and a process for oversight and redress of problems that is made possible by the use of public funds. This paper reports on research on enforcement of a local housing code enforcement initiative under a program aimed at holding multifamily owners/managers with repeat code violations accountable, in Austin, Texas. Austin’s Repeat Offender program was developed in response to a handful of high profile catastrophic cases of poor conditions: in the most high profile case, the balcony fell off of a building. More recently, a subsidized property was added to the repeat offender list. The case revealed not only the lack of oversight of conditions at city subsidized properties but also the complete lack of enforcement of the tenant protections ostensibly attached to city funds.

Until recently, most scholarship on housing conditions and housing code enforcement emphasized the ways that enforcement has been used in low income areas to justify blight designations in preparation for urban renewal or other redevelopment agendas (Dorsey 2005). Desmond describes the ways that enforcement can displace residents without improving conditions (Desmond 2016). A common theme has been the ways that enforcement can result in loss of housing affordable to low income renters, implying that enforcement should not always be pursued. It is often enabled by the systems created to assess conditions and enforce codes, which allow a great deal of discretion to code officers. For affordable housing built with subsidies, arguments regarding the loss of units should not apply. But the discretion built into such systems may undermine enforcement of protections for subsidized housing. This research documents the process for code enforcement for Austin’s Repeat Offender program and how its application has had different effects for tenants and owners of subsidized and unsubsidized buildings. It uses two in-depth cases, one of a subsidized property, one of an unsubsidized property, to document the review process, impacts of non-compliance, and how they differ between the two types of cases. The cases were identified through a review of the overlap between cases on the repeat offender list and cases that have been repeatedly presented to the Buildings and Standards Commission for review. Cases are documented using video recordings of the commission meetings, interviews with tenant advocates and code department staff, review of housing department funding agreements, and eviction proceedings for each building. Anticipated findings include lack of awareness of tenant protections by stakeholders involved in compliance, courts overseeing potentially retaliatory evictions and tenants themselves. For planners involved in addressing poor neighborhood or building conditions, particularly in the context of neighborhood change, understanding how enforcement can improve conditions without displacement is especially important.

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Key Words: affordable housing, displacement, tenants’ rights, housing codes
Abstract ID: 1325
Individual Paper Submission

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Homeownership rates grew nationally by a factor of .04 between 1990 and 2005, and declined back to their 1990 rates by 2014 (US Census Bureau, 2014). Some of the decline is attributed to foreclosure waves and some to the more stringent post-recession underwriting standards, both of which affecting lower-income families more than others. The intriguing fact, however, is that homeownership rates also declined, at even higher marginal rates, for families with little or no financial constraints. This might raise questions about whether homeownership became less favorable after the recession, but survey results show that it is still perceived as the superior tenure choice by the majority (Drew & Herbert, 2012). Therefore, the explanation can be that the financially-secure families (“owner-ready”) wait longer than before to become homeowners, and that leads to lower ownership rates. In this research, I study the changes in time-to-ownership after the recession, and ask how much of the delay can be explained by the preference to live in areas with higher quality of life (QOL). Specifically, I test for the effect of (1) jobs, (2) amenities, and (3) fear of foreclosure on homeownership delays.

The study sample is a panel of families across the US who start as renters in 1999, and qualify for Fannie Mae’s conventional 30-year fixed-rate mortgage in their (i) census-tract or (ii) county of residence every year of the study. The family data is from the Panel Study of Income Dynamics (PSID) between 1999 and 2013, which I combine with data on the commonly-studied QOL factors such as jobs, amenities, foreclosure, and neighborhood characteristics from various sources.

At the first stage, I use logit models to measure the effect of QOL on homeownership likelihood. Results show that, controlling for an array of family characteristics and state fixed-effects, owner-ready families are significantly less likely to become homeowners after the recession. At the second stage, I utilize survival models to measure changes in time-to-ownership as affected by QOL. Regardless of neighborhood effects, it takes significantly longer for owner-ready families to become homeowners after the recession. When I include QOL variables in the model, I observe that while the post-recession time-to-ownership remains significantly longer, the delay is more pronounced in areas with concentration of high-income jobs. Neighborhoods with higher average education and income are correlated with shorter waiting periods. And while foreclosure is associated with longer delays, the intensity of foreclosure rates does not affect the post-recession delay in a noticeable way. Lastly, I limit the sample to only movers, in order to investigate whether owner-ready families move towards better QOL and still remain renters. Results confirm this hypothesis: families who move to areas with higher-income jobs also wait longer after the recession to become homeowners; and safer, more educated and higher-income destinations are associated with shorter delays.

These results indicate changes in the owner-ready’s attitude towards homeownership after the recession. Owner-ready families are the primary target of homeownership incentives, and their response to those incentives can inform future housing policy and neighborhood development strategies.

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  • Rachel Meltzer
Neighborhood change, often associated with its maligned counterparts, gentrification and displacement, has become an increasingly prominent area of study in the urban studies. Further, gentrification has been spreading across additional US metropolitan areas, and accelerating within certain metropolitan areas (Hwang & Lin, 2016). As a result, both urban scholars and practicing planners are anxious for greater insights into the causes and consequences of neighborhood change, as well as quantitative models that anticipate such change so that housing and community development policies can be crafted to promote more equitable cities and regions. Despite lively interest and much active research, however, there remains little consensus on the appropriate ways to measure gentrification and even less on the best ways to model the phenomenon (Freeman, 2005; Hwang & Lin, 2016). In this paper, we enter the debate on gentrification by considering a novel model of neighborhood change. Drawing from both regional science and newly developed machine learning techniques, we construct a model of gentrification that accounts simultaneously for multiple dimensions of change and incorporates both spatial and temporal effects. Following, we present a series of empirical examples, which demonstrate that our approach is more readily applicable to sociological theories of urban ecology and neighborhood succession. The crux of our approach is the consideration of a neighborhood as a bundle of demographic attributes which together describe a discrete ‘neighborhood state’ rather than a single or series of continuous variable(s). To measure gentrification, we thus develop a spatial Markov Chain to examine the ways in which neighborhoods transition between states as a function of their previous state and the states of the surrounding neighborhoods. Conceptually, this approach is similar to Royall (2016), although we use a different classification algorithm, identify different neighborhood states, and include a spatially explicit Markov Chain.

Our approach is as follows. Following Spielman & Singleton (2015), we perform a geodemographic typology that classifies neighborhoods into one of six discrete types based on four measures of neighborhood composition analyzed commonly in the gentrification literature: income, race, educational attainment, and home values. We develop our typology using an unsupervised machine learning algorithm known as affinity propagation, which we then apply to longitudinal census data from 1980 through 2015 in five different metropolitan regions in the U.S. (Washington D.C., Los Angeles, New York City, Minneapolis-St. Paul, and Seattle). This analysis yields a dataset in which each tract in each of the five study regions is discretized into classes that vary by kind rather than degree; we conceive of these classes as ‘demographic states’. To understand the process of dynamic neighborhood change, we then construct a spatial Markov chain which models the probability of transition from one state to another (Rey, 2014). Our results yield new insight into the dynamics of neighborhood change that is both nuanced and context-sensitive. We are able to identify several types of neighborhood change that
include both ascent and decline, and we are also able to identify particular sequences of gentrification, which have been difficult to identify in previous quantitative studies. Harkening to the early Chicago School, we find patterns of neighborhood succession in cities like Washington D.C. where low-income minority neighborhoods transitioned to moderate-income minority neighborhoods before transitioning to moderate-income white neighborhoods. We explore several other emergent sequences and discuss the policy implications for neighborhoods on the verge of tipping.

References


Key Words:
Gentrification, Neighborhood Change, Spatial Methods

PUSHING BACK THE BID: IMMIGRANT COMMUNITIES RESISTANCE STRATEGIES TO GENTRIFICATION

Abstract ID: 1344
Pre-Organized Session: When Planning Doesn't Work: How People Push Back

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The Business Improvement Districts (BID) model allows for a consolidation of property owners and municipal interests in order to promote a determined vision, carried out through marketing, financing, and physical improvements in a specific geography. BIDs require an assemblage of developers, real estate agents, government agencies, retail developers and urban designers to come together and share their expertise in a re-envisioning of sites in the city. Through this process, BIDs play an important role in the restructuring of urban cities by helping create a good business climate. However, previous research has found the depressed impact of BIDs on change in retail performance in small community BIDs (Sutton 2014) as well as the link to processes of gentrification and displacement of smaller businesses.

This paper examines the local spatial and social policies of BIDs in immigrant communities, and how these policies threaten to transform neighborhoods into unaffordable and unrecognizable spaces, no longer immigrant or queer enclaves. While there is strong and growing literature about BIDS, this article will be the first to focus on what tactics grassroots organizations have used to resists these neoliberal policies and prevent the expansion of BIDs.
The two in depth case studies analyze successful grassroots immigrant organizations’ fights against BIDs located in neighborhoods that are majority communities of color: Jackson Heights Queens, New York, and Central Santa Ana, California. Jackson Heights Queens is a place of “hyper-diversity” with sizeable South Asian and South American immigrant communities, and LGBT communities. With nearly two-thirds of its residents foreign-born from numerous countries it is defined by its ethnic, racial, and socio-economic diversity. Central Santa Ana is a Mexican immigrant community, in a majority Mexican-American city, in Orange County California. About half of the population is foreign born and about 50% of the population speaks English less than “very well.”

In both case studies community activists, street vendors, small business owners, and residents recognized a BID proposal as a sign and vehicle of gentrification, and understood that if the BID was uncontested it would have brought privatization and corporatization of public space as well as an end to the thriving commercial districts created by local immigrant residents and business owners. The findings suggest grassroots efforts fighting displacement on two fronts: commercial displacement, and immigration-based displacement. The findings of this article challenge the widely held urban planning acceptance and adoption of BIDs as place-based strategies for commercial renewal and sustainability; and deepens our understanding about the role of immigrant communities in fighting back against BIDs and commercial gentrification.

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Key Words: commercial gentrification, business improvement districts, immigrants

HOUSING FOR PEOPLE WITH DISABILITIES: A REVIEW OF STATE PLANS
Abstract ID: 1353
Individual Paper Submission

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Although the American with Disabilities Act and follow-up court decisions such as the Olmstead case occurred several decades ago, the lack of affordable and appropriate housing for the disabled remains a critical issue in the United States. Some argue it will soon become a crisis. Yet, the academic planning field—long-involved in housing policy—has largely ignored the issue (whereas those in other fields like health care and social work have not).[1] At almost 13% of the population, some observers state that the disabled make up a significant minority group. If planners and housers took greater note of this population, it could help solve the disabled housing crisis.
This paper aims to inform planners about the problem and evaluate what states are doing about it. We examine recent state Olmstead and HUD Consolidated Housing and Community Development plans. To what extent have states complied with the Olmstead ruling mandating the disabled live in the “least restrictive” and most integrated community setting (rather than segregated into state mental institutions, nursing homes or other institutions)?

Researchers note the current shortage of appropriate housing for disabled adults and predict this will worsen. This is due to insufficient Medicaid funding of services the disabled need to live independently (Musemeci and Claypool 2014), the dearth of accessible housing units nationally (Smith et al. 2008; Smith 2010), and the lack of affordable housing in general given that the disabled are more likely to be poor (Cooper et al. 2013). This contributes to their homelessness and substandard living situations.

At the same time, demand for housing by the disabled is growing. The number of people with mobility impairments is expected to increase due to the aging of baby-boomers. Since people with intellectual disabilities are now living longer and most live with family, this will result in their need for supported housing when the family caretaker becomes disabled or dies.

Past reviews (e.g., Christensen and Byrne 2015) of Olmstead plans showed that many are vague and lack goals; while some states are moving the disabled out of institutions, others are resisting. Our review of recent plans shows similar weaknesses. We also observed that no states planned to increase existing, or create new, funding for disabled housing. Our review of recent state ConPlans shows considerable knowledge of housing needs of the disabled (by 70% of the states), but a much lesser commitment (32% of states) to using HUD block grants toward meeting them. There is much work still to be done.

[1] For example, the Journal of American Planning Association (JAPA) and the Journal of Planning Education and Research (JPER) each published one article related to the disabled since 2000; Housing Policy Debate (HPD) published three.

References


Key Words:
housing, the disabled, state plans
PLANNING POLICY IN THE WORKS FOR HEALTHY COMMUNITIES: LESSONS FROM THE MUELLER COMMUNITY IN AUSTIN, TEXAS

Abstract ID: 1358
Individual Paper Submission

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BACKGROUND
In 2015, the US Surgeon General issued a Call to Action to Promote Walking and Walkable Communities recognizing their importance for promoting health of Americans of all ages and abilities [1]. In 2017, eight national organizations, including American Planning Association and American Public Health Association, issued a Joint Call to Action to Promote Healthy Communities. Despite the growing and nationwide movements toward promoting healthy and walkable communities, many challenges remain in establishing walkable communities [2].

PURPOSE AND METHODS
This study is to share insights learned from the development process of Mueller, a 711-acre walkable community being developed on a formal municipal airport site in Austin, Texas. It is also certified as the world’s largest LEED-ND Gold community. The data used in this study are collected in 2016-2017 from public documents, individual interviews, and a focus group session with six Mueller stakeholders including planners, developers, City staff, and community members. A content analysis was conducted using a web-based software (i.e. Dedoose) to extract major policy barriers and solutions.

RESULTS
A review of available data indicates that Mueller has faced and overcome numerous policy barriers, through various innovative policy innovations and public-private partnerships (PPP). Since its initial conception in 1996 with the relocation decision of the municipal airport, Mueller has faced many challenges due to its complex ownership, development, and financing structures.

From the focus group, 61% (40/66) of the barriers and 73% (77/105) of the solutions mentioned were related to policy. Among the policy solutions by the City were the Mueller Planned Unit Development (PUD) ordinance which relaxed zoning, street design and site development standards; the Tax Increment Reinvestment Zone and public financing that helped reimburse the master developer for public infrastructure costs; the Mueller Design Book that guided and dictated the form-based standards; and the modified watershed requirements that allowed for storm water facilities to dually function as community amenities. Through these provisions, the developer was able to afford implementing walkable, sustainable, and affordable development strategies. The developer was also given the entitlements that maximize flexibility in timeline to respond to the dynamic market condition, and able to reduce risk through PPP and phased land acquisition process.

Current Mueller residents reported walking 30 minutes more per week after moving to Mueller [3]. As of 2014, Mueller has been able to achieve a residential density and street connectivity that were about three times higher than the citywide averages, while maintaining the SES profile of the residents similar
to the citywide mean. Upon completion, it aims to achieve a good jobs-housing balance with 13,000 employees and 13,000 residents (including 25% of affordable housing residents). Almost all streets are lined with sidewalks and often with street trees and buffers, compared to about 24% of sidewalk coverage of the streets elsewhere in Austin.

DISCUSSIONS AND CONCLUSION
Policy interventions adopted in the Mueller development process, including PPT, PUD, public financing, and land disposition strategies, can foster the implementation of walkable developments in similar communities elsewhere. Findings from this case study are consistent with the previous literature reporting similar policy barriers to building walkable communities. While policy factors are confirmed to be the leading barriers in Mueller, other challenges related to finance and social norms have also been shown to be important [4]. Further, developer-oriented strategies such as industry-specific guide and performance-based measures can facilitate the application of economic incentives and market values associated with health-beneficial features (i.e. walkability) of the development project [5].

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Key Words:
walkable community, property development, planning policy, public-private partnership

EXPLORING THE RELATIONSHIP BETWEEN NEIGHBORHOOD ENVIRONMENT AND AGING IN PLACE OF THE ELDERLY
Abstract ID: 1372
Individual Paper Submission

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The elderly population aged 65 and over has increased steadily and, as baby boomers age, this trend will be accelerated, taking up a considerable portion of the U.S. population. Previous studies report that most of the increasing seniors have a desire for Aging in Place (AIP) which is defined as staying their current residence as long as possible with some level of independence. The goal of this study is to identify the explanatory factors which affect AIP and explore the extent to which those factors help to predict the likelihood of it among elderly people at the community level. This research seeks to address the relationship between the neighborhood environment and AIP of the elderly from three different perspectives: accessibility to services for Instrumental Activities of Daily Living (IADL), mobility level
including vehicle ownership and public transportation, and socioeconomic environment on the basis of a data set of people aged 65 and over who live in Tampa-St. Petersburg-Clearwater, FL Metro Area. In the data collection process, the cumulative opportunity measurement is applied to evaluate the accessibility to services for the elderly’s independent life using ArcGIS with parcel data at the census tract level, and 2010 census data is employed to obtain the data of mobility level and socioeconomic environment. In the analysis process, Multiple Linear Regression Analyses are conducted to identify the overall AIP predictors and the relative importance of each one. Descriptive results show a high degree of influence with each part of the neighborhood environment. In addition to the traditional regression analyses, a Geographically Weighted Regression (GWR) Analysis is used to display the different spatial relationship between the neighborhoods and AIP because this research employs spatial data. The expected outcomes from this research are as follows: 1) Activities or services related to IADL have more critical influence on aging in place of the elderly than those for leisure, 2) The elderly with higher vehicle availability are more likely to age in place in suburban areas, and 3) Among the elderly who age in place, the residence period of the oldest old is more likely to be longer than that of the young old.

References

Key Words:
Aging in place, Accessibility, IADL, The elderly

DOES START-UP NEW YORK PROGRAM AFFECT ECONOMIC DEVELOPMENT?
INTEGRATION METHOD OF AGENT-BASED MODEL AND COMPUTABLE GENERAL EQUILIBRIUM
Abstract ID: 1387
Lightning Research Presentation

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There are many strategies for local economic development such as tax incentives or enterprise zones. Governor Cuomo introduced Start-Up New York policy which was designed to create more jobs by helping people start or relocate their qualified business to tax free zones in New York. Previous studies for tax incentives tend to focus on analyzing impacts of policy based on data results already occurred. That is, impacts of tax incentives can be estimated when the data already are available according to former approaches. It is hard to anticipate Start-Up New York policy based on conventional studies because we do not have enough result; however, this paper proposed a model to predict this policy. The
The purpose of this article is to examine how giving tax incentives toward high tech industry have an effect on local economy even households, especially on Tompkins County. Based on my model, this approach does not only anticipate how a policy works, but also evaluate a proceeded policy by simulating data. The purpose of this paper is to analyze the impact of Start-Up New York policy on local economy, especially Tompkins County by proposing a combined method of agent-based model(ABM) and computable general equilibrium(CGE) model. ABM capture behaviors of firms in the system; moving, agglomeration, and failure. Then, the simulating result is applied in CGE in order to explore the ripple effects toward other sectors. Therefore, this paper is not related to judging success or failure for policy, but anticipating progress of policy.

(I will write result and conclusion later because I need to fix up the model)

After mentioning the conclusion, I believe that combination method of ABM and CGE will help to predict the impact of tax free zones by capturing firms move and ripple effect on local economy.

References


Key Words:
Startup New York, Agent Based Model, Tax Incentives

THE SHIFTING ROLE OF THE LOCAL STATE IN THE LAND DEVELOPMENT PROCESS IN THE UK
Abstract ID: 1390
Individual Paper Submission

BLOOM, Aretousa [Rutgers University] aretousabloom@gmail.com, presenting author

This paper presents findings from my doctoral research on the re-structuring of the local state in the UK in the context of austerity and in relation to the post-recession boom in house and land prices. More specifically, I consider the way in which an increasing number of local authorities in England have started assuming a greater role in land and housing markets through the setting up of subsidiary companies to generate revenue and deliver housing directly across a range of tenures.

Drawing on the insights of state theory (Jessop, 2008), financialized urban governance (Peck and Whiteside, 2016; Ashton, Doussard and Weber, 2016; Lake, 2015), and on recent work on the state’s treatment of public land in the UK (Christophers, 2017), I seek to gain a better understanding of the logics and forms of political power that underpin the use and design of council-owned development companies, as well as the ways in which they work to redefine the blurred boundaries between private and public, and state and market.
The paper advances three hypotheses. The first hypothesis is that local authorities have started setting up council-owned companies as a relatively pragmatic response to a set of fiscal and legal constraints imposed by the national state, which in the UK is highly centralized, rather than as a principled turn towards a more privatized and marketized form of urban governance. The second is that the policy-oriented goals that local authorities are seeking to advance, are nevertheless influenced, to a varying degree, by the financial and legal requirements of these new funding mechanisms. The third is that development companies have become a defining feature of the varied political trajectories that different local authorities have taken during the current property boom and in the context of deep cuts to local government budgets.

Using a range of methods including document analysis and semi-structured interviews with council leaders, finance directors and planning officers, this paper explores the phenomenon through a multi-case research design in order to understand the varied reasons local authorities are setting up the companies, as well as the different institutional arrangements devised in the process. Findings from four local authorities in London and the surrounding commuter belt are presented and include emergent trends within each case, and a cross-case analysis of themes.

Through an exploration of the way in which political and financial logics are combined in the process of designing and operating the companies, the paper contributes to broader discussions on the role of private funding mechanisms in planning practice and on the shifting role of the local state under conditions of fiscal and political crisis.

References

Key Words:
urban governance, austerity, housing, land development, privatization
market status, indicating more diverse factors at play. While a number of researchers have investigated the recovery of the housing market in the United States, studies devoted to housing market recovery at the neighborhood level across the United States are still in demand. For example, several studies have attempted to identify the determinants of housing market recovery at the neighborhood level, but their studies focused on one particular city or region (Ellen, Madar, & Weselcouch, 2015; McMillan & Charkarborzy, 2016), and although many studies have explored the short-term impact of foreclosures on neighborhood housing markets, few have investigated the long-term impact (Immergluck, 2012).

The purpose of this study links theories of resilience and neighborhood change to the housing market and explores the factors that affect neighborhood resilience in the context of metropolitan housing markets in the short term of the U.S. housing crisis, from 2011 to 2014, and in the long term, from 2000 to 2014. Using hierarchical linear modeling and changes in foreclosed properties at the ZIP-code level within 358 metropolitan areas, I measure housing market resilience according to its vulnerability to shock, for in that high resilience can be determined by lower vulnerability.

The findings suggest that neighborhoods with higher shares of low-cost home loans and mixed land use urban forms experienced resilience to the housing crisis across the nation during both the short and long terms while those with higher shares of elderly individuals and old housing were vulnerable. They also suggest that racial and industrial diversity were critical factors to housing market resilience. Overall, the results suggest that neighborhoods in resilient housing markets are more likely to have access to robust social, economic, political, and physical opportunities. Housing is an important physical structure in which individuals live but also a fundamental place where social networks and neighborhood interactions arise. Thus, understanding resilience of neighborhood housing to economic crisis will provide policy makers and planners with insights that will help them establish housing policies, set goals, and develop strategies for a healthy and sustainable housing market.

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Key Words:
housing, neighborhood, resilience, economic crisis, sustainable and healthy neighborhood

IS GREEN THE NEW GOLD? LANDSCAPE EQUITY IN TIMES OF DROUGHT
Abstract ID: 1416
Pre-Organized Session: When Planning Doesn't Work: How People Push Back

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In spite of the above average rain during winter 2016/2017 California, alongside other western states in the US, is still in recovery from one of the most severe droughts on record. As part of this recovery planners and policy makers, alongside landscape architects, and water management professionals will need to continue to learn how to collaborate to address increasingly complex urban and regional water needs (Gober, et al 2013; Simpson and Aravena 2016). One key aspect these collaborations must address is the question of equity, and the ways in which water management plans and policies promote or inhibit various types of inequalities.

In this paper we examine the case of residential landscapes in Sacramento California to evaluate the differential impact of water management policies on diverse communities, and to examine the ways in which varied communities are responding to, accepting, adapting or resisting these the policies and programs. During the height of the drought city and state governments across California moved to reduce outdoor residential water use through a variety of strategies ranging from increased fines, to incentivizing turf grass removal, and even public information campaigns that included distributing yard signs that declared that ‘gold is the new green’ to encourage residents to let their lawns dry out in the summer months. These methods all represented a set of management practices aimed at promoting a specific, technocratic approach to residential water and landscape management (Swyngedouw 2009), one that dealt very little with questions of inequitable access to everything from information about alternatives, to resources needed to make landscape and behavioral shifts, to the time needed to make these shifts. Additionally, the desired change was defined in narrow ways without attention to the appropriateness or acceptability of these newly mandated landscapes. Sacramento is an informative case from which to examine these issues with both a highly diverse population in terms of race, ethnicity and nationalities, and with large swaths of surprisingly uniform suburban land covers. As such the city provides an opportunity to examine the impact of policies and programs on a varied population while controlling the basic characteristics of the landscape.

Part of a larger study, this paper will report on the results of two stages of research, first a survey of sub-parcel residential land cover in a set of diverse case neighborhoods, alongside the initial results from interviews with neighborhood residents. Surveys were conducted along a transect that covers a set of predominantly high income, mixed and predominantly low income neighborhoods. The percent and quality of turf grass lawn was recorded in the survey, along with notes about additional landscaping and the quality and characteristics of neighboring yards. The findings are revealing contradictory patterns where the lowest rates of turf grass conversation are found in the highest and lowest income neighborhoods, and at the same time the quality of lawn is closely related to the overall income of the neighborhood. The interviews provide an opportunity to begin to discuss how these patterns are arising. Initial results highlight the ways in which the same motivations – for example being neighborly – are leading to radically different landscapes. Additionally, and in keeping with our interest in questions of equity, our research is also unearthing landscape practices tied to cultural communities that directly contradict state-promoted management plans while also creating important opportunities for increased environmental justice (Anguelosvski 2013) within communities including increased access to green space and food, and deepened landscape sovereignty.

References

FROM GLOBAL CITY TO REFUGEE CITY: PUSHING BOUNDARIES OF POWER AND PLANNING IN A SMALL SOUTHERN TOWN
Abstract ID: 1418
Pre-O rganized Session: When Planning Doesn't Work: How People Push Back

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Clarkston is one of the most foreign-born cities (54%, ACS 2014) not just in the regional US South but also in the United States, greatly exceeding the foreign-born percentage share of city populations of traditional immigrant destinations like Los Angeles (38%) or New York (37%). In many southeastern and rust belt states, newly arrived immigrants are actually refugees – arriving in large numbers each year and usually settled in suburbs outside of the core metropolitan area or traditional central city urban enclave. Barriers to civic, social, and economic engagement for more recently formed majority-immigrant suburban and rural areas are impacted by larger regional or state level policies towards immigrants, and yet many of the more recent immigrant destinations are located in heavily anti-immigrant states with strict policies of deportation, detention, and immigration enforcement. How Clarkston has adapted to rapid migration related change is a good example of how smaller US cities (outside of traditional “global cities” like New York, for example) integrate and incorporate new immigrants and new Americans into civic life. Increasingly, foreign-born immigration is to these emerging destinations – and concentrated in small towns and suburbs outside of the central city. Our study of Clarkston, pop 13,000, and the more than 5000 refugees and immigrants who have been resettled in this small town over the past two decades, serves as a good guideline for how to plan with and for widely differing “New American” groups.

Refugee settlement occurs with a combination of federal and state funding, and initial settlement is mainly determined by state refugee resettlement agencies. As such, the rate of demographic change (flipping from majority non-foreign born to majority foreign-born) in cities like Clarkston occurred over several waves of resettlement from many different countries in a short amount of time. The lessons learned from Clarkston, Georgia are transferable to refugee receiving towns in Minnesota and Minneapolis (outside the twin cities), North Carolina (outside of Charlotte and Raleigh), and Massachusetts (outside of Boston), but add the unique perspective gained by this study of Clarkston is that unlike other new migration destinations, Clarkston’s refugees and immigrants are not just a “significant minority” group, but a significant majority of the city’s population. There are more immigrants and refugees in Clarkston than there are native-born residents, and given the lengthy process of citizenship in the US, many members of the town’s majority cannot actually vote (only 1000 or so naturalized citizen residents of the approx. 5000 in residence) in local elections or on local laws that have a direct impact on themselves or their neighborhoods.
HEALTH, HOMES AND HARD SKILLS: IMMIGRANTS CHARTING A COURSE FOR COMMUNITY AND ECONOMIC DEVELOPMENT.

Abstract ID: 1425
Individual Paper Submission

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In the current US political climate, immigrants are struggling to respond and resist while at the same time maintain economic and social stability for their families. Much of the literature on immigrants and economic development has focused on low skilled immigrant labor and it is impact on native low skill workers (Cortes, 2008), immigrant entrepreneurs in ethnic enclaves (Waldinger 1994) or the impacts of highly skilled immigrant workers (Saxenian 2007). There has been little literature that directly integrates political oppression of immigrants and multifaceted community responses for economic development (Sweet 2016). Based on three years of activist research, which includes participant observations, interviews, mapping projects, and facilitating financial training, this paper reports on the case of immigrants and their families developing a three-pronged approach to building sustainable community and economic development. Using a grounded theory approach I explore the meaning and significance of their innovative approach tackling community health, housing, and workforce development. Their strategy includes a community savings club, a 14 raised-bed urban community farm, and housing cooperative (coop). Each person or family contributes a set monthly amount of money of their choosing. At the end of the year, each contributor can leave all the savings in the account toward investments in the housing coop or take up to half of it out. The farm allows member to learn farming techniques and best practices for using little water for food production with experienced coop members and additional technical assistance. The production from the farm permits cooperative member to have fresh and organic produce. Additional profits from the sale of produce not consumed by the members go in the saving club toward housing investments. While the coop members have not purchased their first home yet, there are more than 7000 homes for sale in Norristown, PA that are less than $30,000. The coop members have partnered with a couple who have purchased a property with two homes, one of which they rehabbed already. The couple has committed to supporting and training the coop members in the work of buying and rehabbing the homes and then the coop will rent them below market rate to coop member.

The project is innovative because it combines solutions to three big urban and regional problems, health and nutrition, financial/economic development, and housing. Furthermore this is being done by a group

References

Key Words:
immigrant integration, community planning, refugee resettlement, segregation, civic engagement
of marginalized Mexican immigrants, mostly women, many of whom are undocumented. They are doing this work in a climate of fear and framing their work on the coop projects as a remedy for trauma and stress related to the increases in deportations and anti-immigrant harassment. I argue that this somewhat unconventional approach to regional development successfully responds to three building blocks for economic self-sufficiency in marginalized communities of color, health, homes and hard skills.

References

Key Words:
Immigrants, cooperative, workforce development, urban farming, housing

SUBSTANDARD HOUSING IN LOS ANGELES: CHALLENGES FOR NON-PROFIT ORGANIZATIONS SERVING AFFECTED POPULATIONS
Abstract ID: 1426
Individual Paper Submission

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Substandard housing is not a new phenomenon in the United States, but it is a social problem that has evolved over the years. Since the mid-nineteenth century, social reformers have sought to improve the unsanitary and unhealthy housing conditions of the poor (von Hoffman, 1998). In the late-nineteenth and early-twentieth centuries housing reforms were intended to reduce overcrowding and squalid living conditions. Thus, slum housing decreased, and new developments replaced blighted buildings (Schwartz, 2015). However, beginning in the 1980s, as buildings aged and affordable housing became increasingly scarce, the most vulnerable groups, particularly immigrants and low-income minorities, often occupied substandard housing due to limited housing choice. These circumstances spurred concern for tenants’ health to reemerge in policy circles.

Today, in Los Angeles, substandard housing conditions disproportionately affect low-income and immigrant families. Advocates for the poor and many public officials now consider substandard housing a health crisis, negatively affecting the physical and mental health of this population. Yet, there is limited research and data on the extent of the problem. Although there is an estimated 48,000 people living in "extreme" substandard homes in Los Angeles (Lowe & Haas, 2007), there is little information about evaluation systems used by the city, the county, and supportive organizations to address substandard housing. This research seeks to fill the gap in our knowledge.

The research in this paper is an investigation of the non-profit organizations in Los Angeles that address blighted housing as their central mission. It considers the adoption of policies and implementation of projects to foster healthy housing. Based on the limited, extant scholarly and empirical research, these organizations appear fragmented with little collaboration among them. This collaboration void appears
to prevent the effective use of resources and present less than optimal results from the work. Preliminary research suggests that there is a range of these organizations, but duplication of efforts may result in wastefulness, gaps in service, and general lack of coordination. The purpose of this research is to understand the degree and nature of collaboration among non-profit organizations who address housing issues, in particular substandard housing issues. Specifically, this study will focus on answering the following research questions: What are the challenges that organizations face when addressing the substandard housing issue? How do they adapt to these challenges? And, what are the degree and methods of collaboration with other organizations?

The study employs qualitative methods within an interpretivist paradigm. Through key informant interviews with representatives of non-profit organizations in the City of Los Angeles, the research will investigate the relationships of organizations along key themes such as purpose and focus of their projects, challenges in implementing their work and achieving goals, type of systems they use for coordination and collaboration, among others. The data will be analyzed using ATLAS.ti, a qualitative data analysis program, for open coding of interview text and supplemented with other qualitative analysis. In addition, the data will be triangulated with articles from The Los Angeles Times and existing reports that highlight the work done by these organizations. The results from the study will help planners and housing advocates to understand the challenges faced by these organizations and inform strategies to promote enhanced coordination and collaboration among these organizations.

References


Key Words:
nonprofit organizations, substandard housing, collaboration

THE PROMISE AND PERILS OF PORTLAND'S ACCESSORY DWELLING UNITS: A SURVEY OF OWNERS AND TENANTS
Abstract ID: 1432
Individual Paper Submission

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In the past few years, there has been interest in a growing number of states and municipalities in accessory dwelling units or ADUs. ADUs are fully independent, second housing units located on single-family lots. They can take a number of different forms, wholly within, attached to, or detached from the primary unit and are known by many different names including secondary dwelling units, granny flats, in-law units, guest houses, backyard cottages, garage apartments, or carriage houses. ADUs have been discussed as possibly filling a variety of niches and satisfying a range of needs including as a means of:
1. Increasing density in single-family neighborhoods that circumvents NIMBYism and fights over upzoning, multifamily housing, and neighborhood “character”; 
2. Providing options for downsizing, aging in place, or forming multigenerational households; 
3. Combatting sprawl and climate change by using existing infrastructure, creating smaller, more energy-efficient housing units, and increasing density to support transit and walkable communities; 
4. Creating affordable housing options, often in high opportunity neighborhoods; and 
5. Providing cost-effective development opportunities for homeowners to generate income, possibly offsetting increasing costs of living in changing neighborhoods.

Despite their potential, numerous barriers exist to the widespread development of ADUs. Regulatory restrictions, financing shortfalls, and design and construction ability (particularly as many ADUs are self-built) can all pose challenges (Antoninetti, 2008; Wegmann and Chapple, 2012).

Portland, Oregon has one of the most permissive regulatory regimes governing the development of ADUs in the US, and, since 2010, has incentivized ADU construction by waiving the System Development Charges (SDCs) normally levied on new construction. This has led to an increase in the number of permitted and built ADUs in the City, to the point that nearly as many permits were issued for ADUs as for single-family homes in 2016 (Law, 2017). However, despite the increase in ADUs in Portland, they remain a very small segment of the overall housing market and have substantial room for further growth.

In order to facilitate further growth, a consortium of scholars and practitioners have been working to identify and address persistent barriers and bottlenecks. This paper summarizes the results of a survey of ADU owners and occupants in Portland conducted as part of that effort. The survey provides details on the demographics and lifestyles of these groups as well as their motivations for developing and/or living in an ADU. It also explores the process owners undertook to design, finance, build, and use their ADUs and the barriers they faced. Finally, the survey includes individuals that sought to build an ADU, but failed to complete the process to further elaborate the obstacles they faced. The paper concludes by outlining the policies and programs created or refined as a result, with a particular focus on new financing and construction tools aimed at scaling up ADU development.

References

Key Words: 
Accessory Dwelling Units
Track 6 - International Development Planning

PRE-ORGANIZED SESSION: URBAN WATER, SANITATION, AND WASTEWATER: EMERGING ISSUES AND FUTURE DIRECTIONS II – EQUITY AND PARTICIPATION
Proposal ID 34: Abstracts 445, 446, 447, 449, 723

DAS, Priyam [University of Hawaii] priyam@hawaii.edu, organizer
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Existing urban infrastructure is unable to keep up with the growing demand for services around the world. Many cities have aging, absent, or inadequate water, sanitation, and wastewater infrastructure, challenging health, sustainability and social equity. In the Global South, local governments unable to meet the challenges of urbanization are hard pressed to extend basic services to low-income settlements in urban and peri-urban areas. How can cities move towards sustainable, safe and affordable urban water, sanitation and wastewater management? As conventional, centralized approaches fail to sufficiently improve access or reduce environmental burdens, scholarly inquiry into alternative planning approaches is growing. This panel draws on a diverse collection of cases from around the world to facilitate a comparative (e.g. South/South South/North) discussion on the future of urban water, sanitation, and wastewater management. Papers in this session will examine infrastructure challenges at the scale of the community and households, related to public engagement, participatory processes, and multi-stakeholder governance.

Objectives:
- Infrastructure planning opportunities and challenges (water, sewerage, sanitation)
- Understanding participatory tools and techniques

PRE-ORGANIZED SESSION: URBAN WATER, SANITATION, AND WASTEWATER: EMERGING ISSUES AND FUTURE DIRECTIONS I - PLANNING AND MANAGEMENT
Proposal ID 45: Abstracts 450, 452, 453, 1335

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Existing urban infrastructure is unable to keep up with the growing demand for services around the world. Many cities have aging, absent, or inadequate water, sanitation, and wastewater infrastructure, challenging health, sustainability and social equity. In the Global South, local governments unable to meet the challenges of urbanization are hard pressed to extend basic services to low-income settlements in urban and peri-urban areas. How can cities move towards sustainable, safe and affordable urban water, sanitation and wastewater management? As conventional, centralized approaches fail to sufficiently improve access or reduce environmental burdens, scholarly inquiry into alternative planning approaches is growing. This panel draws on a diverse collection of cases from around the world to facilitate a comparative (e.g. South/South South/North) discussion on the future of urban water, sanitation, and wastewater management. Papers in this session will examine infrastructure challenges at the scale of the city and region, related to the social and environmental impacts of infrastructure planning and management.
Objectives:
- Infrastructure planning opportunities and challenges (water, sewerage, sanitation)
- Land use implications of infrastructure planning

PRE-ORGANIZED SESSION URBAN WATER, SANITATION, AND WASTEWATER: EMERGING ISSUES AND FUTURE DIRECTIONS III – VALUATION OF SERVICES
Proposal ID 46: Abstracts 454, 455, 456, 457, 1374

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TEWARI, Meenu [University of North Carolina] mtewari@unc.edu, proposed discussant

Existing urban infrastructure is unable to keep up with the growing demand for services around the world. Many cities have aging, absent, or inadequate water, sanitation, and wastewater infrastructure, challenging health, sustainability and social equity. In the Global South, local governments unable to meet the challenges of urbanization are hard pressed to extend basic services to low-income settlements in urban and peri-urban areas. How can cities move towards sustainable, safe and affordable urban water, sanitation and wastewater management? As conventional, centralized approaches fail to sufficiently improve access or reduce environmental burdens, scholarly inquiry into alternate planning approaches is growing. This panel draws on a diverse collection of cases from around the world to facilitate a comparative (e.g. South/South South/North) discussion on the future of urban water, sanitation, and wastewater management. Papers in this session will examine infrastructure challenges at the scale of the household, related to decision-making, price, cost and affordability in planning and managing infrastructural services.

Objectives:
- Infrastructure planning opportunities and challenges (water, sanitation, sewer, solid waste)
- Techniques and approaches to environmental valuation

PRE-ORGANIZED SESSION: URBAN WATER, SANITATION, AND WASTEWATER: EMERGING ISSUES AND FUTURE DIRECTIONS IV – STAKEHOLDERS AND OUTCOMES
Proposal ID 47: Abstracts 458, 459, 460, 461, 515

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DAS, Priyam [University of Hawaii] priyam@hawaii.edu, proposed discussant

Existing urban infrastructure is unable to keep up with the growing demand for services around the world. Many cities have aging, absent, or inadequate water, sanitation, and wastewater infrastructure, challenging health, sustainability and social equity. In the Global South, local governments unable to meet the challenges of urbanization are hard pressed to extend basic services to low-income settlements in urban and peri-urban areas. How can cities move towards sustainable, safe and affordable urban water, sanitation and wastewater management? As conventional, centralized approaches fail to sufficiently improve access or reduce environmental burdens, scholarly inquiry into alternative planning approaches is growing. This panel draws on a diverse collection of cases from around the world to facilitate a comparative (e.g. South/South South/North) discussion on the future of urban water, sanitation, and wastewater management. Papers in this session will examine infrastructure challenges across scales, examining new models of collaboration and partnerships and how those shape reform and project outcomes.
Objectives:
- Infrastructure planning opportunities and challenges (water, sanitation, sewerage)
- Approaches to project evaluation
- New models of infrastructure governance

PRE-ORGANIZED SESSION: ASEAN AT 50: PLANNING, REAL ESTATE, AND TRANSNATIONAL URBANISM
Proposal ID 48: Abstracts 1140, 1141, 1142, 1143

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The cities of South and Southeast Asia still bear the imprint of their successive colonial legacies. However, since the founding of ASEAN fifty years ago, member countries have been integrated into global production chains, and the closed colonial systems have given way to more open transnational networks and the region’s economy is increasingly driven by networked patterns of urbanization that transcend territorial boundaries. This panel builds upon the work of Ong, Roy, Watson, Shatkin, and others to respond to Healey’s (2013) call for greater attention to transnational planning processes outside the West. In particular, it explores the role of planning and real estate development in mediating these processes of transnational urbanization. The panel will consider a range of related questions: How are new development projects reshaping the built environment and forcing new conceptualizations of the urban? How have these new developments served both to enhance cooperation and to intensify rivalries, at times reinforcing territorial boundaries and at others undermining them?

Objectives:
- Deeper understanding of transnational urbanism in Southeast Asia

DID KOREAN AUTHORITARIAN REGIME ENHANCE COMMUNITY RESILIENCE OF RURAL VILLAGES?: MULTI-SCALE ASSESSMENT OF DEMOGRAPHIC AND ECOLOGICAL RESILIENCE
Abstract ID: 62
Individual Paper Submission

KIM, Chung Ho [Universtiy of Washington] charisut@uw.edu, presenting author

This paper examines whether the Korean New Village Movement (Saemaul Undong, New Rural Community Movement, or the KNVM) driven by the authoritarian regime of President Park, Chung-hee in the 1970s enhanced community resilience of rural villages. As a reaction to rapid Korean urbanization, the KNVM supported rural villages, transformed long-standing human settlements rapidly, and created social-ecological sudden changes of population and resource management. Given the historical context, I assess the community resilience of rural villages supported by the KNVM to rapid urbanization in two dimensions of demography and ecology, addressing the cross-scale and cross-sectoral interaction of the KNVM to population change and resource management change. I selected the two dimensions of demography and ecology in order to compare and contrast the KNVM’s historical impact on them.
The paper takes the following four steps: I clearly identify the mechanism of the KNVM and other central government plans in the 1970s such as the Korean Family Plan for population change and the Korean Reforestation for resource management change. I then create a variety of spatiotemporal patterns of demography and ecology, using a macro overview based on national-scale statistical data, a cross-scale analysis based on multi-scale spatiotemporal data, and a micro survey based on village-scale sample data. These demographic and ecological patterns explicitly show Korean population and resource management changes before / during / after the KNVM. Third, I conduct demographic and ecological resilience assessments of community resilience based on three main variables respectively (i.e., total population, age structure, and fertility for demographic assessment; forest growing stock, primary energy type, and foreign energy dependence for ecological assessment). During the assessment process using demographic and ecological resilience matrix, relevant concepts of resilience theory including adaptive cycle, panarchy, and regime shift are applied. Finally, I discuss short-term efficacy and long-term vulnerability of strong top-down implementations by the Korean Government such as the KNVM, the Korean Family Plan, and the Korean Reforestation, which is associated with a lack of diversity in development strategies including transformation of human settlements, population planning, and reforestation planning.

In conclusion, I discuss the following main findings: 1) The KNVM was an urban development in the rural sector rather than a rural development. The KNVM’s rapid and large-scale transformation created functional changes of rural villages in terms of human settlements, which was to value service and infrastructure of rural villages rather than shelter. As a result, the KNVM caused rural villages to fall into high urban dependence and lose existing self-sufficiency. 2) The KNVM’s social-ecological resilience assessments showed inconsistent results depending on temporal or spatial dimensions. More specifically, the KNVM was responsible for the short-term population mitigation of rapid urbanization, but the long-term urban-rural population polarization in terms of demographic resilience. Meanwhile, the KNVM contributed to the national-scale and local-scale reforestation, but the global-scale consequence of high foreign dependence of resource and energy in terms of ecological resilience.

Further, the paper reveals opportunities, achievements, consequences, and vulnerabilities of Korean modernization since 1962 which has faithfully followed the development strategy of Choose and Concentrate. Given scarce natural resources and weak economic base of South Korea, the government proactively chose and concentrated on main industries, core development areas, and even key figures, which led to a conglomerate-oriented, metropolitan-centered, and elite-led society. As a result, the strategy of Choose and Concentrate allowed for rapid and large-scale transformation of many aspects of society, which was not a minor improvement inside the system, but a major regime shift in the system or between systems. The main rationale was to increase efficiency by sacrificing diversity and lowering self-sufficiency. However, the lack of diversity and vulnerable self-sufficiency of social-ecological systems including built environments, resource management, human settlements, population, and forestry could lead to neither sustainable nor resilient communities in the long run.

References

Key Words:
Strong Top-down Implementation, Sustainable Rural Development, Social-Ecological Resilience, Cross-Scale and Cross-Sectoral Interaction

HOW PROFESSIONAL AND PUBLIC DOCUMENTS IMPACT EXPERT PERCEPTIONS OF CLIMATE CHANGE IMAGES
Abstract ID: 79
Individual Paper Submission

LAYCOCK, Katherine [University of Waterloo] katherine.laycock@gmail.com, presenting author
MITCHELL, Carrie [University of Waterloo] co-author

Do professional documents and public articles reflect the way climate change action experts interpret images within Metro Manila? I am not arguing for causation but, rather, association between the type of documents viewed and the way in which images are construed. To explore this, I specifically draw on communicative planning and new institutionalism to understand individual experiences and organization cultures in relation to such documents. My investigation begins with a brief literature review of communicative planning, new institutionalism, and the use of images in climate change action. Next, results from a content analysis of Philippines’ climate change and urban planning documents, produced between 2009—2016 and encompassing fact sheets, case studies, project briefs, guidelines, land use plans, reports, and technical papers acquired from local government units, private planners, civil society organizations/non-governmental organizations, and national agencies, is discussed. From here, I scrutinize media reports as a readily accessible form of public documentation. Newspaper articles from post-election periods since 2009 (June 30, 2010—January 1, 2011; June 30, 2013—January 1, 2014; and June 30, 2016—January 1, 2017) are reviewed to assess the cultural-political overtones of these periods and potential influence on climate change action experts. With this foundation in place, a comparative analysis of stakeholders’ interpretations of five climatically themed images, based on individual experiences, organizational cultures, and professional interactions, is presented. Three key findings emerged from this investigation. First, the degrees to which climate change experts critically interpret images, based on key words emerging during interviews, highlighted positive or negative aspects of the images. Second, the lengths of time climate change experts analyze images revealed a key connection to age. Third, the reactions of climate change experts to images, measured by the use of similar descriptions or impromptu, unsolicited explanations, exposed cultural-emotional associations to the images. There is a growing volume of research on how images can be interpreted and impact the opinions and actions of individuals, primarily community members; however, there is a gap in understanding how climate change action experts and decisions-makers perceive such images. My research will primarily add to the body of literature around communicative planning theory, particularly the way in which individual perceptions of documents are shaped by personal experiences and organizational cultures, a point also addressed by new institutionalism. This research hopes to bypass the, suggestions of therapeutic/restorative planning as a go-to solution for the shortfalls of communicative planning. Ultimately, my research is useful for planning scholarship and practice in that it could yield better appreciation of how stakeholders, who are required to interact in both urban
planning and climate change action, view images that are used frequently in this milieu. Such awareness can assist communication and collaboration among these decision-making groups and with the public, critical factors as societies deal with the ubiquitous issues of climate change.

References


Key Words: imagery, communicative planning, new institutionalism, urban planners, climate change action

MEXICO’S HOUSING PARADOX: THE POLITICAL ECONOMY OF INACCESSIBILITY AND VACANCY

Abstract ID: 83
Individual Paper Submission

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In 2010, the Mexican Census counted over five million vacant housing units nation-wide. Mexico’s 14 percent vacancy rate is the highest among current member countries of the Organization for Economic Co-operation and Development. Paradoxically, about a third of Mexicans lived in overcrowded or poor housing conditions that same year. This paper analyzes how policymaking at different levels has promoted housing production, access, and vacancy, and discusses some of the implications for residents, government and financing institutions, and developers. This research suggests that recent housing strategies have fostered unregulated and speculative development without effectively addressing the housing needs of the Mexican population. Furthermore, the coexistence of a housing oversupply and a shortage exposes the tension between two opposing Mexican housing policy goals – promoting economic development and securing the constitutional right to adequate housing – and the extent to which the former has trumped the latter.

In the 1990s, following the Washington Consensus, Mexican housing policy underwent a series of neoliberal reforms that sought to increase private sector participation in affordable housing production and limit the role of public institutions to finance and mortgage expansion. As a result of the North American Free Trade Agreement, financing schemes were introduced to expand construction lending as well. Parallel reforms also pushed for the relaxation of development regulations at the state and local levels. These policies drove a significant acceleration in housing production. Yet, housing finance – and
adequate housing – continue to be inaccessible to a significant proportion of the population, most notably very low-income, informal, and rural sectors. Meanwhile, a small group of private developers has reaped significant profits by building sprawling leapfrog housing developments that offer limited access to jobs and urban amenities, and for which local governments have struggled to provide adequate infrastructure and services. Some of these peripheral developments also contain important concentrations of vacant or abandoned housing. The problems associated to these housing development patterns have had wide-ranging affects, including impacts on housing finance institutions facing the deterioration and depreciation of their delinquent portfolio, and on the households who reside in remote or largely vacant housing developments with limited access to infrastructure and services, among other issues.

Drawing upon extensive field research and mixed methods data collection, this paper presents an analysis of the factors contributing to the production of high vacancy levels, as well as the implications for residents and government institutions. Research focused on cases in two states: Baja California and the state of Mexico, chosen for the severity of their problems with both vacancy and housing conditions, despite their contextual differences, such as the size of their municipalities and the institutional strength of their local governments, the presence (or lack thereof) of metropolitan institutions, and their economic conditions, among others. Baja California had the highest vacancy rate in 2010 (18.8 percent), the second highest share of households enduring poor housing conditions, and the fourth largest financing per capita for new housing construction from 2000 to 2010. Within this state, an important focus is also placed on Tijuana (20.3 percent vacancy rate), which has historically absorbed a majority of the state’s housing funds. The state of Mexico had the largest number of vacant housing units in the country in 2010 (11 percent of the national share), received the second largest amount of housing finance for new construction from 2000 to 2010 (9.2 percent of the national share), and had the third highest number of households enduring poor housing conditions. Within the state of Mexico, Huehuetoca (45 percent vacancy rate), which experienced rapid housing development in the 2000s and forms part of Mexico City’s metropolitan region, was selected for further local-level analysis. The methods used in this research include the content analysis of semi-structured interviews with public officials, housing developers, and civic groups, and of relevant government documents, policy reports, and public opinion sources; field visits to neighborhoods with particularly high vacancies; and spatial and statistical analyses.

References

Key Words:
housing finance policy, Mexico, housing vacancy

PRIVATE SECTOR ADAPTATION STRATEGIES IN BANGKOK’S HOUSING SECTOR
Abstract ID: 189
In 2011, Thailand experienced one of the country’s worst floods in history. More than two-thirds of the country was flooded for a period of 175 days, which killed 815 people in Thailand and neighbouring Cambodia, displaced over 13 million, and cost the country USD 46.5 billion in property damage (World Bank, 2012). While research on adaptation strategies to urban flooding in developing countries has increased significantly in recent years (see, for example, Lebel et al., 2011; Marks, 2015), there remains a dearth of information on how the private sector is adapting generally, and to flood risk specifically. This is particularly true for the Asian region. Moreover, we have limited knowledge regarding how private sector adaptation strategies intersect with existing public sector initiatives, particularly urban infrastructure systems. This paper aims to fill this gap through a case study on Bangkok, Thailand’s private housing sector.

Using data collected through interviews (n=23) and an analysis of media articles (n=924), we outline private sector adaptation strategies used by housing developers through the categories of protect, accommodate, or retreat (Bijisma et al., 1996). We then connect these results to existing literature on networked urban infrastructures and splintering urbanism (Graham and Marvin, 2001). Overall, we find that private sector adaptation strategies are catalyzing the fragmentation of urban housing stock in the Bangkok Metropolitan Region (BMR). We refer to this process as adaptation-induced urban fragmentation, which we define as the socio-spatial fragmentation of urban life resulting from autonomous and/or planned adaptation initiatives. We discuss the implications of this process in the context of our case study.

References

Key Words:
Private sector, Housing, Climate Change, Adaptation, Bangkok, Thailand

RAPID URBANIZATION AND THE NEED FOR SUSTAINABLE TRANSPORTATION POLICIES IN JAKARTA
Abstract ID: 205
Individual Paper Submission
Not only is Jakarta the largest metropolitan area in Southeast Asia, it is also one of the most dynamic, though beset with most of the urban problems experienced in twenty-first century Southeast Asia. Batavia, colonial capital of the Netherland Indies in the first half of the 20th century was a small urban area of approximately 150,000 residents. In the second half, Batavia became Jakarta, the 28 million megacity capital of independent Indonesia. Among many urban problems, one major problem plagued Jakarta in the last two decades is traffic congestions.

This paper will discuss the extent to which rapid urbanization in Jakarta has contributed to the need for sustainable transportation policies in Jakarta. The urbanization and suburbanization in the megacity of Jakarta will be discussed. The development and expansion of Bus Rapid Transit (TransJakarta busway system) and Mass Rapid Transit are documented and the services of public transportation including the Metromini and Kopaja minibuses, public minivans and the city buses are also critically analyzed.

The urbanization and suburbanization in Jakarta are strongly associated with the traffic congestion in Jakarta which is estimated to cost US$3 billion per year. The economy of Jakarta dominates its peripheral areas. In the daytime, the total population in Jakarta is much more than its population in the nighttime; the number of daily commuters in Jakarta is estimated 5.4 million. The level of services of public transportation in Jakarta is not reliable and accessible. People who live in the outskirts of Jakarta can save as much as 30% of their transportation costs using motorcycles to work rather than public transport.

The expansion of BRT and the development of MRT could be viable solutions to alleviate the acute traffic jams in Jakarta. Jakarta will need to implement other innovative sustainable transportation policies including carpool matching services, shuttle services, telecommuting and downzoning and better parking management in downtown areas. Jakarta also needs to encourage the development and usage of the smartphone apps on its two-way ability to locate, coordinate and orchestrate both passengers and vehicles and encourage more biking and walking for its residents.

References

Key Words:
Urbanization, Sustainable Transportation, Jakarta, Mass Rapid Transit, Traffic Congestions
DISPLACEMENT AND PLACE-MAKING IN THE MILLENNIUM CITY: THE POLITICS OF URBAN VILLAGES IN GURGAON, INDIA

Abstract ID: 273
Individual Paper Submission

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Popular narratives of Gurgaon, the “Millennium City”, focus on its meteoric rise from a rural backwater to a highly privatized, modern satellite town of Delhi. These narratives cast Gurgaon as a city of migrants, and emphasize a process of place-making on seemingly unclaimed territory. While Gurgaon’s urban villages, decoupled from their agricultural lands and livelihoods, remain unzoned pockets of underdevelopment in official master plans, they still serve an important role in the city. This research seeks to articulate that role by investigating how villagers have responded to various forms of displacement, and have adapted or retained their own spaces and claims to the city. Who are these communities and what is at stake for them? To what extent do they actively participate in the transformation and governance of their new urban realities?

Over the past few decades, migrants (affluent professionals and low income laborers) have come to outnumber the city’s original, rural inhabitants. This paper argues, however, that the significance and interconnectedness of urban villages/villagers with the political, social, and economic life of the city offers a more complex narrative of place than the Millennium city brand suggests.

The paper draws from recent scholarship on peri-urbanism as an economic and social phenomenon in Gurgaon’s villages (Narain 2015). Processes of land acquisition, displacement, and land use conversion, beginning in the 1960s, have proffered uneven benefits across villages within the district (Narain 2009). The urban village also illustrates processes of neoliberal accumulation and economic displacement (Harvey 2004). Furthermore, competing claims to citizenship pit landowners against new renters in the village, i.e. low income migrant workers, who would threaten the villager’s electoral majority and political authority (Cowan 2015).

The paper presents a further articulation of these phenomena by looking at the ways in which the village has changed, both physically and in terms of its socio-economic functions, but also remained critical to the governance and everyday life of the “formal” city beyond its confines. The fieldwork, conducted from 2015-2016, involved interviews and observation with roughly 50 participants across four of Gurgaon’s urban villages.

The paper begins with a brief history of Gurgaon’s urbanization and preexisting communities. This includes description of the lived realities of ancestral urban villagers, former agriculturalists turned landlords, as the city rose up and various forms of displacement (economic, spatial, cultural, institutional, political) occurred. Certain aspects of this transition, however, strain a notion of displacement as involuntary. Many villagers were easily persuaded to sell their lands and invest or partner with real estate developers and state government, profiting directly from the urbanization of Gurgaon.

Finally, the paper identifies two competing desires and forms of adaptation in the face of displacement. Many participants expressed a desire to embrace cultural assimilation, leave the village, and integrate into the modern “Millennium City” at large. Alternatively, there was also resistance and the desire to postpone this transition through political and spatial tactics (suppressing migrant vote banks) that keep electoral power in the hands of landowning villagers and the spaces of the village underdeveloped.
Although the panchayat (village council) system has been dismantled, many villagers have managed to retain power by moving into positions within the municipal ward structure, where they are able to exert influence over residents of Gurgaon beyond the urban village itself. The paper concludes with a consideration of whether such responses or adaptations might constitute new forms of place-making and a way of simultaneously retaining and integrating rural identities into a new Indian urban reality.

References

Key Words:
India, Displacement, Place-making, Urban Villages, Urbanization

PLANNING PERI-URBAN ASIA
Abstract ID: 318
Roundtable

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LEGATES, Richard [Tongji University] dlegates@sfsu.edu

This roundtable will help planning educators better conceptualize the peri-urbanization process and provide a forum for participants to share experience about how to plan for peri-urban areas. based on the Asian experience.

The roundtable will begin by 5 minute presentations by four participants: Chen Chen from Tongji University, Nick Smith from the National University of Singapore, Qin Bo from Renmin University of China, and Linyun Fan from Suzhou (China) University of Science and Technology (China) about peri-urbanization processes in places they have studied and the most promising planning interventions to help manage peri-urbanization that they know. The rest of the roundtable will consist of discussion among speakers and between the speakers and audience. Richard LeGates (United States) will close with a five minute summary of the roundtable.

Central themes.
The central themes of this roundtable are understanding the processes of economic, social and spatial change as rural areas on the urban fringe of Asian cities urbanize and how students, faculty, and practitioners can best apply the emerging body of theory and practice regarding how planners should plan for these areas.

Relevance to planning education, practice, and scholarship.
The topic of this roundtable is central to planning education, practice, and scholarship not only in Asia, but in South America, Africa, and other developing regions of the world. Peri-urban areas are the most rapidly growing and most dynamic areas in Asian city-regions. Nearly 200 million people are projected
to move into peri-urban areas in Asia in the next 15 years and the UN projects that by 2025 they will house 477 million people. These areas present both Asia’s greatest planning challenges and greatest opportunities. They are dynamic areas, offering developable land for industry and housing, and provide jobs and upward mobility for rural-urban migrants. Planned and managed well they can efficiently decongest core areas, integrate land use and transportation systems, distribute density intelligently, preserve open space and agricultural land, protect water supplies, and provide opportunity sites for new settlements. But many Asian peri-urban areas are characterized by sprawl, conflicting land use, poor infrastructure, pollution, disappearing agricultural land, injustice, and inequality. Many peri-urban jurisdictions are too weak or too corrupt to control the tsunami of change rolling over them. Jurisdiction-based plans don’t fit needs. Administrative divisions develop inconsistent plans and compete with each other if they plan at all.

Approach

The roundtable will focus on cutting edge issues such as how to define and map peri-urban areas using remote sensing, big data, and other new technologies, planning urban fringe land use regionally and across jurisdictions, new ways to mitigate air and water pollution, humane planning to meet migrants’ needs, and coordinated provision of infrastructure and social services. The roundtable will focus on action-oriented grounded theory and practical applied research. The Global Planning Educators Interest Group (GPEIG) and The International Association for China Planning (IACP) will publicize the roundtable and encourage their members to join it through their listserves. The organizers will also call the roundtable to the attention of 100 scholars from China and 50 from other countries who participated in a conference on peri-urbanization in Asia at Tongji University in May, 2017, some of who will attend ACSP.

References

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Key Words:
Urban planning, Peri-urban, Peri-urbanization, Urban fringe, Asia

WHAT DRIVES PERI-URBANIZATION IN SUBURBAN AREA OF CHINA’S MEGA-CITIES: THE CASE OF SUZHOU

Abstract ID: 319
Individual Paper Submission

CHEN, Chen [Tongji University] tjupchenchen@tongji.edu.cn, presenting author

Peri-urban areas are the most rapidly growing and most dynamic areas in Asian city-regions. Scholars and research institutions forecast that in the next 15 years, nearly 200 million people will move into peri-
urban areas in East Asian countries. According to the United Nations, the peri-urban areas in East Asian countries will accommodate 477 million people in 2025. China’s rapid urbanization has been accompanied by peri-urbanization in both population and spatial terms, and the peri-urban areas of China’s megacities are particularly important. Extant research documents the peri-urban area not only as the most dynamic and growing territories, but also the most problematic suffering from urban sprawl, environmental pollution, and social segregation. Many planners agree hold that spatial planning can mitigate peri-urban problems, however, the driving forces of peri-urbanization has significantly diversified during the last decade, and the extant scholarship on peri-urbanization has fallen behind the most up-to-date developments. This paper helps fill an important gap by describing what drives peri-urbanization in Suzhou, China and their innovative pilot program of integrated urban-rural development. Since 2003, China has been experimenting with top down coordinated urban-rural development policies (Cheng Xiang Tong Chou). China’s central government has encouraged some cities to experiment with coordinated urban-rural development and carrying out reforms. The stated purposes include creating more efficient and equitable urbanization that benefits both urban and rural areas by facilitating the movement of people, goods, capital and services and narrowing gaps in urban-rural income, public services, infrastructure, and productivity. Coordinated urban-rural development is intended to help rationalize physical land use in peri-urban and other developing areas, but it is much more than a physical design program. It is intended to fundamentally restructure economic and social relations between city and countryside to produce a more equitable and harmonious society. In 2008 Suzhou began experimenting with integrated urban-rural development (Cheng Xiang Yi Ti Hua), and was designated China’s National Pilot city-region for Integrated Urban Development in 2014. Since then, the local government and private sectors have invested and tremendously changed the peri-urban areas of Suzhou.

This research first maps Suzhou’s peri-urban areas in multiple dimensions, including spatial statistics of built-up patches, socio-economic statistics at the township level, and land use patterns. The research then documents their changing characteristics, and explores the driving forces that underpins these changes using a “government-market” analytic framework. The paper describes driving forces that promote peri-urbanization and how the spectrum of driving forces has varied during different stages of urban-rural development process. The findings help generate new theory about the peri-urbanization process in mega-cities, as well as informing efficient planning strategies, planning techniques and policy tools to manage urban-rural development in peri-urban area of Mega-cities in China and other Asian Developing countries.

References


Key Words:
This paper investigates tensions between international and local planning actors and local residents concerning how best to manage rapid urbanization in developing world cities. It does this through a case study of Ulaanbaatar, Mongolia, and focuses on the city’s ger districts, the site of numerous plans for large-scale urban transformation (Gotov, 2010). Ger districts are rapidly growing areas named for the felt tents that frequently house residents (Byambadorj et al., 2011). Ulaanbaatar serves as a useful case for understanding the tensions between international and local planning actors and residents because, like many other developing world cities, it is growing rapidly in spatial and population terms (World Bank, 2015) and is experiencing marked environmental and health challenges associated with this growth (Allen et al., 2013). Furthermore, many of the internationally supported plans for the city focus on issues of densification, which provides an opportunity to understand how densification strategies, premised on models developed in the Global North, play out in developing country contexts. As Dempsey et al. (2012, 136) state: “density and its potential impacts on the resident population are not fully understood by academics, practitioners, decision-makers or residents.” This is particularly true outside the United States and Europe.

The paper first looks at the competing perspectives of international and local planning organizations with respect to the spatial allocation of land and housing in Ulaanbaatar. It then looks at how plans for the city, and particularly those that are supported by international organizations and which advocate for densification, intersect with local residents’ perceptions of housing and land use. Interviews were first conducted with representatives of 18 international and Mongolian planning organizations. These interviews reveal that, while there is broad agreement concerning the city’s main challenges, there is also a lack of consensus about how best to tackle them. This has led to a proliferation of plans, in which local organizations’ perspectives are often given relatively little attention. Nonetheless, local government acts on particularly Mongolian perspectives on land use and housing, leading to a divergence between plans and action. We argue that this divide between international and local organizational actors perspectives on how best to approach planning is likely to further reduce the city’s ability to effectively cope with rapid urban growth. The study then interviewed 120 ger districts residents across central, middle and outer areas of the city. The results reveal migration patterns different from those typically reported, with the highest proportions of migrants and renters living in the central district. Interviewees generally held positive views of apartment living, while preferring low density land use. These preferences diverge starkly from those embodied in plans for the city, including the internationally-supported masterplan, which emphasize both high unit and land-use density. Residents’ views of density were strongly influenced by Mongolian attitudes to land and open space. The paper concludes by discussing the reasons for, and consequences of, residents’ and international policymakers’ different framings of urban density and the implications of these differences for the successful implementation of compact city plans in the developing world.
INFORMAL WATER SERVICE PROVIDERS: WATER ACCESS IN KIBERA INFORMAL SETTLEMENT IN NAIROBI, KENYA
Abstract ID: 366
Individual Paper Submission

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Water service provision remains one of the key roles of governments worldwide. In Nairobi, Kenya, more than 60% of the county’s population lives in informal settlements [1]. The informal settlements are characterized by infrastructural disorder - creating an obstacle to the provision of basic municipal services such as water, electricity, housing and sanitation. The resultant failure in municipal water service delivery has led to the propagation of Informal Water Service Providers (IWSPs). IWSPs govern pirated or existing water taps or wells to manage the delivery of water to residents. Absent or inefficient formality has paved the way for informal systems to govern water resource distribution.

This paper evaluates ten IWSPs operating in Kibera, an informal settlement home to around 450,000 residents in the southern part of Nairobi, Kenya. The study uses Participatory Urban Appraisal (PUA) with residents living in the 13 villages in Kibera to map the location and territory of operation of the IWSPs. Focused Group Discussions (FGDs) with the IWSP managers, the public consumers (identified as female heads of households), local youth leadership groups, and local non-governmental organization directors are then used to chart the efficacy of the ISWPs. Four components of each IWSP’s infrastructure are assessed: (1) available water source, (2) physical infrastructure (e.g., transmission, and storage, and any additional levels of treatment), (3) managerial capacity, and (4) government regulation and/or assistance. The paper refutes the hypothesis that IWSPs provide an efficient, coordinated and sustainable solution to the existing problem of water service delivery. The paper finds that households in Kibera pay almost four times the price for water and face greater frequencies of water shortage and outage than other households in Nairobi. The paper argues that rather than solely a cause of infrastructural weaknesses, these gaps in service are regularly induced by the IWSPs to artificially increase water prices. Vandalized water meters, perceived bribery of government officials to temporarily shut off services, and burst pipes that go unrepaired are a manifestation of the
technical, technological, human resource and policy breakdowns that permit IWSPs to maintain control over price and delivery of water in Kibera.

Nairobi Water and Sewerage Company (NWSC) is slated to install 1,000 new water taps within the Kibera settlement and a total of 9,180 taps in informal settlements throughout the county in the next five years in an attempt to fill identified water provision gaps[2]. If the current system of management continues, IWSPs will be highly likely to govern these new taps. This paper offers key insights into how the current management of water taps by IWSPs in Kibera results in a reduction in accessibility to potable water. A new structure of support for the community governance of water taps is needed to maximize the efficacy of water service in informal settlements in Nairobi and promote equitable resource delivery.

This study sits within a trend of cities throughout the global South that are increasingly characterized by a multiplicity of formal and informal provision mechanisms – configuring the city as a set of what Katherine Bakker calls ‘archipelagos’ forming “spatially separated but linked islands of networked supply [3].” In cities where the realization of modern infrastructure has been highly uneven, issues of access and equity are worsened by the “splintering urbanism” first identified by Stephen Graham and Simon Marvin in the early 2000s [4].

References


Key Words:
Informality, Africa, Water Access, Informal Settlements

TENURE FORMALIZATION AND LOCAL COMMUNITY LEADERSHIP IN MOSHI, TANZANIA

Abstract ID: 384
Individual Paper Submission

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The promotion of property titling and tenure formalization or regularization has now enjoyed several decades as the land policy of choice for international institutions and national governments across the globe. As such, there exist many studies that have examined the impact of property titling and tenure formalization on a whole range of social, economic, political, and even cultural outcomes. Nevertheless, these studies often do not examine the role of governance and leadership in implementing the programs they profess to evaluate. In fact, implementation is often treated as assumed or exogenous. However, in order to be successful, the implementation of tenure formalization and property titling programs requires effective and efficient organization and administration. As such, the success of such programs is contingent upon local leadership and effective and efficient preparation and implementation with a
strong level of public participation. The very localized context in which implementation occurs suggests that the geography of tenure formalization is quite variable.

This study examines the relationship between local governance and the implementation of a tenure formalization program. Specifically, we examine how individual responses to land regularization policies vary in response to neighborhood governance and oversight of their implementation. The study focuses on a number of neighborhoods in Moshi, Tanzania that took part in a property formalization program organized by the Sustainable Moshi program in 2008: Miembeni, Dhobi, and Kwa Komba. These neighborhoods differ in terms of organization and implementation of the tenure formalization process and the role of local community level leadership. Miembeni had strong leadership and community participation, while both Dhobi and Kwa Komba were weak in terms of both participation and leadership, and local leaders failed to enforce public right of ways or include community members in decision making. We employ a multi-method approach to explore these relationships. First, we utilize a household survey (a total of 485 completed surveys across all three neighborhoods). Second, we undertake an assessment of the title deed application records in order to ascertain which properties applied for title deed and which ultimately received them. Finally, we undertake walking visual assessment in order to map improvements and developments in the intervening time period. Based on these indicators, we find that there is a strong relationship between governance and longer term development impacts for both individual properties and neighborhoods.

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- Kurt Paulsen
- Gavin Shatkin
- Jeremy Nemeth

Key Words:
tenure formalization

PRIVATE DEVELOPERS AND PUBLIC POLICY: THE CASE OF MOROCCO'S HOUSING AND RESETTLEMENT POLICIES
Abstract ID: 393
Individual Paper Submission

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The rapid rate of urbanization continues to pressure governments around the world to provide housing and basic needs for the urban poor. In order to meet the rising demand, urban development and public housing projects must rely on alternative modes of financing and delivery. One such model is public-private partnerships (PPPs) which relies on the collaboration between private, public and sometimes non-profit sectors to execute a national scale vision (Moskalyk 2011). This paper presents a retrospective account of assessing the role of private developers in Morocco’s contemporary housing and resettlement policies.

On May 16th of 2003, fourteen suicide bombers from two large slums in Casablanca struck the city center, killing over thirty people. After this tragic event, slums were branded as a “breeding ground for radical Islamists” (Bogaert 2011). As a result, in 2004, the Moroccan government launched an ambitious
slum removal program: The Cities without Slums Initiative. The main goal was to “clear slums in 83 cities and urban centers by year 2012” (Al Omrane Group 2010). Previous (1980s) slum resettlement efforts in Morocco were ineffective due to a decrease in state financial engagement and an increase in housing market liberalization and reliance on the private sector (Bogaert 2011). Therefore, for the current resettlement effort the government sought to hold a stronger, more sustained role in implementing the resettlement policy (Bogaert 2011). However, since the program’s initiation, the government has been forced to rely more heavily on private developers as a result of limited funding and an increasing housing deficit.

The implementation of the Cities without Slums resettlement policy was further complicated when its trajectories were merged with those of The New Town Program. The New Town Program, which was also inaugurated in 2004, proposed 15 planned economic centers (AFD 2003). It was an effort to decentralize and decongest major urban centers by formally planning new urban clusters to house the growing middle class in proximity to major cities. Developments under the New Town Program, originally intended for higher social classes, now had to accommodate former slum dwellers as well in order to help meet the goals of the Cities without Slums Program.

Literature on reliance on PPPs as a public housing delivery strategy suggests that the level of success is dependent on implementation and operation. A key concern with PPPs is the rigidity of long-term contracts that span across unexpected ‘economic or situational challenges’—as was the case in Morocco following the 2008 financial crisis (Moskalyk 2011).

Even with this contractual rigidity, private developers play a crucial role in insuring accessibility to housing in a rapidly urbanizing world. As such, questioning the motivations of private developers in working with government urban policies will be instrumental to understanding how PPPs can become more flexible and adaptive to external social, economic and political challenges that may arise in parallel to policy implementation. Specifically, the case of Morocco’s housing policies raises a series of questions: How has the mixing of the two national housing programs affected private developers’ investment in government-led initiatives? What challenges have they faced? What adjustments (if any) have they made to their investment plans after the merging of the programs? And why (or whether) they are continuing to invest in the national government-led resettlement policy?

Utilizing qualitative fieldwork (to be conducted in the summer of 2017), this paper presents a snapshot of the role of private developers in the implementation of Morocco’s housing and resettlement initiatives. The paper analyzes the key motivations, challenges and adjustments that private developers have faced in assisting with the government’s task of housing a growing population. Findings will have direct implications for future planning in Morocco, but also provide lessons to be learned from the use of PPPs in the Middle East and African region and the developing world.

References


Key Words:
Morocco, rapid urbanization, housing, government policy, private-public partnerships

SETTLEMENT-LEVEL PRAGMATIC PLANNING FOR WATER IN NORTHWESTERN INDIA

Abstract ID: 445
Pre-Organized Session: Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions II – Equity and Participation

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This paper will explain how a semi-rural settlement of about 300 households, located about 50 miles from the city of Jaipur in the severely water-stressed region of Northwestern India, conceived and pursued formal arrangements and basic infrastructure projects such as dug ponds and irrigation trenches (or community plans in planners’ parlance) ensuring year-round water supply. Using three episodes of water planning from pre-colonial, colonial and postcolonial period as the backdrop, this paper will illustrate how an incremental approach using social intelligence and cultural understanding helped a local NGO gradually work out a practical rainwater collection and supply system meeting the diverse demands of households, farmers and herders in a sustainable manner. Underscoring how these common people used planning—largely without articulating it in formal terms—this paper will reemphasize the importance of social learning highlighting why scholars should look to the ways in which communities make plans to bridge the political challenge between economic competition and social cooperation in practical ways.

The empirical work for this paper comes from a mix method approach including archival research, an in-depth, semi-structured and open-ended interview with the head of the concerned NGO lasting more than four hours, and the firsthand experience of visiting the project sites during the yearlong sabbatical in AY 2015-16. Two insights shape the findings. First, the flexible and incremental process through which the ostensibly uneducated and marginalized village community made community-centered plans to organize year-round water supply and second, the significance of a pragmatic approach for making better development plans.

References

Key Words:
UNDERSTANDING THE COMPLEXITIES OF URBAN SANITATION IN INDIA

Abstract ID: 446
Pre-Organized Session: Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions II – Equity and Participation

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At the deadline for meeting the Millennium Development Goals (MDGs), 2.1 billion people gained access to improved sanitation and 95 countries were able to meet the MDG sanitation target. However, 2.4 billion still lacked improved sanitation facilities (WHO-JMP, 2015). India is among those countries where the problem of open defecation stubbornly persists. Despite ample evidence to indicate the association of improved sanitation with direct and indirect health benefits, and non-health related ones such as less time spent queuing up at shared sanitation facilities or walking to a site for open defecation, access to sanitation has lagged behind drinking water supply. The Swachh Bharat Abhiyan (Clean India Mission) launched by the Prime Minister in 2014 was a clarion call to address the sanitation crisis by making India open-defecation-free by 2019. The National Urban Sanitation Policy (NUSP) calls for the preparation of state and city sanitation plans with the goal to “transform urban India into community-driven, totally sanitized, healthy and livable cities and towns” (NUSP, p.7) spawning a potpourri of sewerage projects. In keeping with a decentralized, demand-driven approach, such projects seek to engage low-income communities disproportionately affected by inadequate access to sanitation. However, propelling sanitation uptake among the urban poor remains daunting.

A growing body of scholarly work on urban sanitation has delineated factors related to sanitation uptake in low-income settlements where affordability is a thorny issue (McGranahan, 2015; Das, 2015; McFarlane et al., 2014). A few studies have looked at the nexus between tenure security and urban sanitation (see, for instance, Scott et al., 2013). Some have suggested broadening the definition of access, shifting focus from toilets to the wastewater cycle to help address environmental and public health challenges, which is particularly salient in dense urban settings (Wankhade, 2015). To draw attention to the deep deficits in sanitation services in smaller Indian cities, we seek to provide a nuanced understanding of factors that influence a household’s toilet ownership and its use of a sanitation facility versus open defecation. Despite decades of government spending on the construction of toilets, demand for toilet use remains weak in rural settings (Coffey et al., 2014). In this regard, the Community-Led Total Sanitation (CLTS) program in rural India, premised on igniting change in sanitation behavior, has seen some success through collective action by community members, bolstered by institutional support (Prabhakaran et al., 2016). The question we explore in this paper is: what influences sanitation uptake by the urban poor? Drawing on household survey data (n=622) from 13 low-income settlements in smaller Indian cities, we attempt to disentangle some of the complexities of sanitation uptake. Our findings underscore the importance of viewing sanitation as a continuum of services (facility to fecal sludge management), in addition to inducing behavioral change so that subsidies and incentives are not misplaced. They are instructive for addressing the global sanitation challenge and India’s urban sanitation policy.

References


Key Words: sanitation, urban, toilet, water supply, India

COMMUNITY-BASED PARTICIPATORY RESEARCH TO IMPROVE WATER GOVERNANCE SYSTEMS: EVIDENCE FROM THREE LOCATIONS IN NORTHERN UGANDA

Abstract ID: 447
Pre-Organized Session: Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions II – Equity and Participation

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As Rouse (2013) states, no water governance system is without flaws, too often serious ones, and all governance systems can benefit from improved structures and processes of decision making and participatory deliberation. There is a growing list of examples whereby incremental changes to existing water governance systems are being driven by local, everyday realities. These emerging examples are built from the ground up in ways that move beyond an instrumental understanding of participation and toward more dynamic systems accessible in meaningful ways by both state and non-state actors. However, there remain important questions about how these improved institutional structures are created, how they function, and how they might be facilitated for greater levels of local responsiveness moving forward.

At the same time that there are these examples of dynamic institutional evolution, there is a growing call among development practitioners, academics and action researchers for greater improvement and engagement with institutions and governance systems using Community-Based Participatory Research (CBPR) techniques. The CBPR approach seeks to: 1) center the analysis of governance, service provision, or any other system on everyday local experiences, knowledge, and values; 2) provide decision makers with community-embedded alternatives for intervention; 3) foster critical reflection by communities on issues of local importance and possibilities for transformative change. CBPR was once the domain of public health, but is now an emerging set of techniques used to elicit community preferences in built and social environments (Nykiforuk 2011) and to locally evaluate national water policies (Keremane and McKay 2011) among other uses.
This paper seeks to explore the potential for CBPR to improve water governance systems through critical community reflection in three locations in Northern Uganda. The University of Oklahoma has initiated a water systems based CBPR with local communities and this paper will reflect on the outcomes and processes of the program. The program was initiated in June of 2016 whereby faculty and students engage in-depth with community groups predominantly comprised of women. CBPR techniques such as Photovoice, problem identification, and concept mapping were utilized whereby local community members engaged in critical reflection to dissect the everyday challenges of water collection, conservation, use, and disposal. Community members worked with researchers to create a grass-roots localized model of water provision and governance with priorities for improvement and institutional adjustment.

This paper is essentially a case study of a community engagement process and presents examples of the complex data that can emerge from CBPR as well as critical reflection on its limitations. There is a growing need for this kind of work in places like Northern Uganda. It is generally recognized that in both rural and urban areas Uganda has seen significant improvement in recent years in its overall coverage of safe water provision (Naiga, et al. 2015; Kayaga 2009; Mugisha and Berg 2009). Still, there are significant gaps in coverage and serious problems with existing systems (O’Meally 2011). In particular it is observed that existing community management systems are largely based on dominant western ideologies leaving disappointing results particularly regarding the maintenance and operation of community systems (Van Den Broek and Brown 2015; Naiga, et al, 2015). Further, there is an acknowledgement that the existing systems as they are described in formal laws and statutes are highly disconnected from the realities on the ground (Terry, et al 2015; Rwakakamba 2009).

It is in these scenarios where a CBPR approach could help model the everyday reality of water provision and set local priorities for institutional adjustment through critical community reflection. The goals of this paper are to present findings related to how the community groups model local water provision systems and their priorities for change while also evaluating the project as a model for fostering improvement in local water governance.

References


Key Words:
Social movements in the Global South have deployed a human right to water framework to demand access to water and sanitation services since the 1980s. Gleick (1998) helped popularize the normative concept, arguing that access to basic water services is implicitly and explicitly upheld by international agreements and state practice. But alleged advances in the right to water often have limited impact because they take the form of abstract legal principles. They can also be used to push for the corporatization of the sector (Bakker 2007). Acey (2017) calls for a hybrid governance approach that reconsiders the role of third party duty-bearers as a practical, measurable intervention. In recent years, the human right to water framework has been used by local activists in the Global North. This paper asks, how does use of a human right to water framework in the United States challenge the “myth of the universal access to water” (Wescoat, Headington, and Theobald 2007)? And what practical, measurable interventions are necessary to realize this right?

This paper examines right to water struggles in Detroit, Michigan and California’s San Joaquin Valley. It finds that both movements activated a politics of transnational solidarity with human right to water movements in the Global South through the invocation of linked histories of oppression. Moreover, in the case of Detroit, the lack of access to water was associated to a larger set of regressive urban policy and investment. Conversely, the movement for the right to water in the San Joaquin Valley critiqued longstanding under-development in some of the state’s most marginalized rural communities. This paper demonstrates how these distinct contextual accounts prompt a reconsideration of what constitutes “access” to water and offers policy interventions to realize the right to water and sanitation in the Global North.

References
Pre-Organized Session: Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions I - Planning and Management

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Food and water are part of an interconnected nexus. Nowhere is this more apparent than in the arid desert region of New Mexico: Doña Ana County. Surface water resources were brought to the county through a large irrigation project [Rio Grande Project] in efforts to vitalize agricultural fortunes in the early 1900’s. Agricultural production has been an economic driver in the county ever since. However more recently, burgeoning development and population growth, against a backdrop of decreasing water resources due to prolonged drought is pushing agrarianism out from its traditional stronghold in the county. In this paper, the researcher investigates how planning in Doña Ana navigates the challenges of promoting development and supporting its agrarian heritage in a region affected by severe drought.

Water is central to development and economic growth, just as it is to agrarian futures. In Doña Ana new development not only increases municipal and industrial water use, but also requires the relinquishing of surface water rights; rights held by farmers and ranchers, to offset the new groundwater use (Ward, Booker, and Michelsen 2006). In many cases these offsets also take the form of land acquisition – displacing land from agriculture as water is diverted for municipal use (Folk-Williams 1991). In a county that is still very much rooted in its agrarian history, a reprioritization of preferred forms of economic growth is taking shape – pitting agrarian and development futures against each other. As drought cycles become more prevalent affecting water availability, the tension between agrarianism and development is bound to come to a head. How local governments respond to these tensions will be critical to the land uses that are enhanced and the community values prioritized (Li, Liu, Zhang and Zheng 2009).

In this study, the researcher investigates the implications of “water blind” planning in an agrarian community where water scarcity is the norm using a pragmatic epistemology implemented through a mixed methods research design. Data for the project was collected via semi-structured interviews with twenty two water managers, ten farmers and fifteen local government representatives recruited via purposive and snowballing sampling techniques. Interviews were conducted in person and over the phone over an 18 month period. Policy and planning documents related to the research questions were also reviewed and analyzed.

The county and city governments play a key role in attracting economic development to the region but remain outsiders in water planning in a changing climate (Wilson 2006). As the climate changes, bringing with it more competition and stress for limited water resources, planners and public institutions have a responsibility to act to protect people and livelihoods – including agrarian livelihoods. Greater understanding of connections between urban development and agrarian viability can facilitate a more fruitful dialogue between agrarian and urban stakeholders in charting a common vision for the future.

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Key Words:
Climate Change, Food and Water nexus, Land use planning, Water resources, Development

SPRAWLING CITIES AND SPLINTERED NETWORKS: RELATIONSHIPS BETWEEN URBAN FORM AND WATER SERVICE QUALITY AND EQUITY IN BRAZIL.
Abstract ID: 451
Group Submission:
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Many contend that the ideal of universal access to centralized, treated, piped water infrastructure for all domestic water needs is near-impossible in many rapidly growing cities in the Global South due to the disparity between cost and ability to pay (Whittington, Hanemann, Sadoff, & Jeuland, 2007). The water and sanitation sector is also quite siloed in its outlook, with a focus on organizational, management, and technical reforms (World Bank, 2012). However, in the Global South, the way places urbanize and globalize may have more to do with water services outcomes than anything a water utility manager would have direct control over.

This paper examines the relationship between two aspects of urban water supply that are often ignored in the quantitative water literature: urban form, and the spatial pace of urbanization. In the land use planning literature, there is a widely repeated claim that network infrastructure costs are exacerbated by sprawling urban forms (e.g. Fulton, Preuss, Dodds, Absetz, & Hirsch, 2013). Transferring this logic to the Global South, where urban infrastructure services are far from universal has strong implications for equity. In a commercialist paradigm where access to piped water is conditioned by willingness to pay for the costs of service, more sprawled urban forms with costlier infrastructure should drive less equitable access to water and sanitation.

In this paper, I investigate the extent to which sprawling urbanization contributes to poor service outcomes, and in particular inequitable service coverage for the poor. I choose to analyze cities in Brazil. Brazil affords a good opportunity to study this relationship because: (1) Brazil underwent a rapid expansion of water and sanitation services concurrently with urbanization recently, and thus there exists wide spatial and temporal heterogeneity in urban forms and water service coverage; (2) Brazil has census population count data available for very small spatial units of aggregation since 1980, allowing for the construction of a panel of urban form measures; (3) Brazil has census household micro-data available at the municipality level for the same period, allowing for the construction of a panel of dependent variables for water and sanitation access by very detailed cross-strata of households such as income, race, and housing quality; (4) Brazil has municipal level operational and financial data for water and sanitation utilities going back to 1995, allowing for a spatialization of water and sanitation infrastructure costs.
My empirical strategy is to measure urban form over time according to several metrics related to network infrastructure coverage requirements, and to relate these measures in a panel framework to water utility cost structures and to water and sanitation service coverage rates for various population subgroups. However, urban form and water service coverage are probably endogenous for several reasons. For example, cities with better water service coverage might attract more people, affecting development patterns. Also, cities with higher performing water utilities and more proactive planning departments might extend water infrastructure as a way to guide development, affecting urban form (Feler & Henderson, 2011). Thus, I will employ an instrumental variables strategy to predict population distributions within a given urban area based on geological factors such as soil type, slope, and water features that affect development density in that particular area but not water service indicators for the whole city. This will allow me to make a causal inference on the impact of the variation in urban form attributable to quasi-random geographic factors on water and sanitation outcomes. If I find a statistically significant and policy-relevant effect size, this would lend a strong argument for more compact land use planning in rapidly urbanizing contexts in the Global South.

References

Key Words:
Urban Sprawl, Spatial infrastructure costs, Water utilities, Sanitation utilities

A SOCIAL-ECOLOGICAL FRAMEWORK FOR UNDERSTANDING THE DYNAMICS OF WASTEWATER IN HAWAII
Abstract ID: 452
Pre-Organized Session: Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions I - Planning and Management

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This talk discusses the social-ecological dynamics of sewage using Hawaii as a case study, and presents a social-ecological framework to support decision-making for treatment and management alternatives. In Hawaii, anthropogenic nutrient pollution comes from a variety of sources including groundwater injection from wastewater treatment plants and private onsite wastewater disposal systems. Wastewater contains a cocktail of pollutants including pathogens, nitrogen, metals, and endocrine disrupters presenting serious threats to tropical marine waters, human health, and coral ecosystems (Yoshioka et al. 2016; Wear et al. 2015; Fleisher et al. 2010). Hawaii’s complex hydro-geology and oceanographic conditions complicates decision-makers’ ability to propose optimal solutions that are economical and
sustainable. The governance context further challenges policy-making in a space with often competing environmental, social, and economic objectives, and management outcomes that are uncertain (Spirandelli, 2015; Wood et al. 2015).

Hawaii is the only US state that has not outlawed cesspools – a concrete-lined hole that requires regular pumping, and the cheapest solution for household sewage disposal. Efforts to mandate upgrades have been met with fierce opposition from legislators, who cite the cost and regressive impact on poor households. Similarly, community groups successfully stopped the injection of treated wastewater from a plant into groundwater due to observed changes in coral cover. There are approximately 80,000 cesspools in Hawaii; over half of these are on the island of Hawaii, located across urban-rural environments, some in high densities, close to the water table and with little to no soil layer. Coastal communities in Hawaii represent a wide demographic spectrum differing along social, economic and cultural characteristics. These communities also rely on a diversity of coral reef ecosystem services to support their quality of life, basic livelihood, and food security.

In this talk I ask: (1) How do alternative wastewater technologies and management practices impact coastal water quality and coral reefs? (2) How do social, economic and cultural drivers influence wastewater management decisions? And (3) How do Hawaiian communities value coastal ecosystems and their services? I present a framework to address these questions by examining the social and ecological dynamics of wastewater management that operate at multiple scales (Ma et al. 2015). Drawing on studies in Hawaii and nationally from the ecological, engineering, and social sciences, I discuss the spectrum of wastewater treatment options, synthesize the literature on the economic, environmental, human health, and governance trade-offs associated with alternative solutions. I summarize knowledge about how communities rely on coastal ecosystem services. Drawing on household behavioral studies, I speculate about factors that may influence sewage management choices. I hypothesize that the ‘optimal’ management solution may be more complex than a simple least cost technological fix, and may differ among communities depending upon their perceptions of sewage, the effect on coral reefs, and value placed on associated ecosystem services. I present a modeling and participatory approach to test this hypothesis and to better understand the interactions between social and ecological systems that control and mediate the environmental and human well-being outcomes of sewage treatment options.

References

Key Words: wastewater, coastal management, sustainable land use planning, social-ecological systems
PLANNING FOR INFORMALITY: THE CASE OF DELHI'S DRAIN-ADJACENT 'SLUMS'

Abstract ID: 453
Pre-Organized Session: Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions I - Planning and Management

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BACKGROUND
A million people live in 89 'informal' settlements ('slums', colloquially JJC - jhuggi jhopdi clusters) along uncovered stormwater drains (nullahs) in Delhi. Nullahs carry improperly discharged waste into the Yamuna river. The waste disposal and treatment infrastructure built to tackle this problem is inaccessible to JJC's despite the dependence of the formal city on informal economies and informal settlements housing those working informally. For JJC's, infrastructure provided in a top-down manner is inadequate or inaccessible (Desai et al 2015), upgradation only benefits non-poor informal settlements (Zimmer 2012), and resettlement results in people returning to JJC's (Bhan & Shivanand 2013). Improper waste discharge into nullahs has made JJC's prone to "nuisance"-based evictions (Ghertner 2015), and while community-managed decentralized wastewater treatment systems (DEWATS) have reduced nuisance in individual slums, these have not yet been scaled up (Das & Takahashi 2009).

I use the case of Delhi's nullah-adjacent JJC's to explain why and how we need to plan for the 'informal' in megacities like Delhi where the informal city grows inextricably with the formal city, but is left unplanned.

QUESTIONS & METHODS
Why should we plan for informality? Unless formal infrastructure provision is complete, adequate, accessible, and frequent, slums have to discard waste into systems like open-access nullahs. Evidence for this comes from field observations, semi-structured interviews with 70 JJC inhabitants, land cover mapping, and testing nullah water quality from upstream to downstream, for 10 field sites (nullah-adjacent JJC's).

How should we plan for informality? Given the need for scholarship on scaled-up decentralized infrastructure for slums I describe a project expanding DEWATS from one JJC to my field sites, and analyze how their institutional framework addresses deficiencies in infrastructure provision. I also interview officials from 7 municipal/regulatory agencies to assess the roles of municipal agencies and planners.

RESULTS
Tests of nullah water quality reveal that nuisance occurs upstream of the JJC's, flowing down from poorly regulated land uses like dairies, malls, railway yards, and small-scale industrial areas- identified using land cover data. Interviews reveal that the relatively smaller contribution to nuisance by JJC's- as improper waste disposal and open defecation- occurs due to institutional deficiencies causing inadequate, inaccessible, infrequent or incomplete service provision. This is the result of 'regulatory overlap'- derived from the term regulatory commons- wherein multiple municipal agencies have same spatial jurisdictions but different functional jurisdictions. One form is underregulation- lack of service provision because agencies are unclear, misinformed, or not accountable for providing services to collect, treat, or dispose waste. Another form is overregulation- agency behaviors conflict each other so they keep transferring "nuisance" from one space to another. For instance, Delhi Urban Shelter Improvement Board installs and manages latrines in slums, but disposes the waste collected into nullahs.
for lack of community bins or waste pickup—under the purview of Municipal Corporation of Delhi (MCD). Delhi Jal Bard cleans those nullahs to remedy flooding issues, only to throw this waste into public areas, which must be cleaned by MCD.

In community-based DEWATS, preliminary findings are that the NGO dialogues with JJC inhabitants on waste collection and disposal, facilitates the creation of an agency representing the JJC within Delhi's participatory governance framework, formalizes the interactions between this JJC and various municipal agencies, and constructs and monitors a DEWATS system managed by the community. Thus, the NGO achieves: (1) self-organization for heterogeneous JJC communities, (2) information sharing and deliberation on JJC by regulatory agencies, (3) O&M of installed infrastructure, and (4) altering of improper disposal behaviour. But this role must be taken on by city planners to achieve scale with 89 JJCs, and because the institutional framework must include regulation of upstream land uses.

SIGNIFICANCE
I destabilize evictions predicated on nuisance by demonstrating that the major causes of nuisance are upstream 'formal' land uses, and regulatory overlap. I also demonstrate that since the unplanned, informal city causes nuisance due to a lack of formal infrastructure, planning for informality with decentralization, can prevent this nuisance.

References

Key Words:
urban informality, nuisance-based evictions, environmental planning, sanitation and waste management, decentralization

VALUING PRO-POOR SANITATION IN KENYAN CITIES
Abstract ID: 454
Pre-Organized Session Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions III – Valuation of Services

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This paper presents findings from a study on the prevalent attitudes and willingness to pay for a sanitation surcharge that would support the recurrent costs of providing sanitation services in low-income areas of Kenyan cities. Over 2.4 billion people lack access to adequate sanitation according to the 2016 WHO/UNICEF JMP. In the face of persistent and inadequate efforts of governments to close the sanitation gap, the focus of neoliberal transnational policy reforms has been to decentralize and
privatize infrastructure in the name of improved efficiency and financial performance of centralized water and sewerage (Bakker, 2007; Sager, 2011). Ongoing global debates that started in the 1990s over the commodification of water or cost recovery and pricing missed the point that neither model alone has proven to be better at extending water services to the urban poor (Budds and McGranahan, 2003). Scholars point to governance failure as the real problem (Bakker et al., 2008; Bakker, 2010). Unanswered questions remain about contested struggles, rights and everyday practices associated with the co-production of services in urban areas serviced by a mix of piped and non-piped water and sewerage (Loftus, 2009; Swyngedouw, 2009).

A central challenge in implementing pro-poor strategies is the preference for centralized sewage systems among local authorities. Water and sanitation provision in Kenya’s largest cities mirrors the pattern found in urban areas across the developing world, where in-home water and sewerage connections are provided to wealthy households in the city center who use more, while poor and less affluent rely on alternative water and sanitation services. Most of the literature on pro-poor reforms in the sector focuses on the promises and pitfalls of private sector participation (Bakker 2007, Komives 2001). However, current data from the Private Participation in Infrastructure (PPI) Database shows that Africa, as a region, has received the least amount of private investment in the sector, challenging the intense focus of public vs. private debates. More research is needed on potential pro-poor water and sanitation provision in cities where utilities are not undergoing private sector reform. What are the incentives (e.g. financial, affordability) and constraints (e.g. service areas, tenure status) facing utilities in extending safe, adequate, affordable sanitation services to low-income neighborhoods? Especially when the vast majority of poor households in developing countries pay exorbitant costs for onsite sanitation, a service seen as a private good and responsibility, despite the enormous negative public health externalities (Tremolet et al. 2010). To what extent could high-quality onsite services be subsidized? Attitudes towards higher taxes and fees for public services are shaped by several factors, including poor service delivery and recurring payments to non-state providers, distrust of government, perceptions of fairness and concern about inequitable impacts on individuals or groups (Ali et al. 2014). Research also shows that framing, heuristics, and labels affect the psychology of choice, taxation and public finance (Tversky and Kahneman 1981).

Sanitation surcharges as a financing mechanism have been implemented with varying degrees of success in various African cities, including “pro-poor” surcharges in Lusaka and Ouagadougou. Findings from this paper come from a larger study to evaluate current willingness-to-pay (WTP) for pro-poor sanitation surcharges in Kenyan cities and identify the factors that could determine support. Specifically, this paper draws on interviews with 40 households and 30 stakeholders, and a contingent valuation survey of 400 households in the Kenyan cities Nakuru, Ruiru, and Juja. Findings demonstrate the link between trust (the amount of confidence that customers have in government institutions and actions, broadly, and in the governance mechanisms for the sanitation surcharge, specifically) and willingness to pay, with implications for designing subsidy schemes for pro-poor interventions.

References

Key Words:
pro-poor policies, water and sanitation governance, willingness to pay, human rights, Africa

ASSESSING THE PERFORMANCE OF ALTERNATIVE WATER AND SANITATION TARIFFS: THE CASE OF NAIROBI.
Abstract ID: 455
Pre-O rganized Session Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions III – Valuation of Services

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Policy makers and utility managers can use a variety of tariff structures to calculate customers’ bills for water and sanitation services, ranging from a simple fixed monthly fee to complicated multipart tariffs with seasonal pricing based on metered water use. Faced with such a wide range of options, what water tariff should policy makers use? Further, once they have decided on a particular tariff structure, how should they set water prices? Economists and development practitioners have debated these questions for decades. However, the issue of pricing municipal water and sanitation services has renewed import given the aspiration of the Sustainable Development Goals (SDGs) to ensure universal access to safely managed water and sanitation services as well as the challenges posed by climate change. Indeed, utilities’ ability to make the investments required to increase their resilience to extreme weather events and changing patterns of temperature and precipitation will largely be determined by their financial viability and stability (Nauges and Whittington 2017).

Despite the wide range of tariff options available to policy makers and utility managers, the increasing block tariff (IBT) is among the most widely applied tariffs across the globe, particularly in low and middle-income countries. In this paper, we develop a framework for simulating the performance of water and sanitation tariffs with respect to several policy-relevant indicators. We then apply this framework to the case of Nairobi, Kenya, a rapidly growing city with conditions similar to that of many large cities in low and middle-income countries. In particular, we examine the performance of five alternative tariff structures relative to the current tariff implemented by Nairobi City Water and Sewer Company (NCWSC) at three different levels of cost recovery. We then evaluate the performance of alternative tariffs relative to several indicators of tariff performance, including: the overall quantity of water sold (i.e., conservation), the magnitude of the total subsidy delivered through the tariff, subsidy incidence, and overall changes in social welfare. We also examine how the tariff alternatives perform under uncertainty about consumer behavior (e.g., the extent to which customers respond to changes in price and income). To accomplish this, we develop a dynamic tariff simulation model using a complete set of billing records from NCWSC.

Contrary to conventional wisdom, we find that tariff alternatives with a uniform volumetric price outperform increasing block tariff alternatives across nearly all policy-relevant metrics of tariff performance. These findings hold at the three levels of cost recovery we consider and are robust to a wide range of assumptions about consumer behavior. This finding stands in stark contrast to the widespread use of IBTs in low and middle-income countries and to current perceptions of best practice
in tariff design. Additionally, we find that the size of the lifeline block and the number of blocks in the IBT tariff alternatives does not affect the relative performance of the IBT tariff alternatives in a policy-relevant manner. Finally, our simulations underscore the benefits of getting utilities on a path to improved cost recovery. This will be essential to ensuring governments have the resources to invest in climate resilient infrastructure and meet the Sustainable Development Goals’ aspiration of ensuring universal access to safely managed water and sanitation services.

References

Key Words:
water and sanitation, infrastructure planning, water pricing

TROUBLES WITH TRASH: RISK AND DECISION MAKING IN EAST AFRICAN INFORMAL SETTLEMENTS

Abstract ID: 456
Pre-Organized Session Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions III – Valuation of Services

WERNSTEDT, Kris [Virginia Tech] krisw@vt.edu, presenting author

In the largest urban area in East Africa, Dar es Salaam, Tanzania, informal settlements—unplanned neighborhoods that currently house 70 percent of the city’s population—face a sustainability challenge. While the city provides infrastructure services such as solid waste collection, water and sanitary services, and electricity to millions of its residents, de facto access in many informal settlements is limited due to an inability to pay, poor infrastructure quality, insecure land tenure, and poor governance. As a striking example in one realm, less than 50 percent of the city’s household solid waste goes to its landfill, leaving 2,000+ tons of waste per day to illegal disposal and trash scattered in open spaces and stream courses. This has yielded ground- and surface-water contamination, a higher frequency and magnitude of local flooding, ecosystem damage, and a degraded residential quality-of-life. It also has created potential breeding habitat or transmission conduits for malaria, cholera, dengue, lymphatic filariasis, typhoid, and other diseases that threaten public health (Cheng and Urpelainen 2015).

We investigate innovative urban solid waste management practices to improve the quality of life in Dar’s informal settlements. Our study 1) centers theoretically on decision-making under uncertainty and the use of heuristics or rules of thumb to make decisions (Kahneman, Slovic, and Tversky 1982); and 2) frames solid waste sustainability as a behavioral matter. We hypothesize that culturally-specific risk perceptions shape attitudes toward and actions to address solid waste problems, and that household-level behavior is amenable to low-cost incentives and “nudges” (Thaler and Sunstein 2008) that don’t rely on
sophisticated governance.

Our work draws on interviews (n = 60) and surveys (n = 500) conducted in four informal settlements in Dar, where we have focused on alternative payment mechanisms for solid waste collection and household-level source separation opportunities. In these surveys, we employ choice experiments (Louviere, Hensher, and Swait 2000) to estimate the importance that households place on different elements of solid waste management. We also test some simple decision heuristics from the literature (e.g., herd effects, prospect theory, availability heuristic).

Our research is motivated by the universal recognition that sub-Saharan Africa needs massive investments in infrastructure, $90 billion annually by one highly cited estimate (Foster and Briceño-Garmendia 2010). While international foreign assistance to address this shortfall has increased markedly in the last five years, infrastructure investments in informal settlements likely will continue to lag their population growth and spatial expansion. Low or negative financial returns from infrastructure provision in these settings holds limited attraction for foreign direct investment. In addition, even in parts of sub-Saharan Africa experiencing economic growth, most of this has been jobless, leaving many residents of informal settlements unable or unwilling to prioritize environmental dimensions of sustainability at the expense of economic needs. In such a limited resource environment, an approach stressing behavioral measures with low-financial requirements may offer a resilient, politically viable path toward providing urban environmental services more equitably to a wider cross section of the population.

References


Key Words:
solid waste, decision heuristics, informal settlements, source separation, East Africa

MARKET PREMIUMS FOR (DIFFERENT KINDS OF) PIPED WATER CONNECTIONS: A META-ANALYSIS OF THE HEDONIC METHOD AND AN EMPIRICAL STUDY IN KATHMANDU, NEPAL

Abstract ID: 457

Pre-Organized Session Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions III – Valuation of Services

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This paper uses the hedonic property model to study the value of piped water connections and their characteristics in developing countries. The hedonic method has been used widely in valuing environmental (dis)amenities such as air quality, noise, landfills, etc. It has also been used to derive monetary values of water infrastructure to give local policy makers reliable estimates of benefits obtained by households in order to better achieve both efficiency and equity goals of water service provision [Anselin et al., 2008]. However, variations in service levels, water quality, and reliability have not been a central focus of these studies [Komives, 2003]. As a result, this study hopes to make two contributions to the literature, first with a systematic literature review and then an empirical application that focuses on the characteristics of water supply.

This paper contributes the first systematic literature review and meta-analysis of the hedonic valuation of water infrastructure in developing countries. I address the diversity of market premiums found in the literature (the significance and magnitude of coefficients on water access) and hope to be able to explain the differences in market premiums found by these papers [Smith & Pattanayak, 2002]. Some studies find that households are willing to pay significant portions of their income or higher prices for homes with private water connections [Suparman, Folmer, and Oud, 2016]. Others fail to find a significant relationship between having a private water connection and the price of the home [Simiyu, Swilling, Rheingans, and Cairncross, 2017]. Explanatory variables to be used will include how access to water is measured (as a simple dummy variable or if other characteristics are considered, such as availability, type of management), water access levels within the area, if the paper focuses on water supply, sample size, functional form of choice, and study design.

Second, I hypothesize that variation in water access’s significant capitalization in the housing market is related to how access to water is measured. While most papers already found use a simple dummy variable, there is variation in the level of service and quality of piped water across cities in developing countries. I further test this hypothesis using household data collected in Kathmandu, Nepal in 2014. I will then compare hedonic models in which I use different variables to capture characteristics about the piped water supply: (1) a dummy variable for access to a private piped water connection, (2) water availability, (3) perceived water quality characteristics, and (4) distance to the closest functioning water treatment plant (as a proxy for both water availability and quality). I hope to apply the best econometric practices used by other authors and to try other methods.

Through the meta-analysis and the subsequent empirical application, I hope to build more robust estimates of the market premium of different kinds of piped water supply. Additionally, I hope to contribute to building best practices for conducting hedonic valuation studies of water supply in developing countries, which will give policy makers a more accurate policy instrument.

References


Key Words: water supply planning, urban water, non-market valuation, hedonic model, meta-analysis

**URBAN HEALTH AND SANITATION PROVISION IN LATIN AMERICA**

Abstract ID: 458
Pre-Organized Session: Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions IV – Stakeholders and Outcomes

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Providing sanitation for low-income dwellers is a central topic for planners interested in minimizing the effects of climate change in cities from the Global South. As explained by Friel et al. (2011), there is a correlation between climate change and incidence of infectious diseases in segregated urban areas. Moreover, the rural-urban migration due to climate change impacts the already fragile urban sanitation infrastructure. In summary “climate change will likely exacerbate already existing urban social inequities and health risks, thereby exacerbating existing urban health inequities” (p. 886). Within this context, there is a need to better understand how sanitation-related projects are being implemented in sustainable and successful ways in the Global South. Research on this topic already exist, for example, for India and Pakistan (McGranahan and Mitlin, 2016). The objective of this paper is to identify and examine five sustainable and successful implemented sanitary sewerage projects in Latin America urban areas. First, based on an extensive literature review, this type of project will be identified. Secondary data analysis will be used as part of the methodology, and therefore, only the projects that are very well-documented will be included in details in the narrative. Even though the selected projects can be community driven, public sector driven, and/or based on public private partnerships, McGranahan’s framework of collective action, coproduction, affordability, and housing tenure (2015) will be adapted and applied for each case study. The ultimate goal of this paper is to understand, in the Latin American context, what is working concerning sanitary sewerage projects for low-income dwellers. It is expected that the findings of this study will generate questions for new research about urban health, such as: is it possible to scale one of these case studies up?

References

Key Words: sanitation, Latin America, implementation process
THE POWER OF PROXIMATE PEERS: PRACTICAL LEARNING AND TEACHING AMONG WATER AND SANITATION OPERATORS IN ARGENTINA AND BRAZIL

Abstract ID: 459
Pre-Organized Session: Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions IV – Stakeholders and Outcomes

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Though Latin America receives much scholarly attention for the challenges accompanying its experiences with private sector participation in the water and sanitation sector in several countries, the region is also celebrated for gains achieved in improving water and sanitation access levels over the past fifteen years. Narratives explaining the achievement of such improvements typically relay accounts of efforts made by several different stakeholders to effect change, including non-government organizations, informal vendors, utilities, governments, regulators, and international development organizations. Rarely, however, does the literature adequately describe the detailed operational changes that actors involved in shaping water and sanitation delivery undertake on an everyday basis. In this paper, we address this gap by exploring the operational impacts of a partnership between two water and sanitation operators in South America. Specifically, we ask how an international knowledge exchange platform fostered by UN-Habitat among water and sanitation utilities (namely the Global Water Operators’ Partnership Alliance) supports operational improvements toward reducing the proportion of the population unserved by water and sanitation services. Based on key stakeholder interviews with the utilities in Argentina and Brazil, we describe in detail the micro-level types of learning and knowledge levels fostered through a Water Operator Partnership established between utilities in Salta (Argentina) and Brasília (Brazil). Our study shows how capacity building among these proximate peers directly translated into operational improvements and institutional change for both operators. We argue that the nature of partnerships between proximate peers – one of “similar enough” contexts – enables a productively recognizable generation of factual, conceptual, procedural, and metacognitive knowledge among both utilities. We conclude that the power of proximate peer partnerships to effect institutional change and foster improvements in water systems operations elicits greater attention as a mode of improving upon traditional development partnerships and planning that seek to universalize best practices.

References
SUSTAINING SUCCESS? REVISITING BANGALORE’S PROGRAM TO CONNECT THE POOR TO THE CITY’S PIPED WATER SYSTEM, TEN YEARS LATER.

Abstract ID: 460
Pre-Organized Session: Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions IV – Stakeholders and Outcomes

TEWARI, Meenu [UNC Chapel Hill] mtewari@email.unc.edu, presenting author

Innovations are often tested in the form of pilots. Scaling up happens later, if at all; but a central challenge surrounding development projects is maintaining good performance over time, long after the klieg lights of early success have faded and the funders have left. How and under what conditions can early project success be sustained and maintained over time? This paper revisits a highly successful water project in Bangalore city that connected the poor to piped supply, ten years later to see what remained of the initial success, what was working and why, what was not working and why not. Did some places and pilots do better than others in maintaining project performance over time? What lessons can we draw about implementation from a comparison of infrastructure cases where success was sustained with those where it was not.

Context
Starting in 2002 the Bangalore Water Supply and Sewerage Board (BWSSB) launched an ambitious program of connecting all low-income settlements in the city to piped running water. By 2005, BWSSB’s Social Development Unit (SDU) had connected nearly 46 slums to paid, metered, city water systems. A majority of the wards where these projects were located were able to collect user charges and stem non-revenue water losses significantly. I returned to these projects in 2013 focusing on a paired comparison of two of the original pilot settlements (and visited a few of the others) to examine how the projects had performed over time. Through detailed interviews with the settlers, local water boards, BWSSB officials, local non-profits working in the water sector and a number of street level bureaucrats, I found that one of the projects had continued to operate successfully: receiving water, paying user charges and actively maintaining and operating the system while the other had not.

Methodology
Controlling for the same city, a similar political economy and meta-level organizational structure, as well as project design and technology provided an important opportunity to analyze what factors accounted for better performance in one case and not the other. I draw on 22 detailed face to face semi-structured interviews 2 focus groups, analysis of data obtained from BWSSB and local sub-stations to understand what specific factors – institutional, political and micro-regional that explained differential performance including the role of agency.

Findings
The central findings of the paper are that the factors underlying the successful initial implementation of a pilot are very different from the factors that help sustain it over time. Project planners tried to
institutionalize in form, but not in spirit, aspects they believed accounted for the initial success of the launch. Though these arrangements have sustained, they were not the ones that were key to dealing with unforeseen problems that arose over the life of the project. When longer run success demanded political inventiveness and an ability to adapt. Second, attention to the boundaries of a pilot – i.e., the ways in which it relates to the excluded adjacencies -- is as important as the details of the project’s internal design and organization for how it unfolds over time.

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Key Words:
Urban water, good governance, street level bureaucrats, global south, implementation

EXPERIMENTALISM IN POST-SOCIALIST WATER GOVERNANCE: THE PROMISE OF HAVANA, CUBA
Abstract ID: 461
Pre-Organized Session: Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions IV – Stakeholders and Outcomes

GALLAGHER, Daniel [Massachusetts Institute of Technology] dgv@mit.edu, presenting author

This paper examines contemporary water governance challenges facing Cuba’s capital, Havana, and its extended urban territory. Cuba’s authorities expect to embrace (or brace for) an inflow of capital investment in a political economic context of liberalization, while demand for water across the island has exploded. In Havana, where water supplies are already insufficient for a growing urban population—often providing water just two hours per day—the threat of diminishing water supplies in light of climate change brings new urgency to questions of water governance. Cuba’s authorities have planned and taken several measures to improve water management while accounting for a changing climate, notably by forming the public-private operator Aguas de la Habana with the Spanish corporation Aguas de Barcelona in 2000. More recently and at a scale impacting the entire island’s territory, a new national law (Ley de las Aguas Terrestres) promises to radically alter regulations around urban water management.

Events in Cuba complicate the discursive dualism battled out at the global level between, on the one hand, repackaged neoliberal reforms, and on the other, campaigns that urge remunicipalization. Governance innovations in Cuba suggest that the nation is charting a path that is neither fully antagonistic nor acquiescent to the controversial notion of water as commodity, but pragmatic and informed by an array of experiments elsewhere in Latin America with neoliberal water governance that led to violent confrontations and negative social outcomes. In this paper, I review the recent actions of the Cuban state in planning for a safe and reliable supply for Havana’s residents and explore the extent to which the Cuban model might provide an alternative to the orthodoxy of water governance prescribed
by international water planning experts. What I tentatively characterize as “post-socialist water governance” in Havana could offer timely lessons to other cities and nations seeking socially inclusive and equitable water governance under a changing climate.

References


Key Words:
water, governance, cuba, privatization, political ecology

MUDDLED WATERS: UNRAVELING PUBLIC-PRIVATE RELATIONS IN MIXED-OWNERSHIP WATER & SANITATION COMPANIES IN BRAZIL

Abstract ID: 515
Pre-Orgarized Session: Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions IV – Stakeholders and Outcomes

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Policy and academic circles have dedicated much attention to the relative merits of public versus private ownership or control over water and sanitation services (Budds and McGranahan 2003; Bakker 2010). Yet, utility ownership arrangements in which public and private capital are intermixed remain underexplored (Vining, Boardman, and Moore 2014). This paper addresses this gap by examining variation in mixed-ownership arrangements in water and sanitation companies. Through a comparative analysis of two-large scale utilities in Brazil, Copasa and Sanepar, I discuss the management and performance of these utilities before and after the change to mixed-ownership models, and draw on in-depth interviews and document analysis to unravel public-private interactions in each case over time.

Conventional views position mixed models as either the best of two worlds, where public and private actors discipline one another, or a two-headed monster afflicted by competing interests (Eckel and Vining 1985; Pargendler, Musacchio, and Lazzarini 2013). Instead, my analysis suggests that neither of these pictures accurately captures the on-the-ground dynamics of public-private interactions. I argue that the repercussions of the entanglement of public and private capital in utility ownership need to be contextualized within historically-specific political configurations. While the change to mixed-ownership increases pressures to augment profits and extend services primarily to lucrative areas, governments play important roles as modulators for highlighting or mitigating tendencies to prioritize profits, to emphasize social objectives, or to balance both. As public-private collaboration increasingly becomes the norm in the water and sanitation sector, this analysis contributes a more contextual and grounded understanding of how public-private interactions translate into services provided.

References


Key Words:
Water, Sanitation, Utilities, Mixed-Ownership, Privatization

NATIVE ASPIRATIONS & FOREIGN PLANS: A HAITIAN PLANNING HERSTORY OF THE LONG-TERM SOCIOCULTURAL IMPACTS IN DISASTER RECOVERY EFFORTS

Abstract ID: 551
Individual Paper Submission

JOSEPH, Sophonie Milande [Columbia University] smj2140@columbia.edu, presenting author

Oral storytelling is at the heart of Haitian traditional culture and planning practice (Sandercock 2003). I tell an insurgent planning herstory of the evolution of the Côte Sud Initiative (CSI) from the bottom-up perspective of rural residents, particularly women, of the intervention's target region. One year after a devastating 7.0 earthquake, CSI was announced as a new 20-year sustainable development initiative in Haiti's South Department. In 2011, I lived and worked as a UN consultant all along the Haitian southern coast. I collected baseline ethnographic, questionnaire and document data prior to CSI's full launch to ostensibly inform program design and implementation. In 2012, after the program had been up and running I returned for a shorter, follow-up visit and data collection stint. On October 4, 2016 Haiti's Southern region was struck by a category five hurricane, the strongest such storm in over 50 years. At least 842 people were killed and over 1.4 million made homeless. In 2017, I returned to live and work in the region collecting survey and ethnographic data to assess the long-term sociocultural impacts in disaster recovery efforts. The longitudinal, mixed-methods data collected indicates a dismal picture of the contributions of top-down, interventions despite foreign plans' mantra to inclusively, build back better and native aspirations for their homeland's environmental and economic restoration.

Consequently, the findings from this analysis of the CSI planning story demonstrates that foreign plans' tensions with native aspirations have led to detrimental planning outcomes for impoverished, monolingual, Black Haitians (Nasir & Volait 2003). Local elites, such as urbanistes trained abroad, selectively import and culturally translate mobile urbanism policies (Umemoto 2001). As an aid-dependent country, the negotiated imposition of external planning traditions is also led by the international development apparatus (Ward 2000). Such transnational flows of planning ideas and practices are in need of critical analysis of origin stories, traveling histories, cultural translation experiences and localization that this narrative analysis provides (Healey 2013). To conclude, I present
planning and policy recommendations gleaned from my field research experience in an attempt to improve development planning practice in Haiti specifically and in the Global South generally.

References


Key Words:
cultural translation, policy mobilities, transnational flows, negotiated imposition, environmental disaster planning

MITIGATION FOR RURAL COMMUNITIES: CASE OF FLASH FLOODING IN THE HIMALAYAS, INDIA

Abstract ID: 564
Individual Paper Submission

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Post-disaster relocation and rebuilding efforts are oftentimes spearheaded by government agencies rather hastily, to meet the urgent demands of displaced disaster survivors. Consequently, the process of building back better and instituting mitigation strategies ignore survivors’ livelihood needs and preferences thus subjecting them to even more hardships (Arlikatti and Andrew 2016). It is well recognized that the absence of planning for disaster recovery leads to poor post disaster reconstruction and rebuilding operations and an increase in community vulnerability to future events (Schwab et al.1998; Zhang and Peacock 2009). Hence there is a growing recognition among scholars that adhoc top-down post disaster reconstruction policies for rebuilding and relocation are likely to fail if they do not integrate the preferences of disaster survivors (Sapat and Esnard 2016). This study analyzes the protective actions preferences of survivors from rural communities living in the Himalayan region of North India to relocate or rebuild stronger following the flash flooding in 2013.

On June 16-17, 2013 heavy rainfall in the Himalayan State of Uttarakhand, India triggered a devastating flash flood and subsequent landslides. Termed as the Himalayan Tsunami it resulted in the deaths of over 5,748 and affected 4200 villages, caused the loss of 11,091 livestock and complete damage to 2513 houses. More than nine million people were affected in five worst impacted districts of the state. Prior to the flash flood, the Indian Meteorological Division had reported that the state had already received 400% more rainfall than during an average year and temperatures were abnormally high. Glacial melting and increased Himalayan runoff further inundated dammed lakes and swollen rivers, following which a
cloudburst in Uttarakhand resulted in breaches in dammed lakes in the region, subsequently causing devastating flash floods and landslides.

316 residents from 17 villages in the Uttarkashi district were interviewed using a semi-structured questionnaire framed to measure demographic characteristics, flash flood risk perception, prior flash flood hazard experience, evacuation experience, damage to home, and intended mitigation action measures against future threats. Analysis of responses revealed that survivor’s preference to either relocate or rebuild in-situ (same location as their damaged home) were not mutually exclusive. While 36.71% were willing to relocate permanently, about 48% of the survivors preferred not to relocate indicating that flash survivors would rather continue to live in the same villages despite the threat. However, 90% of those not wanting to relocate did express that they wanted their homes and communities to be built back better (stronger and safer standards), indicating a heightened sense of risk. A majority of the survivors were also willing to be proactive with their emergency planning with over 53% to 61% willing to participate in discussions with neighbors and village leaders, and create a family or village emergency plan.

One way ANOVA indicated the location of these communities in the mountainous region affected the risk perception and the choice to relocate after the flooding and landslides. The risk perception was higher in groups that were located in higher altitudes than those at lower altitudes because they were hit by the flash floods first due to glacial melting and cloud burst originating at high elevations with no lead time to either look for environmental cues or receive warnings to take protective actions. Not surprisingly, respondents from these high risk villages indicated a preference to relocate more than those from the midlands and lowlands. These results indicate that a one size fits all government mitigation policies in mountainous regions would fail. It is important to understand varying perceptions of risk related to threats, village locations, topography, distance from the river, and socio-economic and cultural ties expressed in people’s needs to relocate or rebuild. Additionally, efforts to build back better should be survivor-centric and provide not only technical assistance but encourage the use of local knowledge and indigenous construction practices (Arlikatti and Andrew, 2016). This study thus underscores the importance of receiving inputs from disaster survivors when making rebuilding plans.

References


Key Words:
Mitigation, Relocation, Building back better, Flash floods, India
THE RESTRUCTURING OF URBAN SPACE FOR TOURISM IN POST-REVOLUTIONARY BATUMI, GEORGIA

Abstract ID: 565
Individual Paper Submission

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This paper explores the urban transformations that took place in the coastal Black Sea city of Batumi, Georgia after the country’s peaceful 2003 ‘Rose Revolution’. The post-revolutionary UNM Government undertook an aggressive campaign of urban regeneration tied to state building that included much demolition and new construction across the country’s major cities. The transformation of Batumi in particular became a personal project of President Mikheil Saakashvili, who aimed to turn the city into the Black Sea’s foremost tourist destination through spectacular attractions, whimsical monuments, and new waterfront sites for leisure. The city’s waterfront edge, along its boulevard promenade and in its northern district of ‘Miracle Park’ was filled with elaborate new architecture, including five-star hotels with casinos, intended to attract greater quantities of foreign tourists. Many of the city’s existing famous monuments, buildings, and historic statuary were removed, replaced, or relocated at the time as part of the urban renewal process. As a result of these transformations, a number of the city’s districts and public gathering places took on new characteristics and shifted in the ways that they served the local population.

This paper will examine the social and political impacts of the urban restructuring of Batumi for tourism and explore how these impacts relate to the country’s broader challenges of post-revolutionary nation building. As such, Batumi is used as a representative case study to understand the type of urban transformations currently underway across many post-socialist countries in the name of tourism development. The analysis is based on key informant interviews, field observations, and public surveys carried out in 2016/17. The results show that new monuments and attractions erected across Batumi surprisingly contain little to no direct cultural or socio-political significance to local Georgians. These sites do not commemorate national figures or key historic events, and some are replicas of famous attractions found in foreign countries, including fountains copied from Italy and Turkey, as well as whimsical references to ancient Greek mythological figures. Collectively, these new attractions target a tourist audience coming to experience a sense of oddity, spectacle, and escape in the city. From the personal narratives of residents, state agents, and visitors to the city, it was possible to obtain a sense of how these groups are coming to understand the new architecture and monuments, and their role in transforming the spaces of the city, as well as how the use of public space has been adapted as a result of these transformations.

This inquiry into how urban space can be restructured for tourism during state building represents a crucial area of research, as core questions related to local belonging and collective identity are ultimately as fundamental to the successful development of a nation state as are its economic structures. Indeed, misguided campaigns of tourism promotion can lead directly to the counter-productive exacerbation of local tensions in the early stages of civic society transformation. While the introduction of a tourism sector might provide financial prosperity to newly-emerging states and may even offer reinforcement of some national state imagery through symbolism, the specific impact of market demands on urban space requires further assessment in order to better understand the socio-political ripple-effects.

This paper aims to contribute to an increasing body of academic work investigating how the public spaces and civic monuments of post-socialist cities are being transformed after national independence and in the face of continued periods of political unrest and revolution.
The adoption of the Sustainable Development Goals (SDGs) in 2015 and subsequent approval of the Paris Agreement and the New Urban Agenda were intended to signal broad global commitment to sustainable development and to provide interlocking and supportive platforms for action. Although the initial focus was at the policy level, attention has been turning to how the SDGs and other agreements will be implemented and which actors should be involved. The UN Secretary General’s 2014 Report on the SDGs states that “many of the investments to achieve the sustainable development goals will take place at the subnational level and be led by local authorities.” The High Level Panel on the Post-2015 agenda claimed that the battle for sustainable development will be lost or won in cities. Despite such statements, the specific roles that urban governments can and should play and the capacities and resources they require have been given limited consideration.

The role of urban governments as key players in sustainable development was a primary focus of Habitat III and the New Urban Agenda. Wealthier countries—and increasingly developing countries—rely on cities for major public functions and investments that promote job creation. Developing countries, however, often suffer from basic public infrastructure and service deficiencies that constrain sustainable development and poverty reduction. Demands will only intensify. Global population growth—from around 7 to more than 9 billion by 2050, will be largely absorbed by urban areas, with urbanization rates nearing 85% in industrialized and 64% in developing countries.

Addressing these gaps will require enormous planning and investment in the coming decades, much of it in sectors for which urban governments do or could have substantial responsibility. Many SDGs encompass multiple elements that must be acted on collectively in specific territorial jurisdictions.
Urban governments need to be key players in formulating and executing integrated development plans that meet the particular needs of their constituents. Urban governments can also address high-profile and consequential global resource challenges and constraints—climate change, energy shortages, health crises, financial instability, etc.—through, for example, climate adaptation policies, green growth strategies, and improved local resource mobilization, among others.

Unfortunately, the urban areas expected to assume these burdens often suffer from major deficits in empowerment, governance and finance. In many developing countries, national governments have yet to develop and adopt intergovernmental frameworks that adequately empower, fund, incentivize and support urban governments and their citizens. Cities often have not adopted measures they could take independently even facing of constraints imposed by national governments. Political economy realities underlie many of these weaknesses, so that careful analysis of their nature and effects is needed to determine how reform-minded actors might deal with them.

Monitoring the SDGs and the New Urban Agenda has already begun. In 2018, the 9th World Urban Forum and the High Level Political Forum, the SDG monitoring agency, will focus on localization in reviewing SDGs 6 (Water), 7 (Energy), 11 (Cities), 12 (Sustainable Consumption) and 15 (life on land). Considering a number of timely questions can to help inform these processes and generate an agenda for needed research.

- What are the most pressing issues in urban governance and finance that need more attention from planners?
- What types of reforms and innovations are being pursued and what allows them work in often challenging environments?
- How are major international agencies documenting and trying to address these challenges?
- How are shifts in global political and economic conditions likely to affect the debates?
- How can planning academics and practitioners contribute to the research and action needed to improve governance and finance for more effective urban planning?

This panel brings together planning academics and practitioners from major development organizations who have been thinking about and 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.

References


Key Words:
The objective of this paper is to analyze the cross-border mobility planning process at the U.S.-Mexico border. The focus of the article will be exclusively on the planning process of infrastructure projects that facilitate international crossings, either pedestrian, passenger vehicles or trucks, from Mexico to the US and vice versa. The main question I attempt to answer is: What can we learn from two projects that a priori one of them has performed better than the other in terms of transaction costs?

Two border crossings are used in this paper as case studies to illustrate the complexity and challenges that planners face, and must take into consideration, while engaged in crossborder mobility planning. The first case study is the Crosborder Xpress (CBX) skywalk bridge built in the Tijuana, Baja California-San Diego, California region. The second case study is the Tornillo-Guadalupe International Bridge (TGIB) that connects the eastern-most side of Ciudad Juarez, Chihuahua and El Paso, Texas. Planning cross-border mobility infrastructure such bridges or Ports of Entry in the U.S.-Mexico border is a complex and lengthy process that can take 10 to 15 years in average. The first case study is a Public Private Partnership (PPP) and a priori an example of a mobility project that can be considered as a planning success relatively speaking, since it took only six years to get completed from the moment that the approval was granted (August 2010) until its opening in April 2016. The second case study is an example of an attempt of a PPP failure that the public sector in Mexico reluctantly had to overtake; the planning process took about 11 years to get completed from the moment of the approval (March 2005) to the grand opening in February 2016.

The hypothesis that I put to test is that the success of the planning process of a crossborder mobility infrastructure project is related to realistic demand forecasts for the use of the facility and the potential for making it sustainable (cost-recovery) or even profitable. In other words, when latent profits or benefits exist there are incentives by all the stakeholders to expedite the planning process; thus, public-private partnerships (PPP) are more likely to emerge and succeed. This hypothesis is derived based on Flyvbjerg, Bruzelius and Rothengatter (2003), who argue that poor outcomes or planning failures in mega infrastructure projects are due to the fact of the existence of structural problems of inaccurate forecasts which always overestimate benefits and demand and underestimate costs and risks.

Methodology
I used a multiple case study methodology to compare two projects in terms of the planning process. Marshall and Rossman (1999: 61) argue that case studies are an appropriate qualitative methodology when the researcher is focusing on organizations or programs and “this entails immersion in the setting and rests on both the researcher’s and the participants’ world view.” Furthermore, according to Yin (2009:2) case study methodology allows us to compare different unit of analysis across cases in order to draw conclusions in regards to questions that are related when our questions deal with “how” and “why”, the investigator has no control of the events and when “the focus is on contemporary phenomenon within a real-life context” in order to draw strong conclusions. I will look at and compare
stakeholders’ engagement with the visioning of the project (stage I); the permitting process to get presidential approval for a facility across the international border (stage II); the design of the facility (stage III); the construction (IV); operation and management (Stage V).

The two projects are in operation and the user demand outcomes are completely different. The CBX project in Tijuana-San Diego area in the first year had 1.3 million users and it is underway to achieve its forecasted demand. The other project has been underperforming in terms of the demand users, particularly of trucks crossings; there are in average around 20 trucks crossing per month which is way lower compared to the forecast and capacity; revenues are way lower compared to the expected revenue.

References

Key Words:
U.S.-Mexico border, cross-border planning, border mobility, cross-border cooperation, planning processes

GOVERNANCE OF THE URBAN POOR: TRANSFORMATION OF THE INFORMAL SETTLEMENTS OF ANKARA, TURKEY
Abstract ID: 622
Individual Paper Submission

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The turn of the millennium marked a radical shift in the governance of urban land and housing markets in Turkey. Today, urban transformation projects (UTP) continue to be implemented with vigour and are the main instrument of the state for the transformation from a populist to a neo-liberal era. Furthermore, large scale UTPs have been the primary mechanism for the incorporation of areas, such as the informal settlements (known as gecekondus) which had not been completely commodified into the burgeoning neoliberal system. By analysing the UTPs implemented in the specific case of two informal settlements in Ankara, this study explores the primary rational behind the transformation efforts, their socio-economic consequences and the nature of the grassroots resistance to the new urban governance. The transformations taking place today in two informal settlements, the 50.Yıl and Besikkaya neighbourhoods of Ankara, showcase the evolutionary changes in the governance of urban housing markets in Ankara from a populist to a neoliberal ideology. The research questions in this study were framed as follows: What are the motivations behind UTPs and what are the outcomes of such transformation projects? Is there change in the urban fabric, social space, and governance of the poor? Is a new kind of citizenship emerging? What is the level of justice in Ankara for the urban poor? The year 2015 marked the beginning of the rollout neoliberalism in Turkey, with the establishment of an
associated legal framework and a restructuring of the tools of implementation. Urban land is now used as a method of capital accumulation, with a particular emphasis on the under-commodified areas like gecekondu lands. The Ankara Metropolitan Municipality demolished 17,000 gecekondu buildings which were either abandoned or under disaster risk and was planning to demolish 30 thousand more gecekondu in 2016. According to Brown (2006), neoliberalism as a rationality has the power to de-democratize. The overarching question to be addressed then becomes: Have the rights of the gecekondu dwellers really been de-democratised by the move from populism to neoliberalism?

The current research is based on field work conducted in both the Besikkaya and 50. Yil neighbourhoods between May 2014 and September 2016. In-depth interviews were conducted with 20 residents from each neighbourhood. In addition, municipal officials, local reeves, police officials and small-scale developers in both areas were interviewed. Finally, an analysis of the municipality redevelopment plans and plane notes as well as other documentary materials, such as municipal surveys and statistical data obtained by the municipalities during the preparation of redevelopment plans, was performed. Photographic documentation and participatory photographic studies performed by the residents themselves were also conducted in both settlements.

The analysis indicated that the UTPs are initially motivated by the objective of upgrading the physical and socio-economic conditions of the areas. However, rather than improving the existing living conditions of the inhabitants, their scope remains limited to the spatial and demographic changes, resulting dispossession and displacement. The study also reinforced the notion that the tenure structure of the areas plays a critical role in the determination of not only the UTP implementation process but also the shape and form or lack of grass roots resistance to the transformation projects.

The objective of this work is to contribute to the body of knowledge of urban planning and policy development in such a way that it provides an in-depth understanding of the nature of urban transformation and its connectedness to the political, social and economic dynamics of the localities. This is particularly important for policy-makers in developing countries where urban transformations should be considered beyond the overly simplistic framework of legalization and property ownership.

References


Key Words:
Urban transformation, neo-liberal urban governance, informal settlements
THE ROLE OF MICRO-ENTREPRENEURSHIP IN EMERGING LAND MARKETS: A CASE STUDY OF RENTAL MARKETS IN HAVANA, CUBA

Abstract ID: 653
Individual Paper Submission

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In November 2, 2011, the Government of Cuba enacted a law allowing its citizens to buy, sell, and rent property. As part of these reforms, the Cuban Government has established distinct rental markets: (1) short term and long term rental markets for Cuban citizens; and (2) short term rental markets for foreigners. This has resulted in an increase in the number of microentrepreneurs (cuentapropistas) that rent units to Cuban nationals or foreign tourists. The combination of real estate market liberalization policies and the formalization of cuentapropistas is viewed by the Cuban government as a means to address the dual goals of creating more wealth and capital and increasing the housing stock for its citizens (Ritter & Henken, 2014). To gain further insight into how these goals could be working in tandem, it is important to discern how these changes in property rights affect both renters and new landlords in the form of cuentapropistas.

This research project will use Havana as a case study to answer the following questions: (1) How does the recent emergence of entrepreneurial activity hinder or foster access to affordable housing for its citizens? and (2) How does the underlying institutional context foster or hinder individual landlords (microentrepreneurs) to enter the housing rental market?

Research on the housing markets in transitioning economies shows that clear but informal social rules allowed real-estate markets to behave rationally, even if it didn’t have the Western-style property rights present (Kim, 2007). The benefits stemming from the formalization of tenure, however, does not reach everybody equally; access to information or financial resources remain important linkages. Research on the social capital of entrepreneurs in the Global South show that entries to newly created markets are hindered by “institutional voids”, or absence of formal actors that link individuals to needed resources, and results in inequities across gender and income level (Mair & Marti, 2009). In these situations, actors depend on informal transactions with other actors that can provide the necessary “bridging” to access information or resources.

In Cuba’s case, the consequence of imposing two distinct rental submarkets is that they can affect each other. Differential pricing between short-term rentals to foreigners and long-term rentals to Cuban nationals can lead to market segmentation (Wu & Sharma, 2012), which could result in short-term rentals crowding-out affordable long-term rentals for citizens. At the same time, informal social ties used to compensate for institutional voids can reproduce unequal opportunities for market entry. If so, this would imply that the recent housing policies in Cuba inhibit the State from achieving more equitable outcomes for its citizens, for both its renters and potential microentrepreneurs.

The purpose of this research project is to provide some insight into how overlapping policies related to property regularization and the formalization of entrepreneurial activity affect each other. This will be achieved by: (1) Analyzing the association between the housing market and the emerging entrepreneurial activities in the form of short and long-term rentals; and (2) Identifying and analyzing the interactions between actors involved in the rental markets and the underlying social networks that are relevant for these dynamics.

Using data from multiple online ad sources, I will develop hedonic pricing models that determine how the new short-term and long-term real estate rental markets in Havana are linked. I will survey selected property owners from the rental dataset and conduct interviews to identify the social networks that structure the possibilities of entry in the rental markets. Finally, using social network analysis I will
identify those actors that play a more central and bridging role in the information and resource exchange that leads to market entry. The findings from the research project will be valuable for the literature on transitioning economies. The results will also highlight how different goals (i.e. property regularization and fostering local entrepreneurship) that stem from a “do-it-yourself” approach to addressing poverty and informality can either be complementary or detrimental to each other.

References

Key Words:
Cuba, Micro-entrepreneurship, Emerging land markets, Rental markets, Social capital

INVESTIGATING COMPLIANCE: AN EXAMINATION OF PARTICIPATORY APPROACHES TO DEVELOPMENT VIA THE WORLD BANK INSPECTION PANEL
Abstract ID: 661
Individual Paper Submission

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The World Bank Inspection Panel was created as a “bottom-up” mechanism through which individuals affected by Bank-financed projects can hold the Bank accountable for any material harm resulting from non-compliance with its own operational standards and policies. Many of these policies require the informed participation of affected communities in the design and implementation of Bank-financed projects. These include, for example, Bank policies on environmental impact assessments, involuntary resettlement, and indigenous peoples. Out of a total of 118 requests for inspection filed with the Inspection Panel since its establishment in 1994, 63 have included complaints that affected communities were not engaged in a meaningful process of consultation and participation. Therefore, there is a need to examine more critically the efficacy of the Bank’s safeguard policies in ensuring meaningful participation, particularly in contexts were the absence of such participation has allegedly resulted in material damage to affected communities.

This paper employs a qualitative analysis of cases brought to the Inspection Panel between 1994-2016 to identify trends in the complaints brought by claimants regarding the Bank’s participatory practices, as well as to examine the extent to which the practices of the Inspection Panel have challenged the Bank to modify or re-examine the role of popular participation in its projects. The qualitative analysis relies on a document review of case files, management responses, and Panel decisions. These are supplemented by reviews of the Panel’s annual reports and, where available, a review of the original project documents and any news or media items related to the cases.
The findings make an empirical contribution to existing critiques of participatory development and to our understanding of how participatory practices are shaped within international financial institutions. Moreover, they shed light on how the Inspection Panel, which was itself conceived as a participatory grievance mechanism, interprets and adjudicates the use of participation in development. The analysis suggests that the Panel has on many occasions found the Bank’s adherence to the procedural rather than the qualitative aspects of participation to be a direct cause of project failures as well as material harm to affected communities; this is particularly evident in cases related to involuntary resettlement and indigenous peoples. Nevertheless, the Panel’s ability to actively shape participatory practices at the World Bank is fettered not only by its institutional dependence on the Bank, as others have suggested, but also by an intellectual dependence on the Bank’s own approach to participation as first and foremost a tool to secure project buy-in and success. These hindrances undermine the potency of the Bank’s safeguard policies with regard to participation as well as the Panel’s own role as a participatory institution.

References

Key Words:
World Bank, Inspection Panel, Participation, Participatory Development

INFORMAL SETTLEMENTS AND INEQUALITY: EXPLORING SPATIAL PATTERNS AND DRIVERS OF GER DISTRICTS IN ULAANBAATAR, MONGOLIA
Abstract ID: 683
Individual Paper Submission

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In this paper, we studied the informal urbanization, focusing on informal settlements and its implication for equality in Ulaanbaatar, Mongolia. Following the collapse of the Soviet Union, Ulaanbaatar has experienced unprecedented urbanization. Lack of housing supply has led to an expansion of informal settlements; mostly in the form of small, portable felt tents used by nomads in grasslands, known as a Ger, which are without water and sewage systems. The informal settlements now host about 45% of Ulaanbaatar’s total population. However, there is a lack of understanding on how and why these informal settlements have increased and changed. Regarding this context, this research aims to provide insight into the spatial patterns and drivers of informal settlements to suggest plausible policy implications for achieving an urban sustainability. Thus, our primary research questions are: (1) Do informal settlements have peculiar spatial patterns? and (2) What are the major factors affecting the growth of informal settlements?
To address these questions, our study first assessed the spatial extent of Gers by applying Object-Based Image Analysis (OBIA) that identified a Ger—uniform in size with a white, circular shape—in high-resolution remotely sensed images (i.e., QuickBird and WorldView2). We then quantified the impact of neighborhoods’ characteristics on the expansion of informal settlements by using a Spatial Autoregressive (SAR) model to control for spatial autocorrelation. The empirical model includes the infrastructure accessibility such as major road, water well, and kindergarten, and geophysical variables such as slope and water cover. To improve the robustness of the empirical model, the results are validated by the outcomes of semi-structured interviews with residents and municipal authorities. We conducted semi-structured interviews with 27 informal settlers in the inner city, mid-city, and fringe area of Ulaanbaatar and 10 sub-district governors with the following questions: 1) what is the primary reason for you to settle down in Ulaanbaatar? and 2) why do you choose this particular place?

We found that informal settlements are neither products of random processes or simple radial aggregations, but instead have a complex relationship with surrounding neighborhoods. The preliminary analysis of sub-districts (N=93) concluded that the distance from the roads, the number of water wells, and the number of children enrolled in kindergarten/schools were all statistically significant in the growth of informal settlements. However, contrary to our assumptions, the number of bus stops and slopes were not significant. These results were corroborated with evidence from interviews with residents. Existing data for public bus stops cannot fully account for the public’s access to transportation in such settlements since private mini-bus systems are prevalent in the area. Additionally, since incoming residents do not need a foundation work for their Gers, they typically do not consider slope. The results suggest that the expansion of informal settlements varies depending on local context and planning interventions, and it is necessary to consider aforementioned drivers in urban policy to achieve the sustainability in informal settlements. While this study is focused on the unique case of Ulaanbaatar, this paper could be a stepping-stone for understanding informal urbanization in transitional economies facing rapid informal urbanization general and designing future policy for sustainable urban development.

References

Key Words: Informal Settlements, Ger, Object-Based Image Analysis (OBIA), Spatial Autoregressive (SAR) model, Mongolia
THE PLACE FOR DECENT HOUSING: THE IMPACT OF AFFORDABLE HOUSING PROVISION ON THE SPATIAL SEGREGATION OF THE URBAN POOR IN CHENGDU, CHINA
Abstract ID: 699
Individual Paper Submission

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Since 1998, the Chinese government has tried to improve the affordability of housing through aggressive development of highly subsidized units for sale and rent. Most research only measures whether cities have met their quantitative goals — the number of units, the amount of total investment — rather than also investigating the impact of the location of affordable housing development on income segregation at the neighborhood scale. Using historical data of housing transactions between 2010 and 2016, and location data of affordable housing projects between 2008 and 2016 in Chengdu, this study investigates whether the siting of affordable housing projects exacerbates the concentration of low price housing, and as a result, perpetuates housing inequality by locking the population that can only afford low price housing in certain neighborhoods. To understand the mechanism through which low price housing concentrates in certain neighborhoods, I ask two questions: first, did the local government assigns land of affordable housing projects to neighborhoods where low price housing development has concentrated? And second, did private developers build low price housing projects in neighborhoods adjacent to affordable housing projects? To answer the first question, I spatially cluster the housing transaction data for each year using the ‘Getis-Ord local statistics’, and map a binary variable whether an affordable housing project was planned within a 600-meter radius in the next year and how many units were planned. I run a linear regression model to understand the relationship between the characteristic of the development and the affordable housing provision, controlling for the year. In the second part, I evaluate the impact of the affordable housing siting on private housing development in the subsequent year by examining the correlation between the housing price per square meter of new development and the distances of the new development from affordable housing projects. Combining the findings of these two analyses, I argue that there is a reluctance to provide high-value land to affordable housing development by the city government and that it further concentrates private development of low price housing in neighborhoods where affordable housings are built.

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Key Words:
economic segregation, affordable housing, China, real estate development

DEEP DEMOCRACY FUELS POLYCENTRIC SEWAGE GOVERNANCE IN URBAN INDIA
Abstract ID: 723
Only recently have international aid organizations and development scholars extracted issues of sewage from coverage under the ‘water and sanitation’ umbrella, recognizing that sewage requires attention in its own right. The governance systems ordering sewage will shape urban futures throughout the global South. Better understanding of these systems will be necessary for a rapidly urbanizing world to manage its sewage. I begin this paper by using a political ecology approach to differentiate urban flows of water from those of sewage. Drawing on those differences, I examine current modes of governing sewage in Agra, one of the most waste-ridden cities in northern India.

I find that cities metabolize sewage differently than water in two key ways. First, sewage does not comply with narratives of scarcity, which underlie logics of nearly all resource management, including water (e.g. Anand 2011; Bakker 2013). Within the urban context, concern centers on availability of sewage services rather than distribution of the material itself. Second, water and sewage differ in their relationship to public and private spheres. Here I do not distinguish public and private in terms of governmental and non-governmental. Following Laporte’s (2000) discussion of the ‘privatization of waste,’ I use private as relating to an individual or a household and public as outside that household. In this way, the procurement of water for private use requires access to a good in the public sphere. The private user needs the public provider. Sewage inverts this relationship. Households and individuals are tasked with disposing of privately produced waste by transferring it to the public sphere. The transition to the public sphere may be through flushing a toilet that leads to municipal sewer, using a community latrine block, or practicing open defecation. All of these modes of transfer make the private act of defecation a public problem. Defecation, or the production of sewage, as a private act and its subsequent entry into the public sphere creates a special problem for the governing of sewage. How does the public enter into people's private lives and manage their shit?

Using these differences as a lens, I investigate how sewage is governed in the slums of Agra. This research, drawing on 13 months of fieldwork conducted between 2012 and 2015, employs case study methods including interviews, plan analysis, participant observation, and historical data collection. Data show that sewage service initiatives, funded by global agencies and implemented by a local NGO, exhibit characteristics of deep democracy (Appadurai 2001). In addition to the “roots, anchors, intimacy, proximity and locality” suggested by “depth,” these processes include the key aspect of “horizontal learning.” Leaders from several Agra slums, aided by the local NGO, developed an informal trans-community network that engages in transfer of knowledge, collection of data, and securing of livelihoods. This network not only facilitates exchange between poor communities outside state and market control, it strengthens ties within each community. This is particularly important in under-served communities, where some residents practice open defecation. Each community becomes the ‘public’ charged with managing its residents’ shit. At the slum level, stronger ties within the community support local decision-making and internal policing of toileting practices.

As the network of communities grows, the number of ‘publics’ expands, creating many loci of local decision-making and control within the city. Simultaneously, the NGO, municipal government, and international aid organizations continue to operate within Agra and exercise influence over sewage management. These multi-level, multi-purpose, multi-functional units operating in one city exemplify a system of polycentric governance (Ostrom, 2010). Polycentricity is a mode of governance most
frequently invoked to describe management of common pool resources, which, unlike urban sewage, are subject to the rationalities of scarcity. However, polycentric governance aptly describes the diversity of institutions – formal and informal – observed in this research.

References

Key Words:
Deep democracy, Polycentric governance, Sewage, Urban India

EFFECT OF EDUCATIONAL MISMATCH ON WAGES IN THE CAPITAL AND NON-CAPITAL REGIONS IN KOREA

Abstract ID: 724
Poster
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During the last three decades, significant changes in higher education and dramatic increases in workers have led to overeducation, which demanded workers with higher education than is required for their jobs (Chapple, 2006; Beckhusen et al., 2013). In recent years, an increasing number of studies has examined the incidence of educational mismatch and its wage effects. However, most existing studies have a potential problem given that they only used cross-sectional data in estimating the wage equation under a standard OLS framework. The estimation results of these studies are biased because they do not address the potential omitted-variable problem caused by the unobserved heterogeneity of workers (Bauer, 2002).

Panel analysis is performed in this study to evaluate whether and to what extent individual heterogeneity accounts for the wage difference between well-matched and mismatched workers in the capital and non-capital regions in Korea. Based on the review of relevant literature, this study uses the research model suggested by Duncan and Hoffman (1981) to identify the wage effect of overeducation. The data used in this study are drawn from the Korean Labor and Income Panel Study for the period of 1998–2014 and the Dictionary of Occupational Titles in Korea. The sample is restricted to individuals between the ages of 15 and 64. After excluding observations with missing values, a final sample of 1,811 observations of 696 individuals remains.

Although the fixed-effect estimates show similar results of the OLS, the estimates in fixed-effect model support the hypothesis that individual heterogeneity plays an important role in the context of educational mismatch. For workers residing in capital regions, the magnitude of the effect increases substantially from 3% to 12% for undereducation. For workers who live in non-capital regions, the magnitude of the
effect increases from 4% to 7% for overeducation. As found in most relevant studies, the coefficient of a year of education completed is statistically significant and positive for workers in the capital and non-capital regions. In addition, the Hausman specification test rejects the null hypothesis; thus, random-effect estimates are biased in this case.

In summary, overeducated workers in non-capital regions receive wage premiums, whereas undereducated workers in capital regions receive wage penalties when compared to their equally educated counterparts. The estimated effects dramatically change when controlling for unobserved heterogeneity using panel estimation techniques. The results emphasize the critical role of individual heterogeneity in the analysis of the wage effects of educational mismatch. The results indicate that this study contributes to a theoretical extension of the antecedents on the relationship between wage and educational mismatch across different regions. The findings also emphasize the need to test the wage effects of educational mismatch across different regions considering the importance of unobserved individual effect. These results have significant implications for planners, particularly to various public and private actors who participate in the formulation and establishment of regional labor market policies.

References

Key Words:
Educational mismatch, Wage effects, Panel analysis, Capital and non-capital regions, Korea

A CRITICAL APPRAISAL OF THE IMPACT OF RECENT PACIFICATION AND UPGRADING PROGRAMS ON THE URBAN DYNAMIC OF TWO INFORMAL SETTLEMENTS IN THE CITY OF RIO DE JANEIRO, BRAZIL.

The State of Rio de Janeiro put forward an ambitious program of pacification and slum upgrading in some favelas in the city of Rio starting in 2008 – the Pacification Police Units (UPP) and the Program of Development Acceleration (PAC) as part of the planning for the 2016 Summer Olympic Games. The aim was to recover the territories once controlled by drug dealers, establishing a program for institutional reconstruction together with the construction of basic and mobility infrastructure and public services. The UPP and the PAC programs stimulated new urban dynamics in some favelas, such as new services and commercial ventures, upgrading of homes, expansion of informal real estate, new touristic, leisure and sport activities, which generate new jobs, income and new perspectives for dwellers. On one
hand, these new socioeconomic dynamics strongly restructure and changed part of the urban fabric of favelas; on the other, the absence of a planning body to coordinate the several projects, together with the precarious infrastructure and the ominous presence of the police force, diminish the potential gains. The upgrading schemes generated new expectations towards public safety, better infrastructure and quality of life demanding a more effective public response and encouraged new forms of participation. They also provoked an increase in real-estate values and rents as well as gentrification. However, with the end of the mega-events and the recent economic and political crisis happening in Brazil one observes an upsurge in violent conflicts, in police confrontation and in homicides.

The objective of this paper is to examine the impact of UPP and PAC programs on the socioeconomic dynamic of two squatter settlements in the city of Rio de Janeiro, Brazil, focusing on the issues of violence and conflict in the favelas, and comparing the different outcomes. I will use empirical evidence from Babilônia and Cantagalo-Pavão-Pavãozinho (CPP). Both communities are situated in the wealthy southern zone of the city, next to touristic neighborhoods, and both experienced changes in their urban dynamic due to UPP and PAC programs. Preliminary results show that the upgrading scheme and pacification program had more positive effects in Babilônia than in CPP, although both communities experienced important transformations in their urban fabric and internal economy. Levels of crime diminished in both communities up to 2013, but violent conflicts and homicides have increased in CPP since 2016. To account for the different outcomes I will examine the power structures of both communities, particularly as it relates to the drug trade, as well as the network of NGO’s and local organizations.

The theoretical bases of my analysis comes from Henri Lefebvre conceptualization of urbanism and his work on the production of space, from Michel Foucault’s work on bureaucratic power and network of micro powers and on my own theoretical discussion about the praxis of urbanism in contemporary neoliberl context (Lefebvre, 1991; Foucault, 1979; Coutinho, 2015; Harvey, 2013). Empirical data come from statistical data about violence and crime the two communities, from field survey on local organizations and businesses, and from selected interviews with local stakeholders.

The careful examination of the outcomes of these two important public policies for informal settlements in Rio de Janeiro on two different communities serves as a basis for critical studies about the current practices of urban planning for poor communities and neighborhoods.

References

Key Words:
slum upgrading, urban violence, urban informality, Rio de Janeiro, planning theory
A UNIQUE PARTNERSHIP BETWEEN COMMUNITY AND LOCAL SELF-GOVERNMENT IN KERALA Responds to Population Aging

Abstract ID: 755
Individual Paper Submission

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The Indian state of Kerala is widely known as a leader in participatory governance since the People’s Planning Campaign in the 1990’s (see citations in Williams et al., 2014, p.1116). In this study I examine a unique partnership between Local Self-Government (LSG) and Kudumbashree, a well-established community network of low-income women in Kerala, and explore how it is responding to population aging. Around the world, countries are facing a rapidly increasing proportion of their population that is over the age of 65 years. In India, the 65+ population doubled between 1991 and 2011 and now stands at 57 million older people (2011 Census of India). Kerala outpaces the rest of India in the growth of its population over 65 (Barik, Agrawal, and Desai, 2015).

In this exploratory study I examine two area-based initiatives being carried out by the Kudumbashree-LSG partnership that help make it possible for older people to age well in community. First, I investigate a project explicitly directed towards individuals over the age of 60 years, the Elderly Inclusion Project that is being piloted in two rural districts. Second, I examine two of the partnership’s Basic Services for the Urban Poor (BSUP) housing projects; they affect the health and well-being of older people in important ways although they were not explicitly planned or designed for them (Williams et al., 2014).

Study objectives. I explore first how the two partnership initiatives help increase the age-friendliness of the areas of focus (WHO, 2007), and second how the experience of older participants differs from their younger counterparts. How these initiatives make it easier (or harder) for families to care for and support their older members is the third objective given that family members remain the expected providers of support and care for their elders in India today (Government of India, 2007).

Approach and methods. I adopted a grounded theory approach to the inquiry and conducted face-to-face, in-depth interviews with community managers and key informants in the areas covered by the two initiatives. I used snowball sampling to identify the interviewees. The interviews were conducted through a translator in Malayalam, the official language of Kerala, and recorded digitally. The recordings were then translated into English. All interviews have been completed as of April 4, 2017: 11 with managers and 14 with key informants. I am using holistic coding to identify themes and sub-themes in the translations, and memo-writing to capture reflections about connections between categories and/or their characteristics.

Preliminary findings. We find discrepant perspectives on how Elderly Neighborhood Groups (NHGs), the building blocks of the Elderly Inclusion Project, benefit older women and men and the community. Managers concur that NHGs make villages, cities and districts more age-friendly, ensure through group solidarity that older people’s rights are protected, and provide opportunities for social participation. Key informants report however that access to loans for livelihood purposes is critical for some older people, and that the expectation of receiving free medicines and physical therapy or other ‘welfare handouts’ through membership in an NHG is also important. In the housing projects, we find two policies that in principle give priority to older people. First, they are given preference for ground floor flats by national policy, along with Differently-Abled people. And second, they are allocated their own flat, separate from their married children and families, in the new housing scheme. The interviews reveal however that contested negotiations over flat allocation carried out by multi-stakeholder Cluster Development
Committees govern the actual allocation, and therefore determine whether elders realize their rights, and what the implications are for families.

Significance. Our findings shed light on the opportunities and challenges faced by LSG-community partnerships involved in strategies in developing areas that seek to support aging well in community.

References


Key Words:
Age-friendly communities, community-based organizations, local governance, Kerala, India

STUDY OF RAIL TRANSPORTATION LED URBAN GROWTH CHINA MODEL

Abstract ID: 759
Individual Paper Submission

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As important transportation infrastructure, rail transportation plays critical role in promoting urbanization for mega-regions and metropolitan areas in China. Especially, the total length of High Speed Rail and the construction pace of urban metro systems, have notably marked as the first on world. Thus the interaction between rail transportation and urban development receive wide research interests from both urban planners and decision makers. Approaching from both regional and urban scales, this paper selects 43 Chinese cities which have established, are constructing, or plan to build urban metro systems as case studies. It builds a data base combining urban spatial and rail transportation data, and explores the rail transportation and urban development characteristics and features. By creating an evaluation index system of synergy development between rail transportation and urban development, the study identifies the pattern and path of a China Model in rail transportation led urban growth. Also, this paper selects typical international cities along the “Belt and Road Initiative” corridors and compares them with similar Chinese cities. By reflecting and rethinking the advantages and characters of the China Model in rail transportation and urban growth and identifying the development conditions and path, this paper will provide policy implications for Chinese urban planners to better prepared for practice along the “Beit and Road Initiative” countries.

References

Village governance in Indonesia has been transformed since Indonesia’s independence. Compared to the decentralization started more than a decade ago, which was once called “big bang” decentralization, the alteration of village governance called “a quiet revolution.” in the rural area. With the enactment of Village Law 6/2014, villages have been brought to center stage for the sake of deepening democracy, promoting development, and alleviating poverty and social inequality, particularly in the eastern part of Indonesia, which lags behind in development from the western parts. To achieve the objectives of Village Law 6/2014, by 2019, the budgets of villages are to be enlarged to nearly five times what they were in 2014 through the allocation of village funds and transfers from districts stipulated by the law. Since the beginning of the implementation of the law in 2015, the question has been whether the villages could achieve the stated objectives of the law due to a weak monitoring mechanism that adversely affects accountability and transparency, the limited capacity of village administrations, and allocation methods of the funds. The involvement of facilitators, the role of district governments, and consistency between village development plans and district and provincial development plans are external factors that can significantly influence outcomes for both village and regional development. Meanwhile, more than ten years of the experience of decentralization in Indonesia has demonstrated only a minimal contribution to economic development, public service improvement, and good governance; this poses a question regarding the causal relationship between development and the current village governance reform.

Therefore, this research asks how the newly introduced village governance law contributes to the development of rural areas in eastern Indonesia by examining the changes in village governance and issues in development that have emerged since the enforcement of Law 6/2014 and the village fund allocation. In 2017, interviews were conducted in Maluku Province, one of the provinces that recorded the highest poverty level in the country, to investigate the decision-making process of village development plans, implementation of the projects, and the impact on development and poverty alleviation. The interviewees include government officials at various levels, village heads, NGO activists, women, scholars and practitioners, and other key persons.

The initial results of the research confirm that anticipated constraints and issues in villages in Maluku impede effective implementation of the village fund, which may hinder development including lack of participation in the planning process, limited accountability and transparency, insufficient support to villages, lack of capacity of village government, and the importance of the role of district government, among others. Moreover, the revival of traditional villages that adapted a traditional governance system replying on traditional values and customs works against village level democracy, preventing women from participating in decision making. However, this does not mean that villagers are pessimistic about the opportunity brought by the new village law and funding schemes. It has only been two years since
the enforcement of the new village governance law; this may not be long enough to evaluate the impact on development in villages. Nevertheless there are many tasks ahead for the villages to make the new village governance work. The research results are expected to contribute to advancement of theories on decentralization and village governance, and practices for development and poverty alleviation in villages.

References


Key Words:
Indonesia, village governance, decentralization, development

PARADIGM OR PARADOX? THE ‘CUMBERSOME IMPASSE’ OF THE PARTICIPATORY TURN IN BRAZILIAN URBAN PLANNING
Abstract ID: 802
Individual Paper Submission

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The Brazilian reform movement advanced a widespread commitment to narrowing the omnipresent gap between urbanization and equity, which came to inform Federal law, and a suite of progressive municipal plans. From the late 1980s onward, this new policy environment sought to catalyze and incentivize citizen participation in decision-making processes organized around the Lefebvrian idea of autogestão (collective urban management). Yet the recent turn of events evidence a different story, and one can see that social exclusion and spatial segregation remain dominant features of the Brazilian city – persistent at best, if not entirely unchanged. These contradictions have led planning scholars and practitioners to grapple with the misalignment between the reform’s letter of the law and limitations to its implementation, evidenced by an expansive body of literature that is reconsidering the reform movement between its paradigmatic goals and paradoxical failures (Fernandes, 2007; Rolnik, 2011; Maricato, 2016). We draw from this genre of thinking to assess critical areas of paradigm and paradox in Brazilian planning, and how they might reorient planning in the Global South. We ask the following question: what are the key critical areas that reveal states of paradigm and paradox in Brazilian planning?

We root the arc of this trajectory within three areas of scholarship and practice that reveal connections between the reform movement’s rapid rise, slow dilution (Klink and Denaldi, 2016) and current impasse (Maricato, 2011). These issues – including housing, data and insurgency – are central to understanding the Brazilian reform movement’s evolution, and of how, despite a shared political context, outcomes could be so different. While certainly not inclusive of all urban issues, these categories were selected for
best representing how the idea of autogestão has been modified through the citizen struggle to influence planning systems, and has shaped a range of conditions that currently exist between states of paradigm and paradox. These issues, we contend, have been influential to planning scholarship, practice and education.

References

Key Words:
Urban reform movement, Participatory planning, Housing, Data, Insurgency

IT’S ORGANIZATIONAL, NOT TECHNICAL – A NEW WAY TO UNDERSTANDING BUS RAPID TRANSIT SYSTEM SHORTCOMINGS IN CHINA

Abstract ID: 828
Individual Paper Submission

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In the early 2000s, China was the site of a major campaign promoting sustainable transportation systems such as bus rapid transit (BRT). Multiple organizations such as the World Bank, the Energy Foundation, and ITDP promoted and worked on BRT projects throughout China. As a result, from 2004 to 2012, fourteen BRT systems were put into operation in cities across China—from megacities such as Beijing to second-tier cities like Jinan, Shandong province. Despite over a decade of experience with bus rapid transit, recent studies have found that these systems suffer from slow speeds, low capacity, and limited networks (Zhang et al 2013). In other words, few systems are operating at optimal levels. These issues are identified as technical and therefore solutions within these analyses often are technical or design related (e.g. improving signal timing, better siting of corridors, and expanding networks).

What if these problems are not technical, but rather organizational? For example, to improve signal timing, siting, or expand networks requires Chinese planners to work across several organizational boundaries. Transportation and land use planning tasks are dispersed across numerous agencies in China; therefore, inter-organizational cooperation would play an integral role in ensuring BRT systems work. And yet, few studies have taken organizational relationships into consideration (Wan et al 2013). Overall, research at the organizational level in BRT projects in China and the world is lacking. My research addresses this gap in the literature.

Taking Jinan's BRT as an example, this paper focuses on the questions of how and why Jinan’s planners were unable to take full advantage of BRT. Jinan was one of the early adopters of BRT and was provided with extensive technical and political support (Zhou 2016). Using an ethnographic approach
that includes years as a participant observer from 2007-2010, in-depth interviews, and planning documents, I analyze the policy transfer process or how Jinan's planning organizations learned about and adapted BRT. My theoretical framework combined Dolowitz and Marsh's (2000) policy transfer framework and organizational behavior theory.

Through this approach, I identify how organizational conflicts led to Jinan's sub-optimal BRT system, which suffered from small stations, low operating speeds, and poor pedestrian access. This finding suggests Jinan's policy transfer process could be considered “a contested policy transfer” (Laguna-Dussauge 2013). A contested policy transfer is when “a policy transfer process produces a policy outcome significantly different from the original ‘model’ because of conflicts and negotiations between...key bureaucratic actors involved (Laguna-Dussauge 2013, 688).” Therefore, these were not simply technical issues, nor could they be improved through technical solutions alone. For example, conflicts between two main agencies over right-of-way resulted in pedestrian space being significantly reduced along certain corridors. This conflict, thus, would not be resolved by suggesting providing more space.

A stronger understanding of all challenges to policy transfer and BRT, not just technical ones, allows for more comprehensive strategies and requires those organizations promoting these practices to take a closer look at the collaborative (or non-collaborative) nature of local planning. While recent research has pointed to the difficulties planners face in implementing innovative policy initiatives in western cities (Marsden et al 2010), this case shows that similar issues can be found in a non-western, non-democratic context. More research, however, needs to be done to understand the prevalence of contested policy transfer in China.

References


Key Words:
bus rapid transit, policy transfer, China, inter-organizational conflicts

THE CASCADING IMPACTS OF MIGRATION AND CLIMATE CHANGE: EXPERIENCES OF MYANMAR LABOUR MIGRANTS IN PHUKET, THAILAND

Abstract ID: 915
Individual Paper Submission

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Central theme and research questions
By 2050, the world could have as many as 200 million environmental migrants who are displaced from their homeland due to sudden or slow onset changes to the environment (Brown and IOM, 2008). With migration patterns predicted to intensify in tandem with ongoing climate change and with Thailand currently pegged as a destination country for migrants in the Mekong Region, particularly migrants from Myanmar, future environmental migrants in the Mekong Region will likely choose Thailand as a destination country due to Thailand’s comparatively higher standard of living than neighbouring countries.

I use my analysis of the current situation of Myanmar labour migrants in Phuket, Thailand as a precursor for challenges that future environmental migrants might face when pushed to move into Thailand. In order to learn from current migrants and develop strategies for reducing vulnerabilities of future environmental migrants, I explore the following research questions:

1) What are the social, economic, political, and environmental challenges faced by current Myanmar labour migrants in Thailand?

2) What coping mechanisms do Myanmar labour migrants enact to deal with social, economic, political, and environmental challenges?

Approach and methodology
In September 2015 to March 2016, I documented experiences of 80 Myanmar labour migrants in Phuket. I conducted ethnographic research in two Myanmar communities using interviews, observations, and photovoice to learn about migrants’ day-to-day lives and experiences. I also interviewed six key informants (e.g., government workers and non-profit community advocates) working in fields related to environmental policy, urban planning, public health, and migration. I apply structural violence theory as my research framework to show how social and institutional structures can impede a person’s agency to adapt to climate change and can have wider impacts upon the community and across national borders.

Findings
By using structural violence theory, I highlight the ongoing marginalization that Myanmar people experience. Structural violence that occurs at the individual level, for example a person’s inability to access basic services such as water or health care, has cascading effects into the Myanmar community in Phuket and across the border into Myanmar. Low-income migrants are collectively forced to pay extra money to order water from private trucks when no water runs through their taps, or co-workers on fishing boats are forced to pay for injured colleagues to get medical help. Given that a majority of migrants send remittances to family in Myanmar, structural violence also occurs at an international level, wherein Myanmar people in Phuket who are forced to spend money on emergencies are obstructed from sending money to friends and family back home. In turn, people in Myanmar who are dependent on remittances are also exposed to uneven resource distribution, unequal life chances, and vulnerabilities to climate change.

Relevance of my work to planning scholarship, practice, or education
While there is an abundance of literature problematizing the connection between climate change and migration (Black et al., 2011), much less has been written about the situations in which migrants may find themselves in the new country and how to best develop policies and strategies that deal with anticipated environmental migrants while mitigating further suffering of migrants in new countries. Widening the discussion to identify problems that environmental migrants might face in receiving countries is important given that environmental migrants are predicted to comprise primarily of poor and marginalized communities (Findlay, 2011). Climate change impacts will hit hardest in countries where
structural violence is endemic. Research that connects community narratives with how climate change impacts are experienced through structural violence will be extremely powerful (Moran et al. 2016). Such research can draw attention to the social construction of climate change vulnerability, and can be an important tool when creating climate change adaptation and mitigation strategies.

References


Key Words:
Climate change, Migration, Structural violence, Thailand, Myanmar

IMPROVING WOMEN'S HEALTH & THE ENVIRONMENT: FACTORS AFFECTING ADOPTION OF "ADVANCED COOKSTOVES" AND BENEFITS FROM THEIR ADOPTION IN RURAL INDIA

Abstract ID: 919
Individual Paper Submission

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Cooking with firewood and other biofuels is one of the most urgent problems in the world today. The United Nations and Global Alliance for Clean Cookstoves report that about 2.7 billion people in the world depend on traditional cookstoves or open fires fueled by biomass. Traditional wood-burning cookstoves (TWCs) contribute over 20% of global black carbon emissions. Women and children are disproportionately affected due to their physical proximity to cooking fires. The World Health Organization estimates that more than four million people die annually from indoor air pollution; exposure to TWCs is the second worst health-risk factor for women and children globally. The increasing scarcity of firewood in many parts of the world combined with respiratory illness caused by cooking with biomass exemplify the ‘slow violence’ that causes immense harm and death but is not dramatic enough to grab the headlines.

Over the past several decades, many federal, state and local governments, and non-profit and international organizations have implemented programs to improve or replace TWCs. These initiatives have had limited success either because they required significant changes in how food was cooked, or because the technology was too expensive or not noticeably better than TWCs.

This paper reports findings of a study that assesses a) the adoption rate of a new device to increase combustion efficiency of TWCs; b) impact of socio-economic, demographic and cultural factors (such as age of household, household size, level of education, participation in economy outside the village) and geography and climate on MA adoption rate and one-year use rate; and c) benefits at the households
and village level from its use over a one-year period. In laboratory and field tests, this new device – the Mewar Angithi (MA), increased the combustion efficiency of TWCs, thereby significantly reducing the amount of firewood needed and smoke produced. Since the MA works with existing TWCs, it does not require new stoves, pots, or pans, or changes in how food is cooked. Moreover, the MA is easy to fabricate, costs little (under $1), and can be made using technology and equipment available in rural India. The study had quantitative and qualitative segments. The quantitative segment was designed as a before-after experiment with information on 100 households from seven villages in India. This data is supplemented with information from detailed interviews of stakeholders in those villages.

References


Key Words:
Traditional wood-burning cookstoves, Improved cookstoves, Womens Health, Deforestation, Climate Change

MATERIALIZING THE COLLECTIVE: EVERYDAY PRACTICES IN SÃO PAULO’S FADELAS
Abstract ID: 954
Individual Paper Submission

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Self-produced, informal, low-income urban communities in Brazil are known as favelas. Low-wage workers, migrants, the unemployed, the elderly and sick have historically made use of vacant urban land to build communities from scratch as a response to a lack of affordable housing. Since favelas first appeared in late 19th century, favela residents have been invested in building and improving their housing and environments independent of State intervention (Perlman 2010). Through different modes of social and political mobilization, favela dwellers transform their living conditions despite scarcity of resources and the stigma surrounding favelas. Understanding local social and political networks and organizations in favelas offers the possibility of leveraging these processes in attempts to upgrade and integrate them (Scott 1998).

By looking at how existing local practices promote change, this article investigates the potentials of incorporating governance mechanisms in favelas to State intervention schemes as a way to empower disadvantaged populations and move beyond the limitations of “participation” discourses in urban
planning (Arnstein 1969). What are the existing social and political collective practices engaged by residents in favelas? How do such practices contribute to the overall political, social and spatial community governance processes in favelas? This study draws on six months of fieldwork in two favelas of São Paulo to develop an understanding of how community governance is produced through everyday practices. Methodologically, I employ a case study design utilizing a combination of participant observation and interviewing.

Community governance in favelas involves not only the management of space and organizations but also the existing social and political networks and daily practices that contribute to how residents govern themselves, formally or informally, consciously or not. Preliminary findings on the street level show a mindset of collectivity among families and neighbors observed in everyday life of residents through simple practices such as a group of neighbors helping one resident to clean his house and wash the alley. Simple everyday practices materialize the idea of the collective in the scale of the street, forming smaller groups that together constitute the favela. These groups actively contribute to the production and maintenance of space and of the social networks that make these two favelas what they are: vibrant urban spaces made and modified by a complex social and political net.

Creating a better understanding of small-scale governance structures in favelas is key to the development and implementation of any policy addressing low-income informal urban settlements. Grappling with the concept of community governance in favelas may enable urban planners to better comprehend these areas, learn their needs and leverage such existing processes and networks in upgrading schemes, for example. The existing local knowledge about the community and its spaces could be incorporated in the development process, instead of underestimated and ignored like many times in the past.

References

Key Words:
favelas, Brazil, community governance, collectivity, international planning

**EXPECTATION AS A MODE OF STATECRAFT: ‘MUNICIPAL ENCOUNTERS’ IN POST-REVOLUTION TUNISIA**

Abstract ID: 995

Individual Paper Submission

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The founding event of Tunisia’s revolution was the self-immolation of Mohamed Bouazizi, the fruit-seller of Sidi Bouzid, a destitute governorate of Tunisia’s hinterland. Bouazizi’s self-immolation narrative notes that a female police agent confiscated his fruit, his fruit cart and scale, the capital with which he made a living. Less discussed about this historic moment that sparked the ‘Arab revolutions’ was that Bouazizi set himself on fire in front of the municipality who had tuned him away multiple times when he protested unfair treatment by police agents. Six years after the revolution, the Tunisian government has embarked on a large-scale political decentralization program that aims to cover the entire territory with elected local governments. What do ‘municipal encounters’, the everyday encounters between citizens and municipal officials, make visible about experiences of the post-revolution state? What labor goes into claims-making at the municipal level, and what are its consequences?

The political science and international development literature on decentralization has focused either on the incentives of politicians to decentralize, or on the effects of decentralization programs once they are rolled out. Although they have been long framed as deficient institutions in authoritarian regimes, a new literature has emerged that addresses municipalities in the Arab world as spaces to modernize governance (Harb and Atallah 2014), and as players in urban contestation (Bou Akar 2012; Fawaz 2014). Neither lens fully accounts for the changes occurring at the level of Tunisian municipalities today. If, as Falutti (2005) argues, decentralization is not a static qualification of the state, but rather a process of reform which is path dependent, and has different economic and political objectives, then it is incumbent on students of the region to understand what “making space for municipalities” produces at this historical conjuncture.

I argue that ‘municipal encounters’ make visible a mode of statecraft ruled by expectation where citizens except the municipality to provide services while simultaneously accusing it of being incapable of service provision. As such, municipalities are not pre-constituted categories of territorial organization; rather they are new “state spaces” (Brenner & Elden, 2009) produced through expectation of service delivery. The result is a new mode of politics the material basis of which is a new architecture of territorial organization that breaks away from the confines of the ‘police state’. To make this argument, I rely on participant observation of 25 participatory planning sessions across the Tunisian territory, 20 interviews with secretary generals and presidents of municipal councils as well as a chronicling of the changes at the municipal level since the 2011. This paper is part of a larger ongoing dissertations project about ‘municipal encounters’, land politics and new experiences of the state in Tunisia.

References


Key Words:
decentralization, municipal encounters, post-revolution Tunisia, claims-making
NEGOTIATING THE COSTS AND RISKS OF ADAPTING TO CLIMATE CHANGE: THE CASE OF PLAN JARILLON’S SOCIAL HOUSING AND RESETTLEMENT STRATEGIES IN SANTIAGO DE CALI

Abstract ID: 996
Individual Paper Submission

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This paper presents the preliminary results from a study of the housing strategies the City of Santiago de Cali, developers and residents deploy to negotiate the financial costs associated with Plan Jarillon’s resettlements. Widespread flooding caused by the 2010-2011 El Nino events placed climate change adaptation on the Colombian development agenda. Colombia created the National Adaptation Fund to repair damaged infrastructure and build new housing across the country. One of the Fund’s macro projects, Proyecto Plan Jarillon, consists of the reinforcement of twenty-seven kilometers of a levee along the River Cauca, at a cost of approximately 300 million US dollars, to protect the city from flooding. One of Plan Jarillon’s central, and most contentious, strategies is the resettlement of approximately 8,000 families who have, over several decades, established informal settlements along the levee.

The aim of this study is to examine the political and economic, threats and opportunities created by public investments in climate change adaptation with a specific concern for the constraints set by Santiago de Cali’s land and housing markets. Namely a segmented market which historically has not produced housing accessible to the city’s lower social economic strata pushing the city to rely on social housing strategies instead. With Plan Jarillon’s resettlement strategy as my case then the primary research questions guiding this study include: 1) How does the resettlement process generate financial costs and risks for the city, developers, and residents in Santiago de Cali’s land and housing markets? 2) What are the housing and social strategies these actors deploy to negotiate those costs and risks?

With support from Cali’s La Javeriana University (PUJ), a comparison is made between two neighborhoods, Charco Azul where the resettlement process has been completed, and Venecia Las Vegas which is currently being resettled. Data was collected over a period of approximately two months. Fieldwork included site visits, community meetings, and in depth interviews of residents and business owners in Charco Azul, Venecia Las Vegas and in the new social housing projects built for resettled families. The city agencies and developers involved in the process were also interviewed. The findings from this fieldwork are considered in relation to an analysis of the city’s master plans, social housing policies and publicly available land and housing market data.

This paper then contributes to the growing body of literature on the “socio-technical transformation” cities are undergoing to confront climate change by providing empirical evidence from the Latin American urban context.

References
“BEST” PRACTICES: THE LIMITS TO SHARING
Abstract ID: 1000
Individual Paper Submission

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Problem Statement
Planners borrow ideas. If there is a good fit, this benefits communities that receive the “borrowed wisdom.” They save themselves the time and expense of trial and error efforts. In other situations, borrowed wisdom, or “best practices” are not a good fit, or they are adopted in order to impose a new order on the recipient community without its awareness or consent. Practicing planners need to examine the technical elements, the socio-economic, political and cultural considerations, and the ethical dimensions of any program or policy they consider adopting.

With the 1992 Earth Summit in Rio, and its coincidence with the advent of the Internet, sharing “best practices” became easier and quite popular. While planners naturally borrow good ideas from elsewhere, wholesale borrowing is fraught with challenges. One issue is that best practice presentations focus on procedures, often emphasizing the successes alone. There is also a tendency towards a promotional tone. More serious is that successful projects and policies are very context-specific but best practices presentations minimize the importance of local conditions, socio-economic pressures, and political realities. Finally, there are issues that surround the potentially “ulterior motives” that surround the adoption of best practices from abroad—notably the incorporation of places into a global vision of a “good” city, without reference to whose conception of “good” prevails.

Objectives
This paper will examine the emergence of the global best practices phenomenon and examine ways in which borrowing has proved both successful and unsuccessful, in both a functional and a philosophical sense. The goal is to explore “best practices” since the early 1990s. In addition to the existing literature on mobilizing policy, which yields insights into broader (political-economic) implications of the transfer of practice and policy, the intention is to identify when such borrowing is likely to be successful or not (in a functional sense), who it will most benefit, and to develop some guiding principles for successful borrowing that will be useful in the classroom.

Methodology
The paper will begin with an exploration of the current literature, which focuses primarily on the political-economic dimensions of transfer of urban policies and practices. Next, it will explore the functional “fit” by carrying out an examination of a two-by-two table of “origin-destination” pairs of
borrowers and adopters, with the Global North and the Global South on the axes. Loosely understood hypotheses regarding “fit” of the ideas will posit that North-to-North sharing works out well, North-to-South sharing works poorly, South-to-North sharing is unlikely and probably unsuccessful, and, last, South-to-South sharing works well. The initial exploration will focus on commonly-borrowed ideas, e.g., N-N: New Urbanism; N-S: Suburban Neighborhoods; S-N: Bus Rapid Transit; and S-S: Slum Improvement. The purpose will be to examine their relative success in adoption and adaptation. Further examination will include differentiation by type of project (e.g., highly technical like computer-based traffic management vs. innovation in social organizations) and the relative importance of the social, economic, and political environment in determining an adoption’s functional success. This paper is seen as a “first cut” at exploring whether and how practices can be imitated successfully—further, more fine-grained, analysis is expected to follow. Finally, transfer will be examined from the perspective of who benefits from the adoption: whether the nominal beneficiaries ultimately benefit, or whether they only benefit upon superficial examination.

Main results and contributions
The main result will be an exploration of the pitfalls of simple adoption of “best practices.” Even though planning emphasizes the complexity of the urban environment, relatively superficial examination of prior practices before attempted adoption yields too many failures, even when new practices would be appropriate (technically and ethically). Identifying fundamental elements and issues that require examination when considering adoption of a program or policy from another setting is key. Ultimately, we know that transfer will continue to occur. We need clear guidelines to assure that planners pursue new ideas with technical, socio-cultural, and ethical foundations firmly in place.

References

Key Words:
best practices, policy transfer, exchange of planning practice

NEOLIBERALISM, GLOBALIZATION & PLANNING IN AFRICAN CITIES: THE POLITICAL ECONOMY OF HETEROTOPIAS
Abstract ID: 1002
Individual Paper Submission

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One of the defining features of the neoliberal regime of accumulation is inequality. This presents challenges for political regime maintenance in Africa and elsewhere, which increasingly find expression in cities. Cities are centers of capital accumulation globally, but they also are places where the majority
of humanity lives. As such, they are the primary crucibles or arenas where the contradictions between use and exchange value play out. Cities are also increasingly interlinked, globally, allowing for greater flows of value and the spatial displacement of contradictions through the urban grid or network, in particular through the rapid growth of the informal sector. Thus inter-and intra-urban relations, and those between cities and their hinterlands largely determine the evolution of these spaces. To date the “urban crisis” has been manifest primarily in the cities of the Global South. Whilst neoliberalism was posited as the solution to global development problems, the neoliberalisation of urban spaces in Africa does not seem to be capable of meeting the challenges of poverty, security and climate change and is contributory to them. Instead, it raises questions about the role of cities in the continent’s future development as they continue to become more deeply informalised. A common approach for mitigating such urban contradictions generated by neoliberalisation and globalization has been the creation of “world city” developments in Africa or heterotopias (attempts to enact utopias). The response of many city authorities to the deepening informalisation of their economies has been to try to connect to the global economy in new ways, through the creation of new financial service, high-tech and elite residential areas.

This paper explores how these neoliberal urban developments in Africa are attempting to incorporate global urban forms and the roles this is playing in the continent’s (under)development. It discusses the contradictions inherent in neoliberal planning and explores the implications for urban planning in Africa. Specifically, it explores three case studies of planned heterotopic developments under constructions across the continent, including Modderfontein (South Africa), Eko Atlantic (Nigeria) and Konza Techno City (Kenya). It shows argue that these high profile urban developments have not been about restructuring the accumulation processes within extant cities but center on new types of additive urban development which ostensibly attempt to: 1) work from a tabula rasa, and 2) on that basis forge new connections with the international economy. We characterize these planned urban developments as utopian dystopias or heterotopias not only because they are unlikely to generate substantial economic benefits in the form of job creation, linkage, multiplier and accelerator effects. But also because through their representations, micro-spatialities and external foci they discursively erase the deepening contradictions of the urban agglomerations with which they are associated. As such they are yet other examples of the unequalisation of space and class associated with global neoliberalism, even as they attempt to reverse marginalization through greater integration into the global economy. We suggest that addressing African’s urban challenges require more creative solutions than those offered by the ideationally, if not practically, defunct ideology of neoliberalism and call for restructuring the accumulation processes in ways that can unleash the growth potential of African cities to benefit the mass of residents of these cities, rather than just their elites.

References


Key Words:
The paper examines driving forces underpinning a global agenda of 'selling successful planning models' to the emerging planning markets in Hanoi City, Vietnam. In urban planning field, success stories have tremendous impacts: the eye-catching success stories not only provide hopeful testimonies for developing countries but also enforce storytellers’ competitive rationale to advise developing countries by replicating planning models elsewhere and open up new planning market opportunities abroad. In this context, sharing success stories is not merely seeking intellectual discussion, but global money-making business to promote new planning-related market opportunities. (i.e. construction, architectural design, real estate business and so on).

My research is empirically inspired by the unique case of Hanoi City in Vietnam, a global laboratory where utopian planning visions and global money-making planning business are well-integrated into local Vietnamese planning process. In June 2016, I attended a high-level conference, ‘Cooperation, Investment and Development.’ My observation was that major invited speakers were selling their ‘legends’ of successful renown planning projects by emphasizing that they can help Hanoi city to achieve this success together. These invited international planners, consultants, and city officials mostly came from the industrialized and developed Asian countries and regions where urban development had been once flourished, but suddenly became stagnant after 1997 Asian Financial Crisis: Japan, South Korea, Taiwan, Hong Kong, Singapore.

Based on this empirical observation, this paper explores two critical hypotheses: First, domestic market saturation is one of the preconditions that leads these developed Asian countries to sell the ‘success stories’ towards the relatively new and the less competitive markets. Second, Hanoi city, one of the fast-developing Southeast Asian capital cities, actively invites ‘success stories’ in order to accelerate urban development through Foreign Direct Investment (FDI) and Official Development Aid (ODA). By examining Intra-Asian connection of ‘selling success stories’ from the industrialized Asian regions to Hanoi city, I argue that ‘success stories’ is not the unidirectional colonial imposition of planning ideas; Rather, it is a strategic method of using 'success stories' as a means to mobilize global capitals towards the emerging planning markets.

To conduct this research, I use three different sets of data: first, descriptive statistics illustrate the capital flow of FDI (Foreign Development Investment), ODA (Official Development Aid), the number of foreign-funded planning projects in Hanoi City, Vietnam. Second, I analyze news articles, planning reports, feasibility reports, and aide memoirs written by the industrialized and developed Asian regions’ planning institutions. This document analysis suggests the competitive logic of ‘selling success planning models’ to Hanoi City. Third, I conduct informal and unstructured interviews with international planners and Vietnamese planners. Their explanatory narratives will synthesize the gaps between the former datasets. Findings suggest that planning experiences, indeed, are valuable assets to be shared globally. However, its rhetorical method of selling ‘success stories’ may not necessarily end up with the constructive and collaborative conversations for the future planning projects. Hence, I argue that
planning practitioners and scholars shall critically assess the impacts of circulating "successful planning models" and its implication on the overall risks and benefits in the emerging cities in Southeast Asia.

References

Key Words:
Global Economy, Transfer of Planning Model, Asian Dragons/Tigers, FDI (Foreign Development Investment), Foreign Aid

CLIMATE ADAPTATION, GREEN INFRASTRUCTURE AND URBAN CITIZENSHIP: INSIGHTS FROM MEXICO CITY
Abstract ID: 1030
Individual Abstract

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The ascent of climate change as the most critical global challenge has upended long standing ideas around cities and urbanization. Today, density, mixed land use and compact development are seen not as obstacles to growth but as indispensable components of climate adaptation strategies and an ostensible “post-carbon” city of the future. With this, a variety of green and compact urban forms and environmentally conscious lifestyles have been embraced as mainstream strategies for urban economic growth. In Mexico City, urban greening strategies have been defined by officials, experts and civil society groups not just as urgent responses to an environmental crisis but also as actions that will unequivocally improve the quality of life of the general public and generate a more inclusive city. But underneath ubiquitous green boosterism and universalist framings of urban environmental problems and solutions, evidence shows that across the globe urban greening strategies are reinforcing existing and producing new forms of inequality and displacement. Thus, urban scholarship today must work to understand not only how cities can contribute to a sustainable future but also–and just as critically–how the greening of urban spaces and lifestyles is transforming landscapes of difference, inequality and democracy in the actually existing city. This presentation draws from my ongoing research examining the practices and politics that make possible the implementation of sustainable transportation and green urban development plans in Mexico City. This work engages with insights from urban political ecology (Swyngedouw and Heynen 2003; Keil 2005), green gentrification literature (Checker 2011) and emerging debates on the public life of infrastructures (Callon, Lascoumes, and Barthe 2009; Leino and Laine 2012) to offer an answer to the following questions: How do greening agendas shape and transform processes of uneven development? How are urban citizenship landscapes altered by the eruption of new policy priorities and infrastructural technologies? How are state and non-state actors engaging in the promotion and contestation of urban greening interventions and what are the forms of
political and spatial difference that such engagements produce and sustain? Specifically, this paper discusses three main issues. First, it shows how global development actors—experts, INGOs, global philanthropy and multilateral institutions—are shaping urban agendas and local policymaking around climate adaptation. Second, the paper analyzes how greening improvements in the city are reinforcing inequalities and generating multiple forms of displacement as they enable market-led urban regeneration in Mexico City’s central districts. Third, this work reflects on the prospects for mobilization against physical displacement generated by green urban projects and the role that state and non-state actors can play in transforming the meaning of sustainability, spatial inclusion and citizen participation.

References

Key Words:
Public infrastructures, Mexico City, Climate Adaptation, Displacement, Citizenship

INSCRIBING THE STATE IMAGINATION OF THE MIDDLE EAST IN THE URBAN BUILT ENVIRONMENT AS HERITAGE-MAKING IN NORTHWESTERN CHINA
Abstract ID: 1031
Individual Abstract
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China’s current national initiative on building a new Silk Road aims at expanding its presence in Central Asia, Southeast Asia, and the Middle East for gaining access to natural resources and potential investments. This objective, especially the goal of making connections with Muslim countries in the Middle East, is reflected in urban development in Northwestern China. This paper thus looks at urban development projects in Xi’an and Yinchuan to understand how the so-called “Muslim heritage” is manifest in the urban built environment. The two municipal governments took very different approaches to feature the “Hui” characteristics in architectural designs in both urban public and residential spaces. Urban planners in Yinchuan engaged symbols including Arabic scripts, onion-shaped domes, and white marble to feature the “exotic” appeal of an imagined Islamic city. Meanwhile, the municipal government in Xi’an excavates the historic narratives of the Hui being descendants of Arab and Persian merchants to turn the everyday space of the Hui enclave into a tourist and commercial space. This paper thus seeks to
understand how the Chinese state’s vision of the Middle East becomes materialized in the urban built environment at the local level. This paper approaches this question through understanding how globally circulated models of “higher forms of Islam” (Moser 2012) are assembled by both global and local processes (Roy and Ong 2011). The Muslim heritage making in urban Northwestern China thus suggested understanding architectural designs and the urban built environment in the context of geopolitical contexts at both local and global scales.

References

Key Words:
landscape, Islam, Architecture, China, Urban built environment

THE SPATIAL SEGREGATION AND SURVEILLANCE OF MIGRANTS: THE CASE OF QATAR
Abstract ID: 1042
Individual Paper Submission

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All around the world, the movement of migrants and refugees has been subject to increasing controls. Borders have been erected and militarized; migrants have been confined to camps that are cordoned off and have been removed and deported from spaces where they are deemed illegal; and the surveillance and policing of public spaces has intensified as migration has been cast as a security risk. These efforts have redrawn built environments at the border and far beyond. This paper considers the case of Doha, Qatar, a city where close to ninety percent of the residents are migrants, and where the control of migrants has structured the spatial organization of the city. While all migrants are subject to rigorous visa controls, those employed in blue-collar jobs are barred from certain areas of the city, as well as from most public spaces. The government of Qatar has invested heavily in construction the physical segregation of workers in Doha: it is currently building gated labor camps outside the city limits slated to house a quarter of a million migrants and has contracted for the construction of separate public facilities, from malls to health clinics, for laborers. Employers have augmented this system of spatial segregation by installing GPS systems that monitor the movement of their workers, on and off the job site. Qatar can be considered a dystopian borderline case, but similar, if modulated, strategies for the control of migrants and refugees have been adopted in the United States and Europe. Because the built expression of strategies for the surveillance and control of migrant have emerged in an amplified form in Qatar, this case offers the opportunity to consider the spatial and political implications of strategies that are being enacted in more nuanced versions around the globe.

References

Key Words:
migrant workers, segregation, surveillance, Qatar

COORDINATED MEXICAN METROPOLISES: ARE EQUITY AND SOCIAL INCLUSION CONSIDERED?
Abstract ID: 1079
Individual Paper Submission

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Intergovernmental relationships among the three levels of government in Mexico (federal, state, and local) have been slowly but steadily changing, allocating more powers to the local level. A series of political events lead to the belief that the political arena is ripe for a new kind of state-municipal approach to the planning process for managing growth in large cities: metropolitan coordination. This approach includes a new growth management strategy in which state and municipal efforts are coordinated, the federal government is involved but also organized citizen groups are becoming influential in decision making. This study provides a contextual framework and empirical evidence to understand the causes behind the structure of laws and policies on urban and territorial management which have been adopted by the Mexican states from 1970 to 2016, and at the same time presents readers with the different settings of equity and social inclusion within planning processes in metropolitan areas which are related to poor governance and institutionalized exclusion and marginalization of certain groups. In order to explain this framework, an analytic four step strategy was followed in the research: context and background descriptions, review of enacted laws, implemented urban development plans, and evaluation and analysis of their effects. This “chain of evidence” is used to explicate two case studies in a narrative sequence. Selected case studies included the state governments of Jalisco and Nuevo Leon. These states experienced strong growth pressures since the 1970s and also allocate the second and third largest Mexican metropolises: Guadalajara and Monterrey. Commonalities and differences between the two states and their metropolitan areas became major findings of this study and set the basis to determine five historical phases as a framework for understanding Mexican policies for metropolitan areas paired with equity and social inclusion issues: 1) State Experiences in Urban Planning, the Planning of Capital Cities, and Neglect of Small Municipalities (1930’s-1975); 2) Federal Revolution in Urban and Regional Planning Controls (1976-1982); 3) State Resistance to Municipal Planning by Federal Decree (1983-1992); 4) Municipal Governments’ Planning Responsibility and Fragmented Decision Making in Metro Areas (1993-2007); 5) State and Municipal Coordination and Governance in Metropolitan Areas with a little help from the Federal Government (2008-2016). Finally, the article includes future scenario possibilities after the recent passage of a new federal law on Human Settlements which establishes a standard national framework for metropolitan planning.
In this paper, I will explore the conceptual relationship between planning and violence in contested cities in the Global South and Global North. How is the apparatus of planning being used in contexts of conflict and its aftermath? Despite the fact that the profession of urban planning has been critiqued as the tool of the powerful—that of the state, capital, and dominant groups (Harvey 1996)—to shape urban spaces in their images, hopes have remained high on the ability of the field to make cities better places. Urban planning for many is therefore a hopeful exercise. It is a medium through which to order the present for a better future that promotes co-existence, protect minorities, and safeguards the environment. Planning has been called upon to “order” European cities after the World War II, and it is nowadays used in cities like Bogota, Colombia (Perez 2015) and Luanda, Angola (Gastrow 2017) to construct different imagined futures in the aftermath of war.

However, planning could also be itself a tool of violence in (post)conflict contexts. Based on my field research in Beirut, Lebanon, the paper will show how planning discourses and practices straddle the tension between the political, the technical, and the violent. By being simultaneously a tool of pacification, of conflict, and of development, urban planning practice has transformed Beirut’s peripheries into contested areas characterized by environmental degradation and ongoing cycles of violence. They produced patchworks of planned spaces that could provide low cost housing but also have overlapping industrial and residential zones, towns where highways are never finished, and playgrounds that are never built.

This paper therefore does not take on the teleological narrative of planning as a chartered trajectory of progress towards a definitive “better” future, and it does not assume that planning is inherently “good” (Yiftachel 1998; Roy 2002). Planning and its relationship to violence is instead assessed based on defining planning as “simply a phenomenon to observe and engage with which may be good or bad in specific instances of planning practice” (Flyvbjerg 2004). In contested cities, the outcomes of planning are not always that of improvement and betterment for everyone, but that the repercussions of planning for a section of the population may be that of oppression, control, violence, environmental crisis, and worse living conditions.
PLANETARY GENTRIFICATION AS NEOCOLONIAL PROCESS: KOREAN LARGE-SCALE RESIDENTIAL PROJECTS IN HANOI

Abstract ID: 1140
Pre-Organized SEssion: ASEAN at 50: Planning, Real Estate, and Transnational Urbanism

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Lees, Shin and Lopez-Morales (2016) have built upon the ideas of Lefebvre, Smith, Merrifield, and Brenner and Schmid to argue that gentrification is the cutting edge of urbanization worldwide. As a planetary process, gentrification has become an economic engine in its own right, suggesting that the second circuit of capital (the built environment) has gained an independent---if not dominating---role in the expansion of capitalist production. Thus, if earlier forms of colonialism were dependent on exploitative production in the first circuit of capital, it is now appropriate to ask whether or not neocolonialism is becoming more dependent on the second circuit, how the two circuits work together, and how they are locally transformed or resisted. This paper seeks to address these issues through an investigation of Korean investment in both production and construction in Hanoi.

Korea is the largest of many global capital investors in Vietnam. Over the last two decades, Korean firms have offshored production of everything from garment manufacturing to high-end electronic goods assembly to purpose-built special economic zones in and around Hanoi. Members of the Korean managerial class have moved to Hanoi to manage these firms, often bringing their families with them. Meanwhile, rapid economic growth has raised incomes in Vietnam and generated demand for higher quality housing. To respond to this new market demand, Korean real estate investors have operated in parallel to build Korean-style housing for both comparatively wealthy Koreans and Vietnamese, positioning these developments as gentrifying projects. These developments have typically taken the form of large-scale residential projects, either high-rise apartment complexes or complete, self-contained new towns, forms which differ radically from those Hanoi inherited from French colonialism. Drawing on Hardt and Negri’s notion of Empire (2000), this paper argues that though the built form is new, this large-scale transnational gentrification reflects colonial processes, implying perhaps that even domestic gentrification is fundamentally a process of colonization. Then, drawing on surveys, focus group interviews with apartment residents, and interviews with real estate agents, government officials, and academics conducted over the past year, the paper offers two empirical contributions. First, it
demonstrates how the combination of production and residential developments have reshaped Hanoi's urban form, contributing to a westward shift of the city's center of gravity. Second, it explores how Korean developments are shaping and being shaped by Vietnamese lifestyles. The findings suggest (a) that foreign-built apartments have become investment vehicles for older Vietnamese and aspirational lifestyle commodities for younger, entrepreneurial Vietnamese and (b) that Vietnamese cultural preferences for ventilation and feng shui conflict with the culturally embedded floor plans of imported designs.

References


Key Words:
planetary gentrification, transnational urbanism, Korea, Vietnam, large-scale residential projects

GLOBAL REAL ESTATE, INTERNATIONAL GATING, AND THE PRODUCTION OF TRANSGRESSIVE URBANISM AT SINGAPORE’S EDGES

Abstract ID: 1141
Pre-Organized Session: ASEAN at 50: Planning, Real Estate, and Transnational Urbanism

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How is transnational space planned and developed? The rise of globalization and neoliberalism over the last half-century has precipitated widespread “state re-scaling,” in which functions conventionally associated with sovereign nation-states are re-scaled up to transnational institutions and down to urban and regional governments. But most empirical studies of global real estate and planning are still framed within the territorial sovereignty of nation-states. This paper seeks to break out of this territorial framework to investigate how transnational urban space is produced. Are there distinct urban spaces where transnationalism lands on the ground? What professional and everyday practices produce these spaces? And how might these spaces rework conventional understandings of citizenship and sovereignty?

Singapore provides an ideal context in which to investigate these questions. As an island city-state, Singapore’s urban networks inevitably spill across its national borders, connecting with neighboring Malaysia and Indonesia. The paper investigates two real estate developments that are located close to Singapore’s borders: Forest City in Johor, Malaysia, and Funtasy Island in Batam, Indonesia. In order to facilitate the transnational flow of capital across these borders into their developments, Forest City and Fantasy Island first had to facilitate the transnational flow of people. Through interventions in infrastructure, management, and marketing, these developments have made it easier for investors to move back-and-forth to Singapore (both materially and perceptually) while simultaneously excluding local inhabitants. Comparable to gated residential estates, these new transnational spaces are accessible.
to those who possess transnationally mobile capital but inaccessible to other citizens with conventional territorial claims.

Based on semi-structured interviews with developers, buyers, and local residents conducted in 2016 and 2017, as well as analyses of marketing materials and media reports, the paper investigates the planning, development, and marketing practices that produce these new transnational spaces. Three distinct but related strategies are identified: (1) By portraying the islands as simultaneously part of multiple distinct national territories the developments engage in a politics of selective inclusion. In a “best of both worlds” strategy, the developments are portrayed as simultaneously in Singapore and either Malaysia or Indonesia. This allows the developments to engage in a process of regulatory arbitrage—in which the islands are planned and developed more easily and cheaply than they could be in Singapore, while still participating in the Singaporean real estate and capital markets. (2) By building new infrastructures, management regimes, and border crossings the developments erode the materiality of national borders and blur the distinctions between national territories. These interventions produce new cross-border spaces of exception, in which developers and investors can escape certain national regimes of discipline and control. And (3) by displacing and effacing local populations, the developments exclude pre-existing territorialities. This process effectively erases existing sub-national territorial claims, de-territorializing existing inhabitants in order to make way for the new forms of transnational space created through strategies (1) and (2).

References


Key Words:
Singapore, Southeast Asia, transnationalism, gating, real estate

PLANNING FOR DEVELOPMENT: TRANSNATIONAL URBANISM AND THE TRANSFORMATION OF CROSS-BORDER CITIES IN CHINA AND MYANMAR

Abstract ID: 1142
Pre-Organized Session: ASEAN at 50: Planning, Real Estate, and Transnational Urbanism

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The two border cities, Ruili in China and Muse in Myanmar, have been designated as new frontiers to promote regional economic integration between these two countries. The central government in both countries highlight the geostrategic significance of these two border cities and grant them a lot of preferential policies for the purpose of trade promotion and economic development. In the case of Ruili-
Muse cross-border regions, the transnational division of labor allows Ruili to attract abundant Burmese labors working for manufacturing factories and service-oriented position, but products made in Ruili can export through Muse to serve northern Myanmar or target the Chinese market. The growth dynamics is built upon horizontal linkages, but ascends spatial scales from the local through the regional and the transnational. Using the term ‘planning for development’, I attempt to analyze the pivotal role played by the states in creating new space of development to facilitate the process of capital accumulation.

Writing about sovereignty in an age of neoliberal globalization, Ong (2006) argues that conventional views that the state is a political singularity resting on a bureaucratic administration order which maintains sovereignty and legitimacy should be challenged and rethought. In addition, the rise of Asian developmental states epitomizes the synthesis of government and business to secure legitimacy on the basis of these states’ ability to promote and sustain development rather than democratic elections. In many East Asian economies, as Ong (2006: 77) puts it, “market-driven logic induces the coordination of political policies with the corporate interests, so that developmental decisions favor the fragmentation of the national space into various noncontiguous zones, and promote the differential regulation of populations who can be connected to or disconnected from global circuits of capital.”

Showing a different formulation from conventional views, Asian development states have to be conceptualized as an ever shifting institutional ensemble of planning, operations, and strategies increasingly deduced by their development-oriented neoliberal spirit to mediate and combat neoliberal globalization in the world at large. One of the important spatial strategies is to create spaces of regulation and operation where the developmental states can implement political economic experimentation to dovetail sub-national regions into global economy. Ong (2006) uses “graduated sovereignty” to describe this strategy through which nation states rescale their power across the national landscapes and impose differentiated regulations on diverse groups of citizens and foreigners. Observing that the Chinese state implemented special economic zones as spatial strategies to accelerate economic development in China’s coastal region, Ong further argues that strategies of reterritorialization and rescaling become vital “not only in stimulating markets in border zones but also in accommodating space of variegated governance” (2006: 100).

Drawing on Ong’s work on graduated sovereignty, I develop the concept of cross-border cities as a subset of transnationalism to describe the highly circumscribed social and economic relations that often emerge from cross-border trade and migration on a local scale. Furthermore, cross-border cities encompasses the notion of translocal sociality linked to transnational trade and migration though which sociocultural and economic flows take place to create hybridized transnational landscapes on both sides. By focusing on Ruili and Muse, this paper advances the theoretical debates on cross-border regions and transnationalism. Specifically, this paper examines three topics: transnational division of labor activated by Chinese investors in Muse and Burmese manual worker in Ruili, economic transformation in Ruili and Muse driven by transnational trade, and the reconfiguration of transnational urbanism.

References


Key Words:
transnational urbanism, cross-border trade, regional integration

WHEN PLANNING IDEAS LAND: THE DEVELOPMENT OF A GROUNDED PLANNING METHOD IN SRI LANKA
Abstract ID: 1143
Pre-Organized Session: ASEAN at 50: Planning, Real Estate, and Transnational Urbanism

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European colonialism has a powerful impact on urbanism and planning across the world. They are well studied: In addition to colonial urban development (King 1974), a field of postcolonial urbanism also emerged in the 1990s (King 2003; Yeoh 2001). As a contributor to both of these, I opt to investigate planning practices that went beyond the colonial reach, from the ground, but in relation to the flow of ideas from the West.

I will examine the largest development project in Sri Lanka, the Mahaweli Project, both funded, planned, and designed by foreign professionals. I will focus on how the planners of the Mahaweli Architectural and Planning Unit developed their own planning method to suit local conditions and reshaped the urban environment through new conceptualizations of spatial transformation. Responding to Healey's (2013) call for greater attention to transnational planning processes outside the West, I will relate this to other larger contexts of the panel, particularly the work of Roy and Ong (2011), Watson (2009; 2016), and Shatkin (2008).

References

Key Words:
Asia, Mahaweli, postcolonialism, Transformative, Third Spaces

PLANNING AND GOVERNING PERI-URBAN AREAS IN ASIA
Abstract ID: 1144
Individual Paper Submission

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This paper is both a research paper and a review paper summarizing existing knowledge about the emerging field of peri-urban planning in Asia. It synthesize the author’s current research on planning and governance of peri-urban areas in China and compares and contrasts his findings with new
information from 19 as yet unpublished papers by scholars from 9 Asian countries presented at a conference organized by Tongji University (China) and the East-West Center held in Shanghai in May, 2017.

Central theme
The central theme of this paper is that a coherent set of planning and governance principles can and should be developed to plan and govern peri-urban areas of Asia. Peri-urbanization—the process by which urban fringe areas become fully urban—is a complex issue. Theory about the nature of Asian peri-urbanization is fragmented. Planners, geographers, economists, sociologists and others offer different explanations of what periurbanization is, why it occurs, and how planners and government officials should respond to it. This paper will help synthesize what is known and advance understanding of peri-urban planning as a category.

Approach and methodology
The paper combines (a) the author’s quantitative statistical and spatial analysis of secondary data and qualitative field research based on observation, interviews, surveys, and content analysis of plans and policy documents related to peri-urban areas in Shanghai, Suzhou, Chengdu, and Chongqing China, and (b) a literature review based on as yet unpublished papers from the Tongji-East West Center Asian regional conference on peri-urbanization written by scholars from China, India, Pakistan, Bangladesh, Indonesia, Vietnam, Japan, Korea, and Cambodia. The author helped organize the conference and chaired the concluding roundtable discussion.

The paper will compare and contrast the Chinese experience with the experience of other Asian countries. It will present a typology of different types of peri-urbanization and peri-urban planning models and program responses. The paper will pay particular attention to the purpose and effectiveness of China’s two major pilot programs impacting peri-urban areas—coordinated and integrated urban-rural development programs—and other recent planning initiatives in China such as large city cluster (LCC) plans.

Relevance to planning education, practice, and scholarship.
This paper is relevant to planning education, practice, and scholarship not only in Asia, but worldwide. Peri-urbanization is a global phenomenon, occurring in South America, Africa, and other developing regions as well as Asia. Many case studies exist and many plans and policies address aspects of peri-urbanization such as studies of growth management, density, economic and spatial equity, transit-oriented development, environmental protection, and food security. But systematic analysis of both planning and governance to implement plans is weak. This paper will help advance knowledge in this emerging area.

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Land management tools such as land readjustment (LR) measures are instruments designed to intervene in urban land markets and guide development processes with the purpose to promote a more equitable and sustainable urban development according to the local characteristics and regulations of cities in different regions of the world. Although the Latin American experience with land management tools and LR measures is well documented, few studies have been conducted looking at the effects of this type of tools on real estate markets, the provision of affordable housing, the generation of pedestrian friendly compact urban forms and the impacts of accessibility benefits when implemented in areas served by mass transit. What are the land management tools effects on real estate markets? How land management tools influence real estate markets on areas served by BRT systems? What are the unintended consequences of land management tools in the distribution of costs and benefits of urban development? This paper answers these questions through a quasi-experimental research design by looking at real estate projects in treatment areas within land management tools polygons known as partial plans in relation to real estate projects located in control areas with traditional development procedures. The data analysis conducts a difference in difference model between real estate projects in treatment and control areas developed during the last decade with similar built environment characteristics in development areas of Bogota. This paper estimates the effects of partial plans by looking at changes on real estate development projects over time focusing on property values, housing supply issues, urban forms and provision of non-motorized transport infrastructure, accessibility and timing dynamics on land development projects. This paper seeks to inform policy and decision makers regarding the intended and unintended consequences of land management tools known as partial plans implemented in Bogota during the last decade.

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NEIGHBORHOOD-SCALE SOCIAL INFRASTRUCTURE AND SOCIAL INTEGRATION OF MIGRANT POPULATION IN CHINA: EVIDENCE FROM A TWELVE-CITY MIGRANT SURVEY
Abstract ID: 1158
Individual Paper Submission
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A large literature has heavily documented the marginalized experiences of migrant populations in Chinese cities. However, scholars largely focused on formal institutions – such as the hukou system, and informal mechanisms – such as social networks that may promote economic, social, and psychological integration of migrants in the urban context. These studies, while valuable, have only indirect planning implications, as little knowledge is offered with respect to the role of service and infrastructure planning in migrant’s social integration. Public services and facilities – planned and provided at the neighborhood scale - offer diverse venues and milieu in which migrants, as marginalized as they are, can enjoy the “publicness” and “inclusiveness” of urban life, thus stimulating social interaction and integration.

In this paper, I utilize data derived from a twelve-city migrant survey to investigate the extent to which neighborhood-scale social infrastructure facilitates inter-group social interaction of migrant populations, thereby strengthening their sense of place attachment. Controlling for housing sources, migration history, and socio-demographic variables, statistical analysis is employed to test the following hypotheses. First, a migrant tends to interact more frequently with local residents if living in a neighborhood with convenient accessibility to services and facilities (e.g. shopping, cultural-leisure, schools, hospitals, and bus stations), and if living in a neighborhood that offers better community public space and cleaner and safer environment. Second, whereas service accessibility may not be a strong predictor for place attachment, a rural migrant tends to express a stronger sense of attachment to the community and the host city if living in a neighborhood with better social and physical environment.

I believe that this research contributes to the scholarly understanding of the social mechanisms of urban integration of China’s migrant population, as well as enlighten current infrastructure planning and neighborhood design to promote inclusive urbanization in China.

References

Key Words:
Neighborhood, Rural-to-Urban Migrant, Social Integration, China
INTERPLAYS OF URBAN HERITAGE CONSERVATION AND THE GOVERNANCE OF INFRASTRUCTURE: THE CASE OF AMRITSAR (PUNJAB, INDIA) AND THE HRIDAY PLAN
Abstract ID: 1166
Individual Paper Submission

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Introduction and Research Questions:
In 2015 the Government of India’s Ministry of Urban Development launched the national Indian Heritage City Development and Augmentation Yojana (HRIDAY) program to fund the development of urban infrastructure in 12 dedicated “heritage cities” across the country. As stated by the official website, the HRIDAY program uses historic preservation as a mechanism to structure and achieve goals of comprehensive urban upgrading, infrastructure development, and economic development. The site of this research paper is the 18th century walled city of Amritsar, Punjab in northwestern India, as one of the twelve heritage cities earmarked to receive Rs. 69 crore (10 million USD). Amritsar is the central pilgrimage destination of the Sikh religion and home to Harimandir Sahib, the monumental, architecturally significant gurdwara located at the city center.

Outwards from the Harimandir Sahib, Amritsar is composed of labyrinthine residential streets of diverse architectural styles. In these residential areas the lack of waste and sewage management, stress on housing by population growth, and public health vulnerabilities, particularly for children, are debilitating. While there are residential areas included in the Amritsar HRIDAY plan, the bulk of investment is being made in the construction of monuments and the rehabilitation of municipal buildings immediately surrounding the Harimandir Sahib, driven by interests in tourism and the desired status of Amritsar as a global “Smart City.”

While it is a compelling national program that puts heritage at the center of urban development, my argument is that the enactment of historic preservation expertise is complicit in reinforcing asymmetries of municipal investment. Ananya Roy has examined the enduring urban crises of Indian cities stemming from fast-paced growth and lack of adequate infrastructure to argue that “informality” is not only an attribute of urban poverty, but that India's urban planning regime is itself an “informalized entity” characterized by deregulation, ambiguity, and states of exception. The purpose of this research is to examine the enactment of historic preservation in urban development plans and the reciprocal influence of material culture on the framing and performance of development goals, particularly in terms of governmental responsibility to equity in the provision of infrastructure.

Approach and Methodology:
This paper utilizes document analysis and critical discourse analysis to interpret the HRIDAY urban planning documents as representations of the national program; its definition of problems and solutions for Amritsar; and the constellation of networks between national, state, and municipal governments, foreign development firms, and heritage conservation organizations. The research also utilizes data from conducted architectural surveys and the literature on Amritsar’s urban infrastructure to historicize the city’s uneven development and existing conditions.

Findings:
Historic preservation and tourism are being used as framing devices to make distinctions between what projects are considered priorities and manageable, when there is no inherent rationality to long-term investments in monuments over municipal staff or comprehensive engineering studies. Utilizing
anthropologist, Hannah Appel’s theoretical framework of “entanglements,” spectacular infrastructure objects are being used by the state – in this case monumental historic buildings- to disentangle governance from responsibility for critical infrastructure deficiencies plaguing the majority of the city. My central finding is that the construction of monuments and enlistment of façade-oriented historic preservation is in part a performance that enables “abdication of responsibility” for the more holistic provision of sewage, water, and waste management in areas that are physically crumbling.

Relevance:
Literature on the interactions of historic preservation and governance is limited, although the development of historic preservation practice is intimately tied to the emergence of modern international relations and global governance structures (Winter, 2016). Studies instead have privileged the examination of the histories of preservation within nation states or the deconstruction of the language of international heritage declarations to analyze if common guidelines are being carried out at the local level. Through the theoretical frameworks of ICOMOS and UN Habitat there is the potential for historic preservation to bolster inclusiveness in urban upgrading by the coupling of physical and social preservation.

References

Key Words:
Urban Development, Historic Preservation, India, Infrastructure Upgrading, Informal Settlements

(De)centralization of Planning Authority and Uneven Community Responses to State-Led Redevelopment: An Analysis of Three Urban Renewal Projects in Turkey
Abstract ID: 1171
Individual Paper Submission

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This paper studies the relationship between (de)centralization of planning power and the local community responses to ongoing state-led urban renewal projects in Turkey. Turkey’s ambitious redevelopment program encompasses individual neighborhood-scale renewal projects in several cities across the country. Central government runs this nationwide urban renewal agenda based on government programs and legislations enacted in the parliament. However, central government occasionally delegates the administrative authority and/or decision-making power to local governments to pursue their local urban renewal agendas. This paper studies three neighborhoods going under urban renewal by comparatively analyzing these planning environments. These neighborhoods are in Adana, Bursa and
Izmir, which are three major metropolitan areas in Turkey. The variation among the local community responses to top-down impositions of large-scale urban renewal projects are analyzed in the context of arbitrary delegation of centralized planning authority to local governments. There are two major findings of this study. First, exclusion of the local government from the planning process gives rise to power vacuums at the local level, and these power vacuums facilitate residents’ collective response in the form of resistance to state authority. Second, decision-making power can be further delegated from local government to grassroots if local government and residents have common interests in redevelopment. This paper concludes that neighborhood organizations are sporadic bottom-up responses to state-led urban change, which have a multifaceted relationship with division of planning power between central and local government.

References


Key Words: decentralization, urban renewal, neighborhood associations, Turkey, recentralization

**HOW DO SLUM-DWELLERS CHOOSE UPGRADING STRATEGIES BETWEEN MULTIPLE OPTIONS?: COMPARISON BETWEEN IN-SITU UPGRADING IN YOGYAKARTA AND RESETTLEMENT IN SURAKARTA, INDONESIA**

Abstract ID: 1222
Individual Paper Submission

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Slums or informal settlements in developing countries typically have high density, substandard infrastructure, and insecure land tenure. The lack of security of tenure often prevents slum-dwellers from investing in their housing and neighborhoods. Accordingly, slum upgrading policies address this issue through security of land tenure or the perception of security for slum-dwellers. We, however, do not adequately understand the different ways and forms of improving slums and achieving security of land tenure.

Indonesia has a rich history of improving slums through the Kampung Improvement Program (KIP). KIP, however, has been criticized for its top-down and supply-driven approach (Tunas and Peresthu, 2010; World Bank, 1995). To address these criticisms, Indonesia has started a new generation of decentralized slum upgrading projects. The recent upgrading projects in Yogyakarta and Surakarta belong to the new generation of decentralized upgrading. Slum-dwellers in Yogyakarta and Surakarta, two mid-sized cities in Central Java, Indonesia, leveraged a small, flexible five-year international grant
in collaboration with local community-based organizations (CBOs) and NGOs. While the people in the two cities received the same financial support and cooperated with the same local NGO, their strategies and processes were different: Slum-dwellers in Yogyakarta chose on-site improvement while those in Surakarta agreed to relocate to alternative sites on public land.

People living in the riverbank informal settlements of Yogyakarta successfully utilized the four core components of the external support — financial resources, technical expertise, knowledge and experience, and peer connections. They also obtained a better understanding of the bottom-up process and expanded their network with other slum communities throughout the region. However, despite their success in upgrading, the new bottom-up approach also displayed some limitations. Residents still do not have secure land tenure, and received marginal government support only for infrastructure improvement. In Surakarta, however, instead of in-situ upgrading, however, 46 households from five communities relocated to a Rumah Renteng (communal row housing) and obtained a 25-year lease of two publicly-owned sites.

This research focuses on why and how slum-dwellers adopted these different strategies. It aims to understand under what conditions slum-dwellers prefer in-situ upgrading over relocation or vice versa. I hypothesize that in addition to secure tenure, relocation provided them with better housing as well as infrastructure than in-situ upgrading. I also hypothesize that the local government’s attitude on land regulations was also critical for slum-dwellers and local NGOs to choose a more desirable strategy within the limited timeframe. I employed qualitative research methods to verify these hypotheses. Data were collected and analyzed through observations and open-ended, semi-structured interviews with various stakeholders, including slum-dwellers, local NGO staff, and government officials. The first fieldwork was conducted from July to September in 2016, which will be followed by additional two-month summer fieldwork in 2017. In addition to field observation and interviews, the donor agency’s yearly reports, meeting proceedings and other publications were also reviewed for analysis.

The findings provide several implications for our understanding of slum improvement schemes in the Global South. This research illustrates that slum-dwellers, when having discretion, find the ways of maximizing the external support and minimizing internal conflicts. Local NGOs help open the dialogue with the government and figure out legal and technical difficulties in moving forward. The roles of CBOs and NGOs are also important in resolving conflicts and differences between households when promoting either in-situ upgrading or resettlement. These findings will also be useful for Indonesia, where the national ambitious zero-slum vision of “100-0-100 (100 percent access to water, 0 percent of slum areas, and 100 percent sanitation access across the country by 2019)” is implemented, and other countries in the Global South.

References

Key Words:
slums, informal settlements, in-situ upgrading, resettlement, Indonesia

THE ELUSIVE RAINBOW CITY: SEGREGATIONIST PRESSURES ON SPACES OF SOCIAL MIXING IN JOHANNESBURG
Abstract ID: 1239
Individual Paper Submission

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The end of apartheid in South Africa heralded an era based on the ideals the phrase rainbow nation encapsulates. South Africa was to be a nation that embraces differences and builds on diversity. Nearly a quarter century later, that vision is tarnished. Xenophobic attacks, state duplicity and violence, and high inequality all contribute to South Africa’s slow progress. This paper sheds some light on the factors that hinder the realization of a rainbow nation with a focus on the evolution of Johannesburg’s landscape of spatial inequality in the post-apartheid era.

I examine the evolution of segregation in Johannesburg through the lens of residential mixing, the creation of spaces that include residents of many ethnicities, nationalities, and income levels. I argue that post-apartheid urban developments are threatening these spaces which appear to be shrinking. The city’s rapid economic and population growth paired with the government’s focus on severely disadvantaged areas in isolation from the rest of the city lead to the growth of spaces that are either economically or racially homogenous at the expense of interstitial spaces of mixing.

I support this argument using a mixed method case study of Johannesburg. First, I trace the trajectory of three neighborhoods with long histories of mixing: Central Johannesburg, the Western Areas, and the Old South. These areas’ diversity persist despite several waves of systematic displacement and physical separations. Historical evidence highlights the role of migration and class structure in shaping the kind of diversity that exist today and its limitations. Local narrative highlight the tenuous balance that underlies diversity. In most cases, areas that are highly diverse retain important divisions that operate at the regional and national scale. Those faults are critical to the evolution of neighborhoods as they can tip their development towards losing one or more dimension of diversity.

Second, I substantiate this analysis with census data from the years 2001 and 2011. I use spatial entropy indexes to show that while racial segregation decreased dramatically it remains extremely high, and that income segregation decreased only modestly. Importantly, the measure of the two dimensions together has remained stable. This implies that growth has pushed the diversification of many neighborhoods but only along one of the two dimensions. Neighborhoods, particularly when I define them at a larger scale, tend to sort either on income or race. I complement these general results with a more refined spatial analysis to locate the shrinking borders of the focus areas discussed above and document the large scale sorting changing the configuration of the city.

I conclude with a brief discussion of the implications of the trends towards large scale homogenization in Johannesburg for the study of segregation more broadly. The study is embedded in the South African context, but draws from frameworks developed in the Global North. I reflect on potential pitfalls associated with this transfer of frameworks and use this as an opportunity to advocate for the utilization of the parallels that exist between South Africa and United States to develop a comparative research agenda.
References


Key Words:
Segregation, South Africa, neighborhood change, residential mixing

URBAN INFORMALITY AND PLANNING CHALLENGES: A CASE STUDY FROM PATNA, INDIA

Abstract ID: 1253
Individual Paper Submission

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Urban dwellers in India represents about one-third of the total population of the country. As per Census 2011, there are 53 urban agglomerations in India with a population of a million or more, a rise of 50% in 10 years. This unprecedented pace of urbanization has caught India unprepared and has resulted in mostly unplanned growth. Mass migration from rural areas due to a loss of productivity in agriculture has caused a huge expansion of informal settlements in cities.

In India, informal settlements or slums are defined as densely populated residential areas with dwellings unfit for habitation. Slums often lack basic services such as electricity, sanitation, drinking water, etc. Slum population in India has risen between 2001 and 2011 from 53 million to 65 million and expected to cross 100 million by 2020. Slum dwellers move to cities in the hope of better socio-economic outcome and mostly to come out of the poverty. This belief is consistent with the ‘modernization theory’ of slums which describes slums as a transient phase of growing economy as economic growth eventually helps slum dwellers to move into formal settlements (Glaeser 2011; Turner 1969). As per the city development plan (2010-2030), Patna has 108 slums, though latest estimates (2015-2016) show more than 125 slums in the city. The state government has put forward a slum policy which aims to provide basic facilities in selected slums in Patna. The government of Bihar’s slums policy is heavily influenced by principles of urban planning. A proper implementation of the plan can ensure planned urban housing for poor.

This research undertakes the dual task of testing a theory and evaluating the outcome of slum policy for urban poor. This paper tests the ‘modernization theory’ using primary data on socio-economic outcomes of 225 slum households in Patna, Bihar. Patna is the capital of Bihar which is the least urbanized state in India (just 11% urbanization against 31% for all India), although it has the highest density of population in the country along with the population growth rate. Bihar is also one of the poorest states in the country but it has managed to achieve double digit growth since 2004-05. Mass migration, acute poverty, and consistent high but unplanned growth in Bihar presents a natural experiment to test the ‘modernization theory’ and as well to undertake an evaluation of policies implemented in last 10 years.
This research focuses on the slums in Tier 2 cities, most of the previous research on slums has focused on Tier 1 cities with little or no discussion on small and medium cities. Understanding the effectiveness of policies aimed at informal settlements will help planners, policy makers, and civil society to formulate and implement appropriate policies for urban poor to achieve more inclusive and sustainable cities.

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Key Words:

URBAN DECLINE AND SHRINKING CITIES IN CHINA
Abstract ID: 1285
Individual Paper Submission

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Many factors have led to the shrinking of cities worldwide. The most significant causes include: the monolithic nature of economic resources and structure, dwindling employment of post-industrialization, the transition of political governance, and trends of suburbanization (Beauregard, 2009; Bernt, 2016).

While China has witnessed tremendous urban growth over the past three decades, some cities have experienced demographic and economic contraction, contrary to China's mainstream story of growth. Between 1990 and 2000, a total of 143 cities with populations over 100,000 in developing countries experienced urban shrinkage; 50 of them were in China. (Gao and Long, 2017). Yet, there have been limited literature focusing on the phenomenon of Chinese urban shrinkage, let alone systemic research on the concept, typologies and potential planning policy for responding to the shrinkage of cities in the Chinese context.

This paper aims to address this gap and develop a better theoretical and empirical understanding of the differences and similarities within and between Chinese shrinking cities and those elsewhere in the world. It attempts to search for urban policy recommendations and planning strategies to address the conditions of urban shrinkage in China and beyond.

Toward these ends, the paper first examines the theoretical work on shrinking cities, clarifies the concept of urban shrinkage based on the multi-layered administrative formation of Chinese cities, and addresses how the household registration system underscores the need for a more nuanced approach to defining urban shrinkage in China. It then analyzes selected case studies of shrinking cities with a focus on their historical formative processes, economic trajectories and consequential spatial characteristics amidst rapid urbanization. There are three main types of shrinking cities in China: postindustrial cities of the northeast region, such as Yichun and Jilin, that bear the consequences of China’s transition from a
planned economy to market operation and manifest urban trajectories similar to those of “rust belt” in the US; cities of provincial capitals and regional centers in the north, such as Zhengzhou and Tianjin, that spearheaded new town developments in suburbs with the intent of utilizing real estate as a growth engine and led to shifts of demographics and resource relocation which resulted in the shrinkage of old cities; and cities of the hinterland along the Yangtze River, such as Liuyang and Changning, where mismatched labor and resources are weakening the competitive industrial structure and causing urban decline.

For each case study, through data collection and mapping of urban vacancy conditions, the relationship between urban vacancy and shrinkage of the selected cities is examined, with the aim of linking shrinkage to the spatial production process, providing a physical basis for understanding the spatial urban conditions generated by shrinking cities. Through these case studies, a metrics of urban conditions is proposed and a detailed analysis and empirical examination is conducted to suggest solutions for addressing demographic, economic and physical contraction processes in China. By analyzing the feasibility of these solutions and recommendations in the Chinese context, this study provides a unique perspective into urban decline and shrinking cities and highlights how preparedness, resilience and consideration of social dimensions need to be addressed in urban policy and planning strategies, both in China and beyond.

References


Key Words:
Shrinking Cities, Urban Decline, Urban Regeneration, Urban Planning Strategies, Urbanization Process

URBANIZATION AND POLITICAL TRUST : THE CASE OF CHINESE RURAL-URBAN MIGRANTS
Abstract ID: 1303
Individual Paper Submission

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This article discusses the effect that rural-urban migration and diversity resulting from it may be having on people’s trust in government. What explains the difference in people’s trust in government before and after they migrate to cities? This article examines this questions in China, employing data from a large-N (33,160 individuals) panel survey -- China Family Panel Study (CFPS) conducted from 2008 to 2016, to seek both macro- and micro-level causes and consequences of rural-urban migrants’ declining political trust.
Specifically, this article provides a multi-level mixed effects models with individuals nested within communities. After controlling for all socio-demographic characteristics by employing propensity score matching (PSM), this model elaborates a negative relationship between migrant status and political trust. Migrants and their rural counterparts grant or withhold political trust in different ways. Four sets of factors influence migrants’ political trust in distinguished ways compare to their rural counterparts. The first set of factors are evaluations of performance of political actors and institutions. The second set of factors are education and socialization. The third set of factors are social group differences including gender, individual total income, household size, age, ethnic groups, marital status, and religious or not, political partisanship and membership in political organization. The fourth set of factors are Community contextual factors including average income, housing price, percent of migrants in the community, population density of the community, whole population in the community.

There are three striking patterns found in this study. (1) For rural-urban migrants, their trusts in government positively correlate with their evaluation of the performance of political actors and institutions. For their rural counterparts, however, there is no statistically significant correlation between performance evaluation and political trust. (2) The findings in this article clearly suggest that the effect of education on political trust is context specific. Among rural-urban migrants, more educated people generally have less trust in government, compared to their less educated counterparts. But higher-educated rural residents intend to grant stronger trust in government compared to their lower-educated counterparts. (3) All community-level factors positively correlate to migrants’ political trust, which implies that migrants’ political trust is context based.

This article shows that rural-urban migration is as much as a political-socialization process as it is a demographic, economic, territorial and social process. It redefined the nature of work and the concept of individuals. It modified migrants’ relations with other citizens and the local and central government. It also transformed the political identities of individuals and societal organizations. Conceptually and empirically deconstructing the urbanization’s effects on migrants’ political attitudes can help scholars unpack the political-socialization implication of urbanization. The ways how the various dimensions of urbanization interactively affect political attitudes of rural-urban migrants in developing nations should call planning scholars’ attention.

References

Key Words:
Political Trust, Urbanization, Rural-Urban Migrants, China, Government Performance

HOW CAN RAINWATER HARVESTING BE IMPLEMENTED IN THE UNITED STATES?
Abstract ID: 1335
Increasing water use per capita in the U.S., among other factors, has led to a severe threat of water scarcity across the country, regardless of climatic conditions (Kloss, 2008, 1). Rainwater harvesting has been promoted as a prime water conservation method throughout the world (United Nations Environment Programme, 2002). While the U.S. EPA, the American Rainwater Catchment Association and several state governments have well-developed rainwater harvesting guidelines, a striking dearth of cities in the United States actually implement rainwater harvesting policies and programs. American rainwater harvesting is also in a primordial state; international advancements in rainwater harvesting, which include incentive programs and communal systems, have not been utilized. The reasons why rainwater harvesting has not developed in the United States has received little attention in the literature. In a case study of three American cities that support rainwater harvesting, Fricano and Grass (2014) found that system costs were identified as the main barrier to implementing rainwater harvesting; economic subsidies and comprehensive planning policies were associated with program success. This paper further investigates and identifies the main rainwater harvesting barriers, and explores the feasibility of introducing rainwater harvesting policies and programs in the United States. This research goes beyond a limited case study by surveying urban planners and administrators in a sample of 400 U.S. cities in the top 300 MSAs.

References


Key Words:
Rainwater Harvesting, Water Conservation, Implementation, Policies, Programs
Urban informality is often theorized as a distinctly global South phenomenon, so much so that poverty, inequality, and urban informality have long been metonyms for cities in the global South (Roy 2011; Robinson 2002; Parnell and Robinson 2012). Not only have scholars questioned this essentializing construction of cities in the global South, but there is also growing interest in, and attention being paid to, urban informality in the global North (Mukhija and Loukaitou-Sideris 2014; Donelson and Esparza 2010). In most of this literature, the global South is often theorized as the location of ethnography, while the global North is the location of theory. The two bodies of literature on informality in the global South on one hand and in the global North on the other, do not speak to each other. The interrogation of this geographic bifurcation of urban informality theory formed the basis of a successful roundtable discussion as the ACSP conference in 2016. Continuing this discussion and responding to questions raised by audience members and panelists, this year’s roundtable debates how a “relational understanding of North and South” could advance theories of urban informality (Roy 2015), particularly in planning. With a focus on the intersection of urban planning and urban informality, both in the global South and North, this roundtable invites panelists to respond to the following questions:

1. How has planning scholarship historically understood urban informality?
2. How has urban informality influenced how planners think about planning?
3. How is relationality inherent within urban informality?

Using a wider array of case studies from around the globe, participants will debate the role of historical context on the character of urban informality, placing special emphasis on how these various modes of informality affect “formalized” urban planning.

References

Key Words:
Urban Informality, Slums, global North-South, relationality
What would be the regional and urban consequences of extending a wall between the United States and Mexico taking into consideration that cities on both sides of this border are so intertwined? Where would the planning goals of pursuing a growth that is inclusive, equitable and smart be left once the wall is extended over the entire US-Mexico border? What would be the implications – if any – for domestic and international planning education? Border crossings between sister cities are a common occurrence as binational families are an evident feature of the region. People go back and forth, not only for family and filial matters, but also for economic and educational reasons. Some of them live in one country and cross the border every single day to go to their job or educational settings. In addition to social and economic linkages, environmentalists have always considered the area as a regional ecological habitat that the US-Mexico borderline cannot blur and that an extension of the border wall will endanger. Rather, this wall megaproject has the potential to become an obstacle to promote sustainability and equity in the border region and its cities, and beyond. The alleged purpose of extending and rebuilding this wall is to deter illegal immigration and drug trafficking; however, those purposes ignore the fact that safety at all levels, in both countries, depends on collaboration and cooperation. Bilateral planning for regional growth might pose opportunities to create regional institutions across borders in order to revitalize border cities, as well as to strengthen the few existing bilateral planning institutions.

By the time the ACSP 2017 conference takes place in October 2017, the extending of the wall might have started and its effects will be evident on immigrant and border communities, on land, labor, the environment, the economy, and human rights, among some of the aspects at play. The planning and border scholars participating in this roundtable will report, discuss, and evaluate the urban and regional implications of the extension of the wall between Mexico and the United States, and its effects on an inclusive and equitable growth, domestically and across borders.

References

RESPECTS TO AUSTERITY IN ITALIAN AND US CITIES
Abstract ID: 1368
Individual Paper Submission
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CELLAMARE, Carlo [University of Rome One] carlo.cellamare@UNIROMA1.IT, co-author

In their efforts to confront drastic reductions in national government funding and more generally the shrinking of the welfare state in recent decades, cities in Italy and those in the USA respond in markedly different ways. Yet mayors and city councils in both countries, as well as activist groups, all seek better ways to respond. They want to promote such things as affordable housing and transport, incorporation of immigrants, and anti-poverty measures. In both places, they are confronted by difficulties. To help them make progress, we need to better understand how they are being pressured from outside.

To foreground the philosophical differences that confront those who would make such international comparisons and to advise progressive activists, we begin with two comments that may reflect very different national attitudes toward cities. Benjamin Franklin said XXX in 18xx. (Morton and Lucia White, The Intellectual versus the City.) Twelve decades later, in 20sxx, the chief planner for Italy’s Bologna region said YY (Del Piano quoted in William Goldsmith, Saving Our Cities).

Italian cities are funded very largely by transfers from national ministries and agencies, and sometimes from the European Union. Funds from higher level governments support physical infrastructure, public transportation, utilities and sanitation, social services, affordable housing, health services, and schools all the way from child-care programs through universities. Local tax resources are extremely limited, restricted by national legislation. The Italian parliament, for example, has in recent years abolished, then re-permitted, local property taxation, but at very low levels. US cities, on the contrary, are funded in good part for many of these same facilities and services through local property and sales taxes.

But in both cases, as national governments have imposed austerity measures (and more generally, as the welfare state has shrunk), cities have suffered.

As an illustration, the very sharpest contrast may be funding (and governance) for schools. In Italy, the national ministry of education not only sets the rules but it funds the schools. Students enroll in schools of their choice. To a considerable extent, opportunities and school quality are geographically uniform. Differences may sometimes be marked from region to region, but across metropolitan areas, generally not. In US metropolitan areas, schooling affairs are much more local. Rules are set by the 50 states, and school programs and funding are very largely designed and provided locally. Regional differences are much less important than those separating poor cities and suburbs from prosperous zones and neighborhoods.

Similar contrasts occur in other areas -- from transportation to health care to infrastructure.
Another set of Italy/US contrasts involves the methods by which fiscal limitations occur and are resolved (or not). In the US case, cities are generally prohibited by law and in fact from incurring (large) deficits. Indeed, in most states, constitutions require balanced budgets not only for cities but for the states themselves. When funds run out, programs are cut. Italian cities, on the contrary, are able to accumulate debt in order to keep basic services operating. Rome's debt currently runs in the range of 12 billion Euros, more than $3,000 per capita.

Yet, in both cases cities suffer from externally imposed austerity. -- or, we might say, the poorer districts or neighborhoods of large consolidated metropolitan areas suffer.

The central question we pose, as we try to understand the effects and appropriate local responses to the austerity prompted by right-wing national political developments, is how cities and activists in the two countries can best respond with their work in housing, transportation, environmental safety, and other areas.

References
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Key Words:
International urbanism, Progressive planning, Austerity, Shrinking welfare state, Italy

THINKING BEYOND THE PUBLIC AND PRIVATE SECTOR DEBATE: DELIVERING EQUITABLE WATER SERVICE AT SCALE
Abstract ID: 1374
Pre-Organized Session Urban Water, Sanitation, and Wastewater: Emerging Issues and Future Directions III – Valuation of Services

DEVADIGA, Asavari [UC Berkeley] asavari@berkeley.edu, presenting author

Both public and private entities have been involved in water service delivery. However, few debates about public service delivery have become as polarized as the question of private sector participation in the water sector. Over time, a spectrum of roles of the public and private sectors has developed across the world varying in the levels of ownership and control of the capital assets or infrastructure. The spectrum has an entirely public ownership at one end and an entirely private ownership at the other end with different forms of public-private partnerships (PPP) in between.

This paper applies the essence of planning as described by Levy (2010) through the complexities and interlinkages of the water service delivery process and provides insights into governance arrangements that achieve access to adequate and equitable water service, and move towards sustainable urban water. Given the debate about whether water should be treated as a merit good or as any other economic good with profit as an objective, it is not surprising that many public agencies, including those in the developing countries, have faced difficulties establishing a clear policy on water pricing as well as on the respective roles of the public and private sectors in water delivery (Devadiga, 2014). While service providers with private sector participation came to serve only 5% of the world’s population and...
investors have shown far more interest in middle-income than low-income countries (Budds & McGranahan, 2003), the privatization trend has not stopped. Authoritarian regimes such as China—which possesses the largest number of projects in Asia—continue to attract investors, and giant countries such as India and Russia have just begun to roll out national infrastructure policies emphasizing private sector participation (Herrera and Post, 2014, p.628).

This paper examines the first pilot project in a rapidly growing city of Hubli-Dharwad in India that was implemented in 2008 to deliver continuous supply of pressurized piped water service to 10% of the population. The project was also intended to demonstrate successful delivery of the water service through a PPP; however, the project has not yet been scaled to 100%. The paper makes a critical contribution toward policy design and implementation and offers a new perspective in studying how different governance arrangements in urban and peri-urban areas operate toward reliable water service. Where scalability has been typically viewed with a centralized delivery framework, the paper uses a decentralized framework that reveals solutions that are already in operation and are both scalable and equitable. Drawing upon the author’s field investigations and interviews, the paper finds that not only do different governance arrangements emerge that are unique to a context and work toward reliable service but they thwart some of the theories on public sector operational attributes and private sector efficiencies. This paper also finds that there are key institutional mechanisms in play and have the power to sustain equitable water service at scale.

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Key Words:
urban infrastructure, institutions, governance, water delivery, planning

RURAL E-COMMERCE AND ITS INTERACTION WITH CHINA’S URBANIZATION: A SPATIAL AND LAND USE STUDY ON E-COMMERCE VILLAGES
Abstract ID: 1379
Poster

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WANG, Wei [Central University of Finance and Economics, China] i.phd.wangwei@foxmail.com, co-author

With the booming of the internet users, China’s e-commerce has experienced dramatic expansion during the last decade, especially in rural areas. This process accelerates urbanization and modernization of
Chinese rural areas. E-commerce Village (EV), also known as Taobao Village, is a typical and unique form of the rural e-commerce development in mainland China. From 2009 to 2016, more than 1,300 E-commerce Villages have been developed throughout the entire country (Ali Research Institute, 2016). These emerging e-commerce centers not only stimulate the local economy in rural areas but also attract a large number of young people who once left the countryside to head back to their villages. Therefore, the population and workforce in these rural areas rebound, and the number of households and jobs subsequently increases. Moreover, with clustering and agglomeration of EVs in some regions (e.g., Yangtze River Delta Region, Pearl River Delta Region, Beijing-Tianjin-Hebei Metropolitan Region, etc.), the regional structure has been transformed and reorganized dynamically. Also, the spatial characteristics and land use patterns in these rural areas have been substantially changed. All above are the background of this study.

Using EV as the research object, this study explored the correlation between rural electronic commerce and China’s urbanization. The hypothesis of the study is that rural e-commerce and urbanization have mutual effects on each other. In other words, the hypothesis has two points: (1) hyper-urbanization triggers the development of rural e-commerce, and (2) the growth of rural e-commerce complements and facilitates the regional urbanization. For testing the hypothesis, this study focused on Yangtze River Delta Region, where rural e-commerce is most thriving, and the EVs are most concentrated. To the first point, this study examined the spatial distribution of 708 EVs in this region based on ArcGIS. The spatial relationship between the EVs and nearby big cities (e.g., Shanghai, Hangzhou, Nanjing, Suzhou, etc.) was analyzed and visualized. The study found that these EVs are significantly clustering around big cities and have high accessibility to highways. These findings suggest that EVs are the products of hyper-urbanization and are highly market-oriented. To the second point, three EVs in Yangtze River Delta Region are selected as the samples of case studies. Viewing and comparing historical imageries of the sites on Google Earth, the transformation of land use patterns and spatial structure in these villages over time was figured out. The study discovered that many urban land uses which seldom existed in rural areas in the past, such as industrial uses, logistics and warehouse uses, and commercial and business facilities (offices), are now appearing considerably in these EVs. In a word, motivated by e-commerce, these rural areas have been in the process of urbanization. Therefore, the hypothesis is accepted.

Last but not least, the study pointed out that although most EVs are formed spontaneously, related planning and political interventions crossing from local level to regional level regarding this unprecedented transformation are highly demanded. In conclusion, rural e-commerce has become an important factor as well as product of China’s urbanization, and planning practitioners and decision makers should take it into account carefully.

References

In historic cities around the world, the historic urban landscape is characterized by both rich heritage assets and conditions that challenge quality of life. The latter circumstances range from substandard living conditions, congestion, lack of public services and informality, to rising property values and commercialization. In light of this duality, historic centers present unique conditions and demands for urban regeneration. These opportunities and challenges are particularly acute in Global South countries whose governments have limited funds and resources. Meanwhile, recent global conversations have emphasized culture’s enduring contributions to creating and managing equitable, sustainable cities. There is nonetheless limited academic research investigating how this connection between urban conservation and regeneration functions.

This study fills that gap and contributes to ongoing dialogues regarding sustainable urban development by identifying the conditions that foster both synergy and disharmony between these urban management approaches. It does so via the following questions: Can governments in the Global South leverage urban conservation as a means of regenerating physically and socioeconomically deteriorated historic cities? What approaches are more effective and conditions more favorable than others in serving twin goals of conservation and urban regeneration for existing residents? Through a qualitative analysis of planning documents, interviews, archival documents, census data and other sources, this study assesses current practices in Quito, Loja, Ibarra and Cuenca, Ecuador. The four cities in Ecuador represent variation in city size, historic fabric, conservation approach, poverty levels and policy approaches. Analysis focuses on the institutional arrangements that shape the past and present socioeconomic and spatial configurations of these historic centers, paying close attention to how heritage is configured and applied in urban governance. Results from these four cities are assessed against a model of conservation-based regeneration, defined as a process that integrates conservation and social policy such that improvements to the historic built environment can benefit local, usually low-income, communities.

The research finds that a city’s ability to initiate and maintain a conservation-based regeneration process depends on local government’s institutional capacity to 1) integrate and implement both conservation and social policies consistently; 2) maintain a conservation ideology flexible enough to combine these values; and 3) a national political environment that enables and supports local conservation management.

References

The adaptive management and institutional literature recognizes the complexity of blending inclusion with environmental governance at resource scales. This challenge is especially pronounced in mountain systems, which are critical sources of water for indigenous peoples, migrants, and natural resource industries. International agencies are recommending a stronger role for local communities and governments that can presumably involve citizens in challenging decisions for infrastructure, land-use, and water (UNDP, 2010; Moser, 2009). However, the continued international focus on the “local” in theory and practice neglect the multi-level nature of institutional linkages (Anderson and Ostrom, 2008) and conflicts over rights and resources in rapidly changing human landscapes (Healey, 1999). In addition, the local institutional capacity to address complex drivers of vulnerability is limited in mountain systems where multiple political, cultural, and watershed boundaries intersect and where much development is driven by national and private resource extraction and infrastructure (Ribot and Larson, 2005; 2012). Lessons from planning, political science, and other social sciences remain neglected in natural resource and adaptation policy and research. What are the shared challenges for equitable and inclusive management of mountain watersheds that extend across political and demographic boundaries? What common elements of state support are needed to sustain adaptive governance, defined here as the capacity to equitably manage conflicting interests over time? The definition of governance and institutions include formal state structures and socially constructed rules and processes within and among users and agencies. The paper presents a synthesis of peri-urban and rural regional cases using a common institutional analysis framework developed from a review of multi-scaled and decentralized...
governance literature from many disciplines. The cases were selected from across the Americas to represent diverse urbanizing and rural mountain governance challenges with shared characteristics that include existing conflicts over large national and regional water or road projects that cross municipal jurisdictions and multiple cultural landscapes, state devolution of land use and water resource planning authority to municipalities and watershed organizations; and the engagement of universities in applied research for regional institution building. The cases include: 1) two internationally significant Ecuadorian high Andean páramo wetland and Andean forest landscapes on which different ethnic groups and industries depend and that falls within the required territorial and climate change adaptation plans of several local governments within two regions; 2) communities in peri-urban Mexico City where agriculture remains important to migrant communities that are largely excluded from municipal and metropolitan water planning and where devolution laws favor city plans; 3) two western US Rockies cases characterized by voluntary and mandatory regional watershed groups working across state, political, indigenous, and cultural boundaries to encourage local land use plans that protect water resources; and the conflict within the Brazilian constitution and decentralization policies between national and municipal interests in terms of addressing local social and environmental policies. Case study methods applied include legal and policy analysis that maps governance structures, participant observation of governance processes, interviews with actors at all levels to explain decisions, and participatory mapping to identify perceived resource management boundaries. The cases are compared using institutional and polycentric analysis to discuss the effect of social and legal contexts on resource conflicts and how decentralized policies enable or constrain efforts by local and community organizations to collectively govern land use and infrastructure across watersheds. We argue for the application of regional planning institution building to the debate on multi-scaled and resilient landscape governance. Implications include a stronger focus by policy makers and multi-lateral funding agencies sub-state institution building and integration of regional planning, political science, and law into adaptive management theory and programs. Ideas for this paper were initially presented at the Mountains of Our Future Earth conference in Perth Scotland, October 8, 2014 and the World Planning Schools Congress, July 7, 2016.

References


Key Words:
comparative planning, transboundary, decentralization, regional planning, Latin America

THE POSTCARD EFFECT: EMBLEMATIC INFRASTRUCTURES AND CITY BOOSTERISM IN MEDELLIN

Abstract ID: 1412
Individual Paper Submission
This paper examines the rising popularity of Medellín’s Metrocables as a ‘best practice’ in slum upgrading. It also considers the rapid diffusion and transnational policy transfer of Metrocables to a growing number of Latin American cities with disparate needs and contexts. Following Medellín, cities such as Rio de Janeiro, Cali, La Paz, Caracas and Manizales have transferred this planning idea to their own landscapes.

The Metrocable is the first aerial cable car system used for mass transportation purposes. It connects some of Medellín’s low-income peripheral hillside neighborhoods to the city’s Metro system. Managed by the Metro Company of Medellín (a public agency owned by the municipality and the Department of Antioquia) the Metrocables were initially implemented as an efficient and inexpensive technology able to increase the metro’s ridership and provide access to marginalized neighborhoods. At the same time, the residents of Medellín’s hillsides where Metrocables were implemented confronted a pervasive stigma associated with violence, poverty and isolation; they had very limited road infrastructure, high densities (about 400 residents per ha), elevated gradient slopes and the constant presence of militias. The lack of mobility reduced residents’ access to jobs and other opportunities.

In recent years, a growing body of literature concerned with understanding the global circuits of inter-urban competition and policy mobilities has developed a robust theoretical framework that explains how cities increasingly engage in a variety of practices to attract foreign investment and tourism. I develop the notion of ‘postcard effect’ to illustrate the role that highly visible or emblematic infrastructures, such as Medellín’s cable cars, play in contemporary efforts of city branding and policy boosterism strategies. Indeed, Medellín’s cable cars have been central in recasting a new image for Medellín; one of a socially inclusive and economically competitive metropolis.

References


Key Words:
City marketing, Policy mobilities, Latin America, Cable cars

URBANIZING WEST JAVA: BUILDERS, BROKERS, AND WOMEN IN THE POST-INDEPENDENCE CITY
Abstract ID: 1413
Individual Paper Submission

PRIYANI, Rina [UC Berkeley] priyani@berkeley.edu, presenting author

In a famous West Java story A Very Bad Secret: Karnadi the Frog Anémer, a short-lived romance between an ordinary man, Karnadi, and a beautiful and smart woman, Eulis, situated in a village near the city of Bandung in the early twentieth century. Karnadi is madly in love with Eulis, and despite being
married already, he plans to propose her. With the help of his friends, he makes up story that he is still single and a successful anémer, entrepreneur in building constructions. Eulis family accepts his proposal, but later she visits a modern house across the paddy field that Karnadi bragged he built. She finds out that Karnadi is a liar, and feeling ashamed and upset, she screams from heart, “Gosh, he is not real, he is the frog anémer!” In this paper I refer to the Southeast Asian’s metaphor of 'frog under the coconut shell' to represent a person who has a very narrow view of the world.

My paper examines production of anémer both as builders and brokers in building construction during late Dutch colonial period to post-Independence Indonesia. Situated in urbanizing region of West Java, I follow stories of anémer and their family businesses during planning of Bandung as a new capital city of Dutch East Indies in 1916-1930s and remaking of Jakarta as a national capital of Indonesia in 1959-1970s. I trace the translation and mistranslation of anémer (Javanese and Sundanese) and anémär (Malay, west coast of Sumatra) from Dutch word aannemer, as well as Indonesian words pemborong or contractor and spekulan or speculator, specifically in construction, land and property.

This research looks at architectural and urban planning project that is collaboratively built by Chinese-Indonesian anémers, Dutch architects, and later, Indonesian engineers. Through a focus on the Bandung-based family businesses of Boen Joek Sioe and Thio Tjoan Tek along with their Dutch architects counterpart Richard and Wolff Schoemaker, I argue that family and women played a critical role in sustaining this practice. Women in the family are not only the passive interlocutors of builders, but also the active brokers of construction workers that link the rural to the urban. Memories of the informality of this expertise inform the anti-Chinese violence, class and race differences, and family’s fame and shame. I read this story side by side with metaphor of the frog as it renders the messiness of construction and planning practice as well as national agony in post-Independence urban Indonesia.

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Key Words:
urbanization, women, building practice, post-Independence city

BUSINESS PROCESS OUTSOURCING, URBAN RESTRUCTURING AND THE SCRAMBLING OF TIME IN METRO MANILA
Abstract ID: 1438
Individual Paper Submission

STERN, Justin [Harvard University] justindstern@gmail.com, presenting author

It is approaching 1:00AM local time in the Philippines and the large outdoor food court and shopping mall at Eastwood City Cyberpark, a forty-two acre “new town” in northeastern Manila, is bustling with hundreds of office employees taking their lunch break. Opened in 1997 by Megaworld Corporation, Eastwood City was the first large-scale mixed-use urban development project in Metropolitan Manila built to meet the exclusive needs of the call center industry. The tens of thousands of employees who work there provide services for companies such as Atos, Citibank, Dell, IBM and JP Morgan Chase –
the majority of which are based in the United States. Owing to the 12-hour time difference between United States Eastern Standard Time and local time in Manila, the typical workday for most of Eastwood’s office workers is 9:00PM to 6:00AM. In planning terms, the development is a privatized space, detached from metropolitan Manila with its own street grid, private security fleet and utility services. Politically, the development operates under the legal sanctioning of the Philippine Economic Zone Authority, which grants tax concessions to the corporations that locate there. Some of the poorest slums in Metropolitan Manila are located adjacent to Eastwood City, separated by a twenty-foot-high concrete wall. Eastwood Cyberpark is a city unto itself – an enclave of deliberate protection and separation in economic, spatial, and socio-temporal dimensions.

Eastwood City is one example of how the growth of the Business Process Outsourcing (BPO) industry is coinciding with urban restructuring across the Philippines. This paper explores how the growth of BPO or customer service “call centers” in Metro Manila is driving real estate development in the city and shifting traditional temporal patterns. Growth of the BPO industry has required the construction of hundreds of thousands of square feet of new office space fitted with the latest communications equipment in information technology. In some instances, existing urban districts are being redeveloped to accommodate the BPO industry. In other cases, entirely new urban districts or “new towns” are emerging to meet the exclusive needs of the call center industry. Manila is prone to power failures and to natural disasters, such as earthquakes and typhoons. For this reason, new office space targeting the BPO industry is typically “off the grid” with its own power generation system, water and waste management facilities, district cooling, and IT infrastructure. This physical restructuring has been accompanied by changes to social practices in each city, including the emergence of a new temporality in cities hosting a large number of BPO offices that operate on a foreign time zone.

Combined, the paper raises important questions related to the transformation of urban form, new patterns in real estate development, metro-wide infrastructural asymmetries, and urban inequality and governance. It draws on an interdisciplinary methodological approach, including spatial analysis and semi-structured interviews with business leaders, designers, politicians, and BPO office workers.

References


Key Words:
International and comparative planning, rapidly urbanizing regions, urbanism in East and Southeast Asia, technology, infrastructure and development
In recent years, practices of transfer of development rights (TDR) have gained traction across different societies for a diverse range of planning goals. In India, TDR has been used to encourage slum redevelopment with the promise of on-site rehousing of slum dwellers. In Taiwan, TDR has served as a compensatory mechanism to address funding challenges in public facility planning as well as a market incentive for real estate development. In the USA, in addition to its long traditional use for historical preservation and environmental protection, new interests in TDR have also emerged for affordable housing provisions, urban redevelopment and rural new town development. These recent interests in and practices of TDR show the new ways through which local planners deal with and harness market forces. In this panel, we present four accounts of TDR practices. Collectively, we examine whether the same TDR instrument is used across different urban contexts. The main question we ask is what new interventions planners conduct and what regulatory roles planners withdraw from in order to make market-based TDR work.

Objectives:
- To examine how TDR has reshaped city spaces
- To examine how TDR has intersected with comprehensive planning
- To examine how TDR has deepened or challenged the social construction of private property rights

In the United States, real estate property investors manage $35 trillion in assets while developers spend $1 trillion annually on four billion square feet of new and replaced buildings impacting 300,000 acres of land, as well as infrastructure. There is growing interest in assuring that real estate development of the future is more socially, environmentally, and economic responsible than in the past. Responsible real estate development (RRED) is not philanthropy or altruism. Emerging research shows that RRED can produce competitive short-term and superior long-term financial returns. This panel will present new research and survey existing research showing market outcomes to RRED. Planning and policy implications will be offered.

Objectives:
- Real estate trends especially focused on nonresidential development
• How property markets are responding to responsible real estate investments
• Long term, cumulative effects on society of responsible real estate trends

PRE-ORGANIZED SESSION: REGIONAL LESSONS FROM THE POLITICAL ECOLOGY OF EXURBIA
Proposal ID 63: Abstracts 1037, 1038, 1049

LINKOUS, Evangeline [University of South Florida] elinkous@usf.edu, organizer, proposed discussant

Since the 1950s North America has seen massive growth of exurban landscapes, with significant consequences for various spheres of land use management, including transportation, zoning, and right to farm policies (Spectorsky 1955; Nelson 1992; Cadieux and Hurley 2009; L. Taylor 2009). Political ecology approaches to the study of exurbia involve examining how factors at multiple scales interact to produce diverse land use policies in different locales (L. E. Taylor and Hurley 2016). Regional perspectives play a critical role in political ecologies of exurbia (Gosnell and Abrams, 2011; Walker, 2003). Papers in this session will use political ecology approaches to address a regional case study and examine how particularities of that region (land use policies, shifting rural industries, environmental histories, etc.) have interacted with large scale socioeconomic trends to create particular local outcomes. This paper session will 1) draw attention to the distinctive nature of exurbia as more than an interface between urban and rural land uses and 2) examine the forces that shape regional differences in exurban land uses.

Objectives:
• Highlight how political ecology approaches to the study of exurbia illuminate how factors at multiple scales interact to produce diverse land use policies in different locales
• Draw attention to the distinctive nature of exurbia as more than an interface between urban and rural land uses.
• Identify the forces that shape regional differences in exurban land uses.

AN ORDINARY CITY: A CLOSE READING OF PLANNING AND POLICY REPORTS IN NEW BEDFORD, MASSACHUSETTS
Abstract ID: 2
Individual Paper Submission

HOLLANDER, Justin [Tufts University] justin.hollander@tufts.edu, presenting author

New Bedford, Massachusetts represents an entire category of cities that escape mainstream urban planning’s more customary attention to global cities (New York), booming cities (Atlanta), and shrinking cities (Flint). New Bedford-style ordinary cities are none of these, they neither grow or decline drastically, but in their inconspicuousness, they account for a vast majority of all cities. San Francisco has grown spectacularly in recent years, yet nearby cities including San Mateo, Richmond, and Daly City all grew less than 1% (California Department of Finance 2015). States and federal government in the U.S. pay attention to the problems of the headliner cities, like the New York State billion dollar investment in the dramatically shrinking city of Buffalo. But in tens of thousands of cities across the globe, the quotidian task of running a city without any appreciable growth or decline is left unstudied. These middle-of-the-road cities are not topping any “best of” or “worst of” list of cities, though the challenges local officials face are daunting. They have both the real estate and gentrification
pressures of new development in some areas (Freeman 2011; Angotti 2008), while they experience the
difficulties of depopulation and disinvestment in other areas (Ryan 2011; Pallagst, et al. 2013). Such
schizophrenia within a single city can be particularly hard to manage and effectively plan for.
New Bedford offers the ideal case study to unravel this puzzle. While historically the city has
undergone depopulation, demographic conditions have stabilized and from 2000-2010 the city even saw
a jump in population. Not booming, but hardly shrinking, the city typifies the vast majority of all cities
where there are forces pushing in both directions, simultaneously, spatially distributed throughout the
city. I ask the question: Given the complexities of growth and decline, both temporarily and spatially,
how does a city manage change and adapt to growth and decline?

I employed content analysis to look at all of the City of New Bedford’s planning and urban policy
reports over the last decade. This approach allows for insight into what the city has been doing and what
it wants to be doing. I complemented the content analysis with further interviews with city officials to
be able to paint a complete picture. Together, these two sources help shed light on the puzzle that is
New Bedford — its reused lots, its abandoned buildings, and its urban planning.

I found a wide range of other policies in place in New Bedford to improve the pedestrian experience,
parks and green spaces, the creative economy, tourism, transportation, sustainability, historic
preservation, and more. When viewed through the lens of smart shrinkage, those official city documents
were also calling for a more right-sized infrastructure, improved land use policies, more recreational and
agriculture uses, and a cultural/heritage reimagining of what kind of a city New Bedford is and can be.
Together the reports and interviews tell a story of a city government trying to play the conventional
economic development game of chasing industry and betting on big “game-changing” projects, while
also investing money and time in a genuine effort to decrease the city’s housing density and find new
non-housing uses for formerly residential structures and land. These findings are important to planning
researchers because smart shrinkage activities have rarely been documented at this level of detail.

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Key Words:
shrinking cities, content analysis, planning reports, New Bedford (MA)

RADICAL PROPERTY FOR RADICAL CONDITIONS? PRIVATE PROPERTY’S
FUNCTIONALITY FOR URBAN AND ENVIRONMENTAL SUSTAINABILITY

Abstract ID: 20
Individual Paper Submission

JACOBS, Harvey [University of Wisconsin-Madison] hmjacobs@wisc.edu, presenting author
The ways in which land and natural resources are conceptualized as ‘owned’ has tremendous impacts on the form and success of land use, environmental, comprehensive and others substantive practices of planning.

The contemporary form of private property rights – so common in the western world – came into being in the 18th century, post the American and French revolutions. It reflected the influence of political philosophers and political economists who argued that democratic governance structures and market economies required a strong and enforceable set of privately owned property.

The idea of the natural and urban worlds as property is widely understood as contributing to the economic, social, political and technological transformation – the progress – of the west from the 18th century to the world of the 21st century. For some, the experience of the west strongly suggests the continued appropriateness of western property in western countries and its extension to developing and transition countries. For others, a question that needs to be posed is whether the form of property invented in the 18th century needs to undergo radical change, given the radically different conditions of the world of the 21st century from that of the 18th century.

Surprisingly (for some) questions about the appropriateness of private property have been posed since the mid-19th century by social reformers, such as Proudhoun, Marx and Kropotkin. These questions found new form in the work of institutional economists such as Ely and Commons in the early 20th century, and then again in mid-20th century through the work of ecologists Leopold who helped birth the modern environmental movement. By the late 20th century the children’s book author Dr. Seuss in The Lorax famously asked: who speaks for the trees? More analytically modern environmental ethicists asked why nature only had rights as filtered through its ownership by humans. Should nature – landscapes, forests, etc. – have rights in and of themselves?

As global urbanization has accelerated and rapidly changing environmental conditions have raised more concerns, questions about the core idea of ownership and control have been revisited, revised and further elaborated. What kind of property is right for this period of rapid urbanization, an emergent world of global mega-cities with an exploding population living in marginal conditions, accompanied by a rising demand on environmental resources such as water, air and land for food production? Should there be continuity or disruption in the 18th century property form which created the modern world? This paper explores these questions by examining the arguments for and against the continued relevance of 18th western property, including the implications for successful sustainable planning.

References

Key Words:
Climate change requires more sustainable urbanism developments. Locales in temperate and arid climates are under added pressure to create more economical, ecological and just neighborhoods. Do sustainable urbanism developments have advantages over traditional urbanism projects in temperate-arid climates? The main purpose of this paper is to examine four distinct neighborhoods in the southwest of the U.S. in order to clarify the evolution of sustainable urbanism developments according to the 3C’s framework of compactness, connectedness and completeness. The four case studies include one consolidated pre-world war II neighborhood in Stockton, California, and three master planned developments in the southwest, one in California (Playa Vista) and two in Arizona (i.e. Civano and Agritopia). The four neighborhood developments exemplify alternative land development strategies, typical of urban design strategies in midtown and suburban locations of the southwest. These strategies have in common goals pertaining to the accommodation of urban growth, water and energy conservation, air pollution mitigation, mixed-use areas within each development in order to reduce immediate and long-range ecological risks and vulnerabilities within scenarios of climate change. The research methods and techniques comprised a study of each development’s history, motivations, design principles and built environment features. Special attention was devoted to understanding their real estate motivations, ecological dimensions, and contributions to more sustainable land development practices. Extensive literature reviews of the theory behind sustainable urbanism, together with analyses of the four site plans and neighborhood phases were instrumental to comprehending the subtle distinctions among each development. Furthermore, there was a concern in reviewing each municipality’s public policy constraints, permitting and approval processes and the existence or not of sub-municipal neighborhood governance mechanisms, such as homeowner neighborhood associations. This research constitutes a novel effort to the comparative study of urbanization and associated urban form patterns in temperate-arid regions of the U.S. southwest. Unique to this research is an up-to-date analysis of the most recent iteration of a long evolutionary lineage of city-building practices based on land development and ecological thinking, which started with Ebenezer Howard’s Garden City movement, continued on with Clarence Perry’s neighborhood unit concept, had localized utopian visions in Frank Lloyd Wright’s Broadacre City, materialized in countless subdivision and master planned communities, finally to the most recent land development projects of Duany and Plater-Zyberg’s neo-traditional and new urbanism communities, Calthorpe’s eco-urbanism, and Farr’s LEED-ND certified communities. The key finding is an up-to-date understanding of how neighborhood development models have been implemented to help create more sustainable cities as well as the identification of a set of challenges and opportunities for advancing sustainable urbanism research.

References

Key Words:
Sustainable urbanism, Master planned communities, Neighborhood planning, California, Arizona

ZONING AND FAIR HOUSING: WHERE TO FROM HERE?
Abstract ID: 34
Roundtable

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Among the array of practices in the realms of housing and urban development that have fostered segregation, the role of zoning is not consistently apparent: cities long ago learned to remove any language from their planning and zoning documents hinting at underlying racial animosity. However, given the social implications of restricting density, the explicit use of zoning for segregationist purposes in the early 20th century, and many cases of discriminatory zoning decisions since then (litigated and not), many scholars continue to scrutinize zoning and other land use policies as factors contributing to persistent racial segregation in the United States.

Practitioners must also address the potentially segregating impacts of zoning: the Fair Housing Act of 1968 (FHA) charges Department of Housing and Urban Development (HUD) grantees with analyzing impediments to fair housing choice, including impediments arising from local zoning and other land use policies. HUD’s 2015 “Affirmatively Furthering Fair Housing” rule (AFFH) outlined a process for HUD grantees to both analyze and challenge impediments to fair housing. The AFFH signaled the heightened emphasis of the Obama administration on addressing the disparate impacts of zoning and other public policies across cities’ racial geographies. Opponents of the AFFH clearly interpret it principally as an attack on local zoning: the proposed legislation nullifying the AFFH is called the “Local Zoning Protections Act of 2017.” Whatever the fate of the AFFH under the current congress, it will remain the duty of HUD grantees to investigate the disparate impacts of zoning and other policies via the mandate of the FHA. Meanwhile, the Supreme Court’s 2015 decision in Texas Department of Housing and Community Affairs v. Inclusive Communities Project, Inc. has the potential to reinvigorate exclusionary zoning litigation, which has historically only featured few successes.

Participants and attendants at this roundtable will discuss (1) the current status of federal, state, and local policies in addressing the disparate impacts of zoning, and (2) the role of the academy in understanding the disparate impacts of zoning and advocating policies that affirmatively further fair housing through
more equitable land use practice. The participants have conducted research on topics including: the history of/current developments in exclusionary zoning litigation, the evolution of HUD policies regarding the FHA’s charge to provide fair housing, state and local strategies for meeting the FHA’s charge before and after the AFFH, the disparate impacts of zoning and other land use policies, and platforms for connecting scholarly work on these subjects to fair housing advocates in Washington, state capitols, local governments, legal advocacy organizations, and elsewhere. The outcomes of this roundtable will be inspiration for further scholarship on zoning and fair housing and knowledge of how to turn this scholarship into action.

References


Key Words:
Zoning, Housing, Land Use, Race, Segregation

GREEN GENTRIFICATION IN CHICAGO: DEVELOPMENT, DISPLACEMENT, AND COMMUNITY ACTIVISM

Abstract ID: 64
Individual Paper Submission

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A growing body of research reveals that low-income people of color have access to fewer acres of parks and to parks with lower quality than those living in with middle- and upper-income white neighborhoods (Rigolon, 2016). Such disparities can exacerbate public health inequalities since parks promote physical activity, mental health, and overall wellbeing. In order to rectify these inequities, urban planners in many U.S. cities have undertaken major urban greening efforts in recent years, such as New York’s High Line project and the revitalization of the Los Angeles River.

Although some of these projects are specifically intended to increase green space in park-poor, low-income communities of color, the most successful projects make neighborhoods so desirable that they increase property values and, ultimately, displace the very population they are intended to serve. “Green gentrification,” or the displacement of low-income residents with middle-income residents due to public investments such as parks, greenways, and trails, thus presents a troubling conundrum for cities (Anguelovski, 2016; Gould & Lewis, 2017): How can planners redevelop struggling neighborhoods and derelict infrastructure without displacing their least-well-off residents?

While scholars have raised concerns about green gentrification, no comprehensive study in the U.S. has assessed systematically the extent to which urban greening projects across an entire city contribute to displacement, nor whether community resistance efforts resulting in new housing and land use policies
might help keep low-income residents in place. This study addresses this omission by analyzing the gentrification impacts of more than 200 acres of parks constructed since 1990 in Chicago, what many call “America’s Greenest City” (City of Chicago, 2015). Since 1990, the city has undertaken major efforts to increase parkland and revitalize some of its neighborhoods (Daley, 2003). Among the new parks are two large but controversial rails-to-trails projects: the 606 Trail (completed) and the Paseo Trail (planned), both of which have raised gentrification concerns among surrounding communities.

The purpose of the study is twofold. First, we aim to understand how greening efforts across the city of Chicago might have fostered the displacement of low-income people of color. Second, we intend to uncover how new forms of resistance to displacement, such as housing policy advocacy and community organizing, might have successfully contributed to keeping low-income residents of color in place.

The study methodology proceeds in two parts. In part one, we complete a quantitative geospatial analysis to identify which neighborhoods have gentrified by focusing on the impact of new parks built between 1990 and today. In part two, we conduct interviews with city planners and with community leaders from four nonprofit organizations that are fighting displacement in neighborhoods located near the 606 Trail and the Paseo Trail.

Our preliminary findings suggest that some areas along the 606 Trail have seen significant increases in property values and rents, and that forms of resistance have emerged in neighborhoods along the trail. We also uncover that such resistance contributed to a proposed ordinance that would introduce a substantial demolition fee for developers replacing affordable market rate multi-family units with new and more expensive housing. Also, notable gentrification in neighborhoods near the 606 Trail led to forms of preemptive resistance in areas near the planned Paseo Trail. The results of this study can be useful for planning scholars, practitioners, and community leaders, as they highlight how investments in public green spaces can be matched by policies and local organizing efforts aimed to keep in place the very people who need such green space the most. This work will bring further attention to green gentrification, a significant new battleground for environmental justice organizations across the United States and abroad.

References

Key Words:
Green gentrification, Chicago, Resistance, Community activism, Environmental justice

DECISION-MAKING IN PLANNING FOR VACANT LOTS IN THE CONTEXT OF SHRINKING CITIES
Abstract ID: 67
Planning theory and practice in the United States has been dominated by a paradigm of growth; however, since the 1980s, many cities have faced prolonged population decline, prompting questions about how shrinkage is engaged as planners attempt to provide for health, safety, and welfare. While shrinkage is observable and affects the physical structure and social fabric of a city, its conceptualization within planning theory remains ambiguous in light of the dominant normative paradigm of growth—shrinkage's opposite. Given that planners have made, are making, and will continue to make decisions related to the health, safety, and welfare of communities within shrinking cities, this conceptual lack or gap prompts questions about the ways in which decisions for shrinking cities are grounded and justified. This investigation identifies current logics of planning decisions made in the context of shrinkage, discusses the relationships of these logics to the dominant growth paradigm, and demonstrates how these logics can provide a platform for advanced inquiry and improved practice. More specifically, it surveys and compares lines of thought being used to make decisions regarding properties most directly affected by decline, with particular emphasis on planners located within cities having dissimilar experiences of “shrinking.” It is focused on vacant and abandoned lots, which are the most immediately visible symptom of population decline and offer the greatest opportunity to reimagine urban form-and-function relationships.

Questions investigated include: Has the context of shrinkage influenced the means by which planners define and attempt to meet the ends of health, safety, and welfare? That is, in what ways have they applied or adapted techniques developed for growing cities to shrinking cities? Or, in what ways have they created new techniques specifically for planning shrinking cities? Also, when making decisions about vacant or abandoned land, do planners attempt to restore former conditions (populations, densities, levels of service, capacities of infrastructure) and thereby meet well-established benchmarks of success (tax revenue, population level, reputation); or instead, do they attempt to form a new image of the city and employ new measures of success? To rephrase, is shrinking seen as a “problem that needs to be solved or an opportunity to create a different development path for the future” (Martinez-Fernandez & Wu, 2007, p. 804)?

Current reasoning supporting decisions about vacant and abandoned lots is identified through a national survey of planning professionals in fifteen cities with either stable-to-growing or shrinking populations. These are augmented by selected follow-up interviews. Both stratified sampling and matching were used to achieve a range of city characteristics and control for them across growth orientation. This approach is new in that while case studies of one or two shrinking cities have been undertaken, there has not been a national survey focused on shrinking cities and vacancy. The goal is to understand regional trends, tools, and obstacles to progress. This work provides a compilation of current planning perceptions and practices that can be identified as being particular to post-industrial shrinking cities in the U.S. More significantly, it provides a basis for identifying current assumptions with regards to the means and ends of planning in the context of shrinkage. Finally, it enables an initial assessment of needs for training and education in regards to shrinking cities, and contributes to the setting of directions for further investigations by the scholarly and professional communities.

The results indicate a range in which methods and techniques predicated on the dominant and normative growth paradigm have been both adopted or adapted for use in shrinking cities. Results suggest that concepts regarding quality of life, intentions for the future, and community goals have been reprioritized and redefined in shrinking cities. Finally, results indicate ways in which ideas regarding the built
environment and the discontinuities of the urban fabric are being reconceptualized in the face of massive economic and demographic upheaval.

References

Key Words:
Shrinking Cities, Planning Practice, Post-Industrial, Growth Machine, Vacancy

TRANSFER OF DEVELOPMENT RIGHTS IN THEORY AND PRACTICE: THE RESTRUCTURING OF TDR TO INCENTIVIZE DEVELOPMENT
Abstract ID: 241
Pre-Organized Session: Comparative Transfer of Development Rights (TDR): A Tug-of-War Between Planning and Market

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In the 2000s, Florida local governments began using transfer of development rights (TDR) to enable a mix of conservation and development rights on large landholdings in rural areas. While the theoretical function of TDR is to facilitate a market for development rights exchanges, these programs envision little or no exchange of development rights, and instead use TDR as part of effectuating new development conditions. Previous research on TDR focuses on program performance, and provides little insight into why TDR programs might differ in theory and practice. In this research, I explore the design and orientation of Florida’s emergent rural TDR programs. I argue that these programs restructure TDR primarily as an incentive rather than its theoretical function of enabling a market. As a result, these programs are biased toward development over conservation. The programs also present an ambiguous treatment of property and development rights.

References
  http://doi.org/10.1080/01944363.2014.985697

Key Words:
transfer of development rights, conservation, growth management, Florida, market-based mechanisms

TRANSFER OF PLANNING POWER TO THE MARKET? TWO DECADES OF TRANSFER OF DEVELOPMENT RIGHTS PRACTICES IN TAIWAN

Abstract ID: 242
Pre-Organized Session: Comparative Transfer of Development Rights (TDR): A Tug-of-War Between Planning and Market

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This paper examines the challenges that planning has paradoxically created in an attempt to address urban issues by adopting market-oriented transfer of development rights (TDR) practices in Taiwan. The paper does so by situating Taiwanese TDR practices in the context of evolving zoning regimes. In 1997, for the first time local governments adopted a FAR (floor area ratio)-based zoning regime to regulate building height with a goal of installing orderly growth in cities. The FAR-based rule represents an important break from the road-based rule previously used. Prior to 1997, building height was determined by the service capacity of the road connecting to the development site – the wider the existing road, the greater the building density. In the same year, TDR allowing market trading and spatial transfer of development rights between sites was also implemented. The paper examines the role of TDR in producing booming high-volume real estate development that exceeds FAR regulations, shadows nearby communities, and defeats planners’ original goal of an orderly city through comprehensive planning. This paper argues that market-based TDR has significantly challenged the planning legitimacy on which FAR-based zoning and comprehensive planning have traditionally relied.

References

Key Words:
TDR, zoning, FAR, comprehensive planning, planning legitimacy

THE INFINITE ELASTICITY OF THE TRANSFERABLE DEVELOPMENT RIGHT: NOTES FROM NEW YORK CITY EXPERIENCE

Abstract ID: 243
Pre-Organized Session: Comparative Transfer of Development Rights (TDR): A Tug-of-War Between Planning and Market
The Transferable Development Right (henceforth TDR) is a highly plastic and highly adaptable concept. This paper explores the drivers of its evolution in case of New York City zoning. The paper argues that its changing meaning can be understood as a response to the larger ideological changes in attitudes and approaches towards the public financing of public services. The changing use of TDR as a land-use planning device parallels the contraction of the Keynesian welfare state capitalism that characterized post World War II America and its replacement by a neoliberal market approach to public finance and public service provision. From approximately 1950 to the mid 1980s, an era dominated by a social democratic approach to municipal governance, TDRs typically reflected concerns about health, safety, infrastructure capacity and aesthetics. It was an era in which cities shared sizable portions of the financial burdens of public finance with higher levels of government; federal and state support for municipal services and infrastructure were sizable. Beginning in the late 1980s neoliberal ideologies came to dominate all facets of public policy. Federal and state finance began to dissolve. One result was that local governments were forced to rely on localized forms of public finance; forms that maximized their ability to capture the agglomerative values that urban life generates. In effect cities were increasingly forced to monetize assets under their control via sale and/or long-term lease and various forms of public service privatization. A consequence of this policy shift was that the definitions and notions of TDR also shifted. TDRs in the form of easy expansion of air rights under existing zoning become a tool for meeting the demands of local government for affordable housing, open space and other needs. Employing an historic analysis to the change in the institution of zoning in New York City, this paper argues that this approach to public finance is unsustainable. It will lead to a worsening of the inequality of urban life, greater social instability and infrastructure unable to meet the sustainability challenges of 21st century urbanization. The implication for planning education concerns to need to better integrate introductions to zoning and land use planning into a broader understanding of the larger political economy that defines and drives existing policy options. A pedagogic lens that better captures the dynamics that drive change in this all-important tool of professional planning practice is called for.

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Key Words:
Transferable Development Rights (TDR), Institutional Analysis, Political Economy, Land use regulation

TERRA FIRMA AND AIR RIGHTS POLITCS: THE CASE OF BOSTON
Abstract ID: 244
Pre-O rganized Session: Comparative Transfer of Development Rights (TDR): A Tug-of-War Between Planning and Market
As the transfer of development rights (TDR) becomes an increasingly mainstream tool by which public planning officials and private real estate developers in cities both within in the United States and around the world seek to maximize the revenue generation potential of landed assets, some cities that would at first blush appear to be obvious candidates for the application of TDR have opted not to embrace the monetization of air rights. The city of Boston is one such example: its small geographic footprint, long built-out urban form, and high development costs have sustained some of the highest real estate prices in the United States for decades. The present moment exemplifies this trend in the city’s rapid appreciation in property values, the velocity of associated transactions, and the rate of accompanying demographic transformation. This paper seeks to account for the absence of TDR from Boston’s otherwise robust embrace of property-based development and growth. Specifically, it seeks to address three driving questions. First, why, although the state’s legislature passed measures enabling the transfer and development of air rights over the Massachusetts Turnpike in 1963, has the city of Boston not availed itself of such development in more than a handful of cases, and not at all in over thirty years? Second, why is it that the issue of air rights development in Boston has been discussed exclusively with respect to infrastructure development and financing (and specifically the development of air rights over the Massachusetts Turnpike), and not, as in other American cities, in terms of historic preservation and regulatory takings (see, e.g., Costonis 1974)? And, finally, how does the turn to TDR as a form of infrastructure financing relate to traditional modes of financing public infrastructure, and to developments in municipal finance broadly (for example, the passage of ‘tax revolt’ Proposition 2 ½ in 1980)?

References


Key Words:
Transfer of development rights, Air rights, Land-based financing, Land monetization

MUNICIPAL RESPONSES TO A HOUSING AFFORDABILITY CRISIS: AN ANALYSIS OF ZONING CHANGES IN SILICON VALLEY

Abstract ID: 263
Individual Paper Submission

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There is strong evidence that restrictive zoning affects housing prices. Planners and policymakers commonly prescribe zoning reforms to mitigate high housing prices. This is the case in the San Francisco Bay Area, one of America’s most expensive housing markets. But, there is surprisingly little empirical evidence about whether and how cities adopt zoning changes. The zoning changes I focus on are “upzoning” (increasing housing capacity) and “downzoning” (reducing housing capacity). My research analyzes municipal upzoning in the Bay Area’s Silicon Valley between 2001 and 2016. I
answer two questions: (1) How common are zoning changes in Silicon Valley’s municipalities? (2) What are the determinants of upzoning and downzoning?

To answer these questions, I compile historic (dating to 2001) and current zoning spatial data for the five largest cities in Silicon Valley: San Jose, Sunnyvale, Santa Clara, Mountain View, and Milpitas. I assign each parcel with its maximum allowable residential density in 2001 and 2016, and I identify parcels that were upzoned or downzoned during the study period. I begin with a descriptive analysis zoning changes by type. I then extend the approach of Gabbe (2017) by specifying multinomial logistic regression models to compare the odds that a parcel is upzoned or downzoned based on explanatory factors related to amenities, accessibility, natural features, prior regulations, homeownership rates, and socioeconomic and demographic factors.

Preliminary descriptive results for San Jose (the largest city in the area) show that the city upzoned about 3.8% of its parcels and downzoned 2.2% of its parcels between 2001 and 2016. Many of these zoning changes resulted in minor increases or decreases in residential development capacity. The use of planned development (PD) zones is common and growing; in 2016 more than a quarter of San Jose’s parcels were in a PD. Additional descriptive and regression results are forthcoming.

My preliminary results are consistent with prior scholarship related to New York City and Los Angeles suggesting that zoning changes are relatively rare. In New York City between 2003 and 2009 – a period of “rapid” rezoning – the city upzoned 5% of its lots (Been, Madar, & McDonnell, 2014, p. 241). Meanwhile, Los Angeles upzoned 1.1% of its land area between 2002 and 2014 (Gabbe, 2017). Zoning changes in both cities were strongly associated with homeowner interests.

This paper fills two important gaps in the zoning literature. First, I analyze cities at a range of sizes. Previous scholarship has focused on New York City and Los Angeles; we currently have no evidence about small- or medium-sized cities. I include cities ranging in size from Milpitas (population 77,604) to San Jose (population 1,026,908). Second, scholars have yet to analyze parcel-scale zoning changes of multiple cities within the same housing market. My paper is the first of which I am aware to do this. For policymakers, my research shows where zoning changes are most likely with little municipal intervention, and I identify strategies for overcoming political obstacles in desirable areas where there has been limited precedent for upzoning.

References

Key Words:
Zoning, Land use regulations, Housing policy
EXCEPTIONS AS PLANNING: QUANTITATIVE ANALYSIS OF ZONING RELIEF AND REZONINGS IN NEW YORK CITY, 1998 - 2016
Abstract ID: 286
Individual Paper Submission

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Zoning and planning are often viewed as being in a one-way relationship, with zoning being a tool of planners that serves the larger aims of planning. Alternately, descriptive studies of zoning practice categorize zoning as the ‘tail’ that ‘wags the dog’ of planning (Alterman 1980, Haar and Kayden 1989). Both approaches understand zoning changes as a direct outcome of external pressures, paying scant attention to how piecemeal decisions about land regulation create pathways for future change. This paper expands our understanding of how zoning responds to the internal dynamics of land regulation by focusing on the interactions between zoning exceptions, or ‘relief’, and area-wide rezonings, including upzonings and downzonings in New York City. Previous work indicates that substantial zoning relief preceded, and contributed, to the controversial rezoning of the Brooklyn and Queens Waterfront (Curran 2007; Wolf-Powers 2005) but there has been no analysis on how this relationship between zoning relief and formal changes to the zoning code has played out in other parts of New York City.

Drawing on a unique dataset of more than 7,000 zoning relief applications (i.e. variances, special permits and waivers) submitted to the Board of Standards and Appeals between 1998 and 2016, we test where and when the issuance of zoning relief serves as a precursor to changes in the formal zoning code. Using time series analysis, we assess the relationship between different types of zoning relief, formal changes to the zoning code and demographic and spatial variables to test the extent to which relief activities conducted outside the formal planning process have an impact on planning and land use regulations. Initial analysis implies that concentrations of zoning relief predict formal zoning changes, suggesting that relief is not a simple or technical process but rather a series of potentially contentious decisions that result in de-facto planning outcomes. The findings also show a positive correlation between ‘zones of relief’ and communities of privilege and a relationship between the issuance of zoning relief and a neighborhood’s racial composition, even holding income constant. These initial outcomes suggest a new avenue through which planning actions contribute to socioeconomic inequalities, and highlight the zoning relief process as a potential area for critical intervention. This paper is part of a larger project examining the practice and consequences of zoning relief in New York City.

References
NEGOTIATING SCIENTIFIC INFORMATION OF CLIMATE CHANGE FOR LAND USE PLANNING IN QUY NHON CITY OF CENTRAL VIETNAM

Abstract ID: 412
Individual Paper Submission

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Role of planning to mainstream disaster risks and climate change impacts is widely advocated. Land use planning has been proven method to reduce the impacts and minimize risk of climate change and disasters in the course of urbanization (Burby, 1998). It guides new growth outside of hazard prone areas, relocates the existing development in safer sites, and reduces the vulnerabilities in post event redevelopment (Berke & Stevens, 2016). Adaptation to climate change entails being capable to deal with unexpected and abnormal weather events. But in practice, local land use plans have very low awareness and lack of uniform actions for climate change (Tang, Hussey, & Wei, 2009). Scientific knowledge of climate change has crucial role to play in the course of adaptation. But the progress of climate science to inform adaptation is not being translated to practice which leads to the adaptation deficits (Preston, Mustelin, & Maloney, 2015). The awareness of policy choices to address this has been realized in some extent but the social systems are still resistant to the change (Moser & Dilling, 2007). The institutional structures and policy tradeoffs are adding extra challenges. It stipulates how the scientific information of climate change can be relevant in land use planning processes and outcomes of cities in a centralized top-down administrative, political and social context. This research strives to answer this question with the case study of Quy Nhon city of Central Vietnam.

The master planning is most dominant method of city planning in Vietnam. Heavily influenced by rational approach, city Master Plans acquire the scientific information of climate change and disasters from multiple sources including national and local. But land use practices may not streamline with the information provided by climate science in Master Plans. This research uses three different types of methods to evaluate how the climate science is being utilize in planning processes and outcomes: 1) content analysis of Quy Nhon Master Plans of 2004 and 2015 to assess how Master Plans are addressing threats of climate change over time in comparison to progression in climate science, 2) semi-structured interviews with 46 central, provincial and local government organizations and climate scientists to assess how they interact to address the requirements of scientific information of climate change in the course of planning, 3) 360 household surveys and 3 focus group discussions to understand the perception of general public about climate change and their vulnerabilities to impacts. Major findings are: the scientific information of climate change is not relevant and less trustworthy to local planners and decision makers if it is produced by distant actors; the climate adaptation in land use planning is not only determined by scientific information of climate change but also by the legal, institutional and financial structures; and; local planning actors expect incentives along with strong legal and institutional support from higher level of administration in Vietnam in the course of mainstreaming climate change.
adaptation. The triangulations achieved through the comparison of the results from household surveys and interviews can inform the utilization of climate science in course of land use planning in rapidly developing cities of Asia to deal with uncertain but inevitable threats of climate change.

References


Key Words:
climate science, land use planning, Climate change adaptation, knowledge translation, Vietnam

TADS, TODS, ÜBER-TODS: MATCHING DENSITY, DIVERSITY, DESIGN AND TRANSIT SERVICE LEVEL IN MONTREAL AND TORONTO STATION AREAS

Abstract ID: 438
 Individual Paper Submission

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North American metropolises are home to innumerable transit-adjacent developments (TADs), where dispersed, monofunctional and car-centric built environments surround transit stations. Contemporary planning aims to transform them into transit-oriented development (TODs), where dense, diverse and hospitable built environments generate substantial transit ridership and pedestrian activity. What is the level of transit service required to elevate density, diversity and design from TAD to TOD status? Reciprocally, what are the levels of density, diversity and design required to improve transit service and ridership from TAD to TOD level? And are there thresholds below which station areas are prevented from evolving from TAD to TOD, and above which they can evolve to über-TOD? This research hypothesises that specific levels of (1) transit service and (2) ridership, (3) population and employment density, (4) land use mix and (5) pedestrian friendliness determine whether a built environment can evolve from TAD to TOD and eventually to über-TOD. It assesses this postulate by classifying the heavy- and commuter-rail station areas of the Greater Montreal and Toronto Areas according to their level of "TOD-ness" or "TOD-propitiousness", based on these five transportation and land use variables. It delineates thresholds between which these variables are positively correlated, in the relatively few station areas deserving TOD status. It distinguishes station areas where achieving TOD status is an unforeseeable target, those propitious for TOD implementation and those where such levels surpass those expected from conventional TODs ("über-TODs"). It focuses on TOD-propitious areas, reveals...
their common transportation and land use characteristics and identifies the missing link necessary to elevate them to TOD status, whether through transit supply or urban intensity improvements. Thus, it draws lessons for planners and policymakers on the appropriate interventions to overcome car-centric dispersed suburbanism by transforming TADs into TODs or even über-TODs and suggests ways to make such levels of density, diversity, design and transit ridership politically acceptable within suburban environments.

References


Key Words:
transit-oriented development (TOD), transit service, density, diversity, design

SMART GROWTH AT TWENTY
Abstract ID: 485
Roundtable

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In the early 1990s a new movement arose in urban and regional planning that would define its orthodoxy for the next several decades: smart growth. Given a tongue-in cheek name that would be both celebrated and ridiculed, smart growth has evolved from a controversial new idea, to a widely accepted set of principles, to a passé expression eclipsed by the more contemporary terms like sustainable development and urban resilience. The precise birth of smart growth remains somewhat ambiguous but important milestones include the Natural Resources Defense Council’s Tool Kit for Smart Growth, the APA’s Growing Smart Legislative Guidebook, and Maryland’s Smart Growth and Neighborhood Conservation Act passed in 1997. This year marks the 20th anniversary of Maryland’s pioneering smart growth act.

Smart growth has generally been defined by 10 principles promulgated by the Smart Growth Network and includes these five key concepts:

- urban containment,
- compact development,
- mixed land uses,
- integrated transportation and land use policies, and
- incentives over regulations as the preferred implementation approach.
Maryland’s pioneering Smart Growth and Neighborhood Conservation Act embodied each of these principles. And while the adoption of Maryland’s act does not perhaps represent the birth of smart growth as a national movement, its 20-year anniversary marks a suitable time for reflection. Important and timely questions include:

- What has smart growth achieved over the past 20-30 years? Is the United States now growing smart?
- Are the fundamental concepts of smart growth still valid? Do they still represent the fundamental tenants of good land use planning?
- Are there important issues and concepts that smart growth failed to address, such as equity, energy conservation, and climate change?
- How does smart growth differ from more contemporary movements such as sustainable development and urban resilience? Do these new terms represent fundamentally different concepts or new terms for old ideas?
- What is the future of smart growth? Is it time for a new paradigmatic approach to land use and urban development in the United States?

We propose a panel discussion that considers these questions. The panel includes scholars from Oregon, Maryland, and Florida, states with rich histories in growth management, and scholars who have written extensively on the topic of smart growth.

References


Key Words:
smart growth, growth management, anniversary, maryland

TRYING TO SMART-IN-UP AND CLEANUP OUR ACT BY LINKING REGIONAL SMART GROWTH PLANNING, BROWNFIELDS REMEDIATION, AND URBAN INFILL REDEVELOPMENT IN SOUTHERN ONTARIO CITIES

Abstract ID: 488
Individual Paper Submission

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The redevelopment of brownfields and the promotion of infill in a manner that prioritizes the renewal, regeneration and retrofitting of urban areas has become a core strategy in government efforts aimed at cleaning up past pollution while working towards a more sustainable future. While the initial attention of policy-makers in the 1980s focused narrowly on the risks posed by these potentially contaminated sites, the focus began to broaden in the 1990s to reusing brownfields in an effort to bring people, jobs, and taxes back to communities afflicted by deindustrialization. As the new millennium has unfolded, policy makers have expanded the socio-economic and environmental benefits that they hope can be gleaned from redeveloping brownfields, although the core objective still lies in the strategic reuse of these properties as locations for urban intensification to combat urban sprawl. That is brownfields as locations for growing “in and up” instead of out.

In Ontario, Canada’s most populous, industrialized, and brownfield-laden province, a suite of progressive government policies and programs have been introduced to not only facilitate the assessment and remediation of the brownfields supply, but to also steer development demand away from peripheral greenfields and towards brownfields through integrated planning and policy that considers a wider regional perspective.

This research project examines the nature of property redevelopment that has taken place on brownfields in a handful of Ontario cities (i.e., Toronto, Waterloo, and Kingston) since the provincial policy shift towards using these sites to deliver smarter growth. Using property assessment data and so-called Records of Site Condition submitted by those who assess and remediate brownfields, the specific questions guiding the examination are:

- How has brownfield redevelopment activity evolved in these three municipalities?
- What has been the scale, character, and value of redevelopment activity?
- What factors have contributed to the patterns of redevelopment?
- Can any broader implications be distilled from these cases in terms of supporting a more sustainable growth regime?

The results reveal that brownfields redevelopment has been extensive despite the fact that most matters related to site cleanup and development escape the authoritative reach of government. That is the province has established growth policies to be largely implemented by municipalities and remediation policies to be largely implemented by private sector companies with some potential support from municipal governments. Ontario’s model, combined with a relatively strong real estate market bolstered by strong planning and growth management policy, has resulted in over 4,000 cleanups between 2004 and 2014 and a significant number of redevelopment projects. In the city of Toronto alone, 995 of the 1000 brownfield sites remediated between 2004 and 2011 have repurposed over 2,867 acres of land and resulted in projects valued at $37.1 billion in property assessment, including over 83,000 residential units that house over 200,000 people. The smaller cities of Waterloo and Kingston have also fared well, although the concern is that the market can only do so much and that once the low-hanging fruit is redeveloped, municipalities and upper levels of government (including the federal government) will have to intervene more directly if they want to continue to target brownfields as places to grow smarter. The research highlights the strengths and weaknesses associated with Ontario’s approach, which lies in between the European and US models in that it focuses more on regional growth planning and less on site-by-site brownfields remediation and redevelopment. This research is of relevance to urban planners and policy makers interested in this domain of urban revitalization and redevelopment, as well as the strong cohort of planning scholars who have made a significant contributions to this field of research over the last two decades.
References


Key Words:
brownfields, policy, redevelopment, remediation, trends

EQUITY IMPACTS OF LAND USE POLICIES IN NETWORKS OF PLANS: SOCIAL VULNERABILITY TO HAZARDS AND CLIMATE CHANGE

Abstract ID: 519
Individual Paper Submission

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Land use planning presents opportunities to mitigate vulnerability to hazards and climate change at the local level. Scholars and planning practitioners have advocated that municipal jurisdictions adopt diverse regulatory, investment, and incentive policy instruments that integrate vulnerability reduction into land use planning (Schwab 2010, Godschalk, Kaiser and Berke 1999). However, the emphasis on integrating vulnerability reduction policies often ignores the uneven impacts of such policies on marginalized population groups.

We expand prior work on development of a resilience scorecard (Berke et al. 2015) to evaluate social vulnerability to flooding and sea-level rise hazards, and to determine the degree to which local plans are coordinated in decreasing vulnerability of marginalized populations in different geographic areas of a community. Our study addresses critical gaps in research. Prior studies fail to examine the nexus of plans and vulnerability of marginalized populations to hazards, and do not explore the effects of the network of plans adopted by a local government on marginalized populations.

We apply a plan integration scorecard for resilience in the networks of plans of six cities along the US Atlantic and Gulf of Mexico coasts. The scorecard evaluates the level to which land use policies aimed at social equity: a) incorporate policies linked to reducing vulnerability of marginalized populations; and b) target geographic areas where marginalized populations are most vulnerable to hazards and sea level rise.
Our analysis reveals that most local plans are not fully consistent and do not always address the areas in a city that have the highest concentrations of marginalized people vulnerable to floods or sea level risks; moreover, some plans actually increase the vulnerability of marginalized populations. These patterns reflect past injustices with land use and infrastructure development (Carmin and Agyeman 2011), but also echo what Arguelovshki et al. (2016) call a “double injustice” since marginalized populations that contribute least to carbon emissions bear the highest social harms of hazards, while they are not benefitting from land use planning policies since such policies do not account for vulnerability reduction.

Our study maintain that the plan integration scorecard for resilience can generate information to identify and monitor how different plans influence the vulnerability of marginalized populations, how well plans target areas with highest concentrations of marginalized groups vulnerable to specific hazards. Planners can use the information to pursue an important role in improving planning for hazards and climate change that threaten marginalized groups by using the scorecard to identify conflicts among local plans, and to assess whether local plans target areas where marginalized populations are most vulnerable.

References

Key Words:
Land use, Equity, Hazards, Climate change

LOCAL LAND USE POLICIES FOR COMMUNITY RESILIENCE
Abstract ID: 536
Individual Paper Submission

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The rise of sea levels has been a major challenge to coastal communities. It increases the risk of temporary and permanent flooding, which leads to loss of valuable lands, properties, and human lives. Also, floods cause mold growth in flooded buildings, contaminations of drinking water supplies, post-traumatic stress, and other mental health disorders.
The State of Maryland has adopted smart growth policies to lead local efforts that address the Sea Level Rise (SLR) hazards. For example, Maryland’s adaptation strategy for SLR and Coastal Storms (2008) establishes short- and long-term adaptation and response measures, while the CoastSmart Communities Program (2009) seeks to build local capacity to develop plans reducing future threats to communities’ safety, health, and welfare. In addition, the State has attempted to empower coastal communities through providing resilience grants to mitigate SLR impacts. Despite State efforts, it is unclear whether Maryland’s counties are well prepared to address natural hazards emerging from SLR and climate change.

This research project examines land use policies adopted by Maryland’s coastal counties to mitigate the SLR impacts and create resilient communities. It investigates two major questions: what are county land use policies adopted to address potential SLR hazards in Maryland? and what are strengths and weaknesses of current county policies to create coastal resilience?

The research analysis identifies sixteen coastal counties in the State of Maryland that are subject to SLR hazards. The research compares land use policies applied by four groups of counties with different ranks of SLR hazards: low (4 counties), moderate (5 counties), high (4 counties), and very high (3 counties). It demonstrates variations in county land use policies based on potential risks of SLR hazards.

The research methodology relies on three sources of evidence: content analysis of county comprehensive plans and hazard mitigation programs/plans, interviews with county planners responsible for land use and environmental planning, and secondary data obtained from state and county planning and environmental agencies, the US Census Bureau, the Federal Emergency Management Agency (FEMA) and the U.S. Geological Survey among others.

Research findings explain major county land use policies to create coastal resilience and mitigate SLR impacts, and demonstrate strengths and weaknesses of adopted policies. Local governments are challenged by legal property issues and continued affordability and availability of insurance for landowners in areas subject to natural hazards resulting from the SLR. Therefore, the State leadership in planning is important to implement long term policies addressing SLR hazards. Research findings provide important implications that can help coastal counties respond effectively to urban challenges resulting from the sea level rise.

References

Key Words:
Local Land Use, Sea Level Rise, Coastal Resiliency

RESISTANT TO CHANGE: WHY DO SOME GENTRIFICATION-SUSCEPTIBLE NEIGHBORHOODS NEVER ACTUALLY GENTRIFY?
Abstract ID: 605
Individual Paper Submission

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Gentrification, or the transformation of an inner-city low-income neighborhood into a wealthier mixed-use or residential area, is an increasingly common phenomenon. Planners, sociologists, and geographers have identified a number of factors that make neighborhoods susceptible to gentrification, including proximity to downtowns, historic housing stock, and a high share of renters (cf Freeman, 2005). Yet not all neighborhoods that should gentrify actually do. Recent work in California shows that several neighborhoods considered “gentrification-susceptible” in 1990 had not, in fact, undergone the expected demographic shifts by 2013 (Zuk and Chapple, 2015). Indeed, although we know a lot about pathways to gentrification, we know considerably less about how we might mitigate its most negative effects, or resist it altogether. This study aims to determine which features of a neighborhood might attenuate gentrification impacts, asking what it is about certain places that helps them resist this seemingly inevitable trend.

First, we rely on a number of previous studies to develop a composite index of “gentrification susceptibility” with variables related to location, demographics, and housing. We apply this new index, which relies solely on nationally-available data, to all Census tracts in 1990 in the Los Angeles, San Francisco, Chicago, Denver, and New York regions, resulting in a list of what we call “gentrification-susceptible” (GS) tracts.

Second, we develop another index adapted from the aforementioned studies that assesses whether a Census tract has, indeed, gentrified. We apply this index to all GS tracts in 2000, 2010, and 2015 to determine whether these tracts actually gentrified 10, 20, and 25 years later. We run basic descriptive statistics on those GS tracts that did not gentrify to determine what changes did and did not occur in these areas.

Third, we hypothesize that three broad sets of factors interact to temper these trends. The first relates to people, and includes variables such as demographics, crime rates, and community organizing (cf Hwang and Simpson, 2014). The second category relates to place, and includes variables such as urban amenities (e.g., parks, schools, and transit), proximities (e.g., to CBDs, job centers, or other gentrified neighborhoods), housing (e.g., supply, age, affordability, tenure, and condition), and the built environment (e.g., neighborhood walkability) (cf Cervero and Duncan, 2004). The third category is policy, comprising variables such as rent control and tenant protections, affordable housing policies, upzonings, and ordinances related to accessory dwelling units (cf Zuk and Chapple, 2015). Then, controlling for market factors such as the strength of regional housing markets and labor market availability, we apply these indices to GS tracts that had not gentrified as of 2015. We conduct a robust quantitative analysis on such tracts to determine common features across them.

Our preliminary findings suggest that several variables interact to attenuate gentrification trends. Place variables such as proximity to CBDs and neighborhood walkability provide the strongest explanation for why certain areas have gentrified or not. Policy also matters, particularly when rent controls exist in a city or region. Yet, perhaps surprisingly, several people variables are also significant. For example, gentrification pressures seem to slow when there is history of community resistance in an area, such as opposition to artist-led gentrification in Los Angeles’s Boyle Heights. Also interesting is that GS tracts in Los Angeles with high percentages of African American persons were less likely to gentrify than those with higher percentages of non-Hispanic White residents, suggesting that gentrifiers’ perceptions and implicit racial biases might also be shaping neighborhood change dynamics. We conclude by discussing the variables under the purview of planners and policymakers, and thus how much agency they might have in tempering gentrification’s most damaging impacts.
References


Key Words:
Gentrification, Resistance, Neighborhood change

THE EFFECT OF GREEN BUILDING CERTIFICATION ON DEFAULT RISK AND LOAN TERMS IN COMMERCIAL MORTGAGE BACKED SECURITIES

Abstract ID: 640
Pre-Organized Session: Emerging Trends in the Demand for Responsible Development

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Using a novel dataset that matches commercial mortgage and green building information, we study the impact of green development on the default risk, interest rate and other loan terms of commercial mortgage-backed securities (CMBS) loans. To identify the causal relation between green building status and loan default risk, we exploit both the cross sectional and the time series variations in Energy Star labeling and LEED certification of our CMBS properties, and estimate hazard models with longitudinal data. Our results show that office CMBS loans can have more than 30 percent reduction in default risk after the collateral property becomes Energy Star labelled or LEED certified. This difference is after controlling for other factors that affect default risk, such as mark-to-market loan-to-value (LTV) ratio and contemporaneous debt-service-coverage (DSCR) ratio, etc. A matched-sample analysis confirms the effect of green development. Our analysis also suggests that the impact at least partially come from enhanced property operating efficiency, instead of solely from the green label or certificate. All else being equal, green property loans tend to have better loan terms than non-green property loans: they carry lower interest rate, and have significantly longer interest-only periods. However, our results cannot be generalized to retail CMBS loans.

References

- none

Key Words:
Mortgage, Default, Green Building

ADOPTION AND DIFFUSION OF ENERGY STAR CERTIFICATIONS IN US HOUSING
Research on responsible property investment indicates that the growth of capital asset value and operational expense savings are the primary pathways to attract institutional investors into the market (Fuerst & McAllister 2011). However, where capital asset value growth accrues only to investors, operational savings can be distributed to tenants through the use of net lease instruments. In a net lease, a tenant agrees to take on the responsibility for their operational expenses such as power and water consumption. Conversely, in a gross lease, the landlord (therein the investors) assumes responsibility for all operational expenses—no matter how much electricity, gas, or water tenants use (Moordian & Yang 2002).

Traditional economic theory suggests that tenants should prefer gross leases while landlords should prefer net leases as each seeks to shed variable costs to the other party (Wiley et al 2014). Moreover, theory implies that principal-agent issues and the distribution of operational expense savings and lease contract typologies creates a split incentive – whereby investors fund capital improvements (for increased sustainability) while tenants benefit from the operational efficiency gains (Wiley 2014). Indeed, this split incentive is often cited as a significant barrier to private investment in green building capital upgrades (Pivo 2010). In the context of climate change, corporate social responsibility motivations (Eicholtz et al 2010), and evidence of competitive advantage from green certifications (e.g., both price premiums (Robinson & Sanderford 2015) and reduced probability of default (Pivo 2017)), developing insight into the factors that shape demand for and leasing decisions about eco-certified space from both landlord and tenant perspectives is important for capital placement and urban development outcomes.

The objective of the paper is to analyze the extent to which there is an implied preference for gross or net leases in the market for sustainable commercial real estate—here in office building leases. Exploiting a proprietary cross-country database of commercial office lease transactions in the United States and Australia, developed in part for the CBRE Green Challenge, the dataset covers markets in each country that offer significant choice in lease structure between net and gross. Specifically, the dataset contains observations on 673 tenant leases in 102 Australian buildings and 676 tenant leases in 64 buildings in U.S. markets. The paper utilizes logistic regression models to answer the research question: which lease typology, if any, is associated with eco-label status in commercial office buildings, holding all other factors constant?

Unexpectedly, the findings are counter-theoretical. Buildings in both countries identified as energy-efficient and/or green labeled are significantly more likely to offer net lease structures. Further, the presence of a net lease is significantly associated with higher grossed-up rent (contract rent plus any operating expense contributions). While counter-theoretical, these findings contribute to the debate over whether the split incentive is a significant barrier to investment in the procurement of energy-efficient commercial real estate. These results have important implications for how real estate investors and tenants engage with eco-certifications in the urban development process. They also provide a base from which to test future hypotheses, offer insight into how market actors make decisions, and how obstacles to increased investment in sustainable commercial real estate could be removed—a crucial issue for
investors seeking alpha, tenants seeking the best space, and planners and economic development officials seeking a healthier and more sustainable built environment.

References


Key Words:
Energy efficiency, Diffusion of Innovation, Housing Markets, Urban Growth

CONSERVATIVE ASSUMPTIONS AND THE DENSITY THEY PREVENT: THE CASE OF TRANSPORTATION IMPACT STUDIES AND SCALED DEVELOPMENT
Abstract ID: 642
Pre-Organized Session: Emerging Trends in the Demand for Responsible Development

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Despite efforts to encourage and incorporate planned density, the constraints of comprehensive transportation system plans and the evaluation of vehicle level of service derived from estimating vehicle trip generation at new (or rezoned) development results in scaled densities. This abstract takes a look at the engineering methods and the baked-in assumptions that bias toward over-designing for automobiles and considers how these approaches influence density of development. The author explores the quantitative impacts of these assumptions—conservatively overestimating vehicle demand to prevent the “failure” of vehicular facilities—and discusses the theoretical impacts on regional development: capping development density, even where it is desired by both agency and developer; and oversupplying vehicle facilities while ignoring high levels of pedestrian demand. Overall, the methods inhibit the ability for sustainable and multimodal regional plans to be achieved by constraining the individual development systematically and incrementally. The conclusions discuss potential remedies which include adjustments to existing methods, supporting agencies that wish to accommodate innovative methods, and moving toward a multi-objective and scenario-oriented transportation review process.

References


Key Words:
APPLICATION OF SUSTAINABLE DEVELOPMENT GOALS (SDGS) TO THE CITY LEVEL: A CASE STUDY OF REPUBLIC OF KOREA

Abstract ID: 681
Poster

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The Sustainable Development Goals (SDGs) have been introduced by the United Nations as the next global goals and targets to be achieved by 2030 after the Millenium Development Goals (MDGs). The SDGs are broader and more ambitious than the MDGs, calling for participation of all the countries in moving towards sustainable development. The SDGs lay out 17 goals and 169 targets with qualifiable indicators, addressing the three dimensions of sustainability, namely social, economic and environmental dimensions, in the integrated manner. In achieving the goals and targets under the SDGs, cities have a significant role to play as a locus with concentrated population and economic activities. Thus, it is necessary to apply the SDGs not only to the national level but to the city level and encourage implementation of the SDGs at the city level. However, there is a serious lack of research in addressing the SDGs in the local context and analysing the implementation of SDGs at the city level despite the urgency of the matter. Against this backdrop, the study aims to apply the SDGs to the city level, analyze the current status of their implementation and, further, assess the relationship to identify any conflicts or concurrence between the goals, for the cities in Republic of Korea. Time-series data for the indicators of SDGs at the city level have been collected and analyzed using a factor analysis to assess the implementation over time with indexation. In addition, a network analysis has been conducted to reveal the relationship between the targets and indicators. The preliminary results show that the current levels of achievements as well as their speed are diverse across sectors and cities in Korea. The results from the analysis as well as the methodology introduced in the research are expected to contribute to incorporation of SDGs into the local policy and facilitate the sustainable development in cities.

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Key Words:
Sustainable Development Goals, Urban Sustainability, Indicators of Sustainability
SYNTHESIZING RESIDENTIAL SORTING BY INCOME: EXPLORING THE RELATIONSHIP BETWEEN INCOME SEGREGATION AND INCOME INEQUALITY
Abstract ID: 719
Poster

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This poster explores the following question: what is the relationship between income inequality and income segregation? Through what mechanisms does income segregation (“the uneven geographic distribution of income groups within a certain area”) occur? This poster (1) presents theories of income segregation. By emphasizing the role of political context in income segregation, the poster distinguishes between income segregation and income inequality, while underscoring their connection and possible overlap. For example, the local housing market, shaped by political contexts at the local level, may strengthen or lessen the level of income segregation and income inequality; (2) displays the level of income segregation between municipalities within MSA by utilizing several measures, such as the Theil index or the Rank-order information theory index. The poster is the framework for an ongoing study of the measures of income segregation through statistical analyses. The purpose of this study is to assess the relationship between income segregation and income inequality within MSAs, as well as how these relationships change according to the different qualities of public services and zoning, determined within political boundaries.

Planners have considered income segregation as a significant issue in addressing social equity since social inequalities due to residential segregation by income are crucially related to current outcomes as well as future opportunities of residents. Therefore, this research is important to planning scholarship and planning practice because it is designed to reveal the relative importance of planning regulation in promoting or discouraging income segregation and inequality.

References

Key Words:
Income segregation, Income inequality, Residential sorting

INDUSTRIAL-INDUCED OR RESIDENTIAL PRIORITY? A COMPARATIVE ANALYSIS OF LAND USE IN COASTAL INDUSTRIAL TOWNS OF LIAONING PROVINCE, CHINA
Abstract ID: 729
Individual Paper Submission
China had promulgated a series of industrial development plans including the Steel Industry Restructuring and Revitalization Plan, Petrochemical Industry Restructuring and Revitalization Plan, Industrial Transformation and Upgrading Plan, and etc. These plans focus on the relocation of energy-intensive industries to coastal areas to utilize the proximity to ocean shipping and convenient access to foreign industrial raw materials. Restricted by the location of shipping ports, the coastal industrial towns reside hundreds of kilometers apart from major cities. Coastal residential towns have been developed to alleviate housing problems for employees of the relocated industrial plants. Other Asian countries including Japan and South Korea have also developed numerous coastal industrial towns. Their spatial layouts reflect significant and common features of industrial-induced land development. More specifically, it is evident to see that these industrial areas have been closely arranged around the shipping ports, with the majority of industrial developments sharing the great proximity to coastline. We adopt a case-comparison method to study coastal industrial town spatial layout features in the following aspects: industry-city spatial relationship, various types of land position and proportion, coastline utilization intensity, industrial land organization, and etc. The paper focuses on the recent coastal development of the fast-growing Bohai Bay area and examine several new industrial towns in Liaoning Province of China. Our study shows that the spatial layout of these towns deviate significantly from foreign cases. In some comparisons, the supplementary residential and recreational land have primarily occupied the high quality coastal areas. Land reclamation for this purpose is also notably higher than foreign comparable. As a result, industrial land-use have not taken full advantage of coastline resources and some even locate a major distance away. It is puzzling to see how industrial-led development has shifted to a residential-driven growth. We further investigate the mostly probable cause through interviews with planners, government officials, property buyers, and data analysis of the purchase policy and statistical data. We find that first, this phenomenon is tightly linked to local government finances. The government is motivated to sell residential land to raise funding for the subsequent industrial development, which has contributed to a high presence of residential land development. Secondly, the Chinese national government has imposed a Purchase Restriction Policy to address the overheated housing market in 2010, just the time for the large-scale coastal industrial town to be built. In order to promote the coastal development, local government further promoted residential development as they were free from purchase restrictions and enticed to preferable loans conditions. Lastly, our findings show that there exists an increasing demand for warm-climate coastline residential units for new homeowners and investors. Significant residential development appear to dominate industrial-induced relocation due to these factors and limit industrial companies to efficiently utilize marine resources. Many areas now exhibit low utilization of industrial land and the local government has agreed to cooperate with civil engineers to alleviate the conflict of new land development. It is critical to develop coastal towns that are suitable to China’s economics, industrial and marine conditions, rather than blind imitation of foreign successful examples.

References
In the low-lying plains of Eastern North Carolina, flooding is a living legacy of centuries-old settlements along streams and rivers. For a number of reasons, catastrophic flooding has intensified over the past two decades. Property acquisition is one of the only permanent flood hazard risk reduction strategies, but it is most effective in areas with low home values and lower incomes, often African-American communities that are located in floodplains as a result of segregation or racial discrimination. Because of the social vulnerability of these communities, it is critical that planners understand how acquisitions, also called “buyouts,” may affect participants’ individual economic wellbeing as well as the community’s overall economic resilience. Although research has captured the value of floodplain property acquisitions in losses avoided for future floods, we have less of an understanding about the multifaceted value of buyouts to individual participants or to the fabric of the communities where they occur.

This project analyzes the role of buyouts in individual and community economic wellbeing by comparing two small African-American communities in Eastern North Carolina: Princeville, a historic Black settlement founded in 1865, and Lincoln City, a neighborhood of the small city of Kinston. Hurricane Floyd completely devastated both places in 1999, after which the federal and state governments made funds available to buy out homeowners. As a town, Princeville decided to reject a buyout program, while Kinston aggressively pursued a buyout program in Lincoln City where 97% of eligible sellers participated. This project uses a comparative case study method to trace the role of buyouts in long-term Floyd recovery and understand implications for repeat catastrophic flooding that occurred in both communities in 2016. I use interviews with current and former residents, local leaders, and state and federal officials, as well as government documents, economic and social data, and media records to draw conclusions.

I find that the floodplain buyout program in Lincoln City provided mostly positive individual economic benefits, but these individual benefits came at the cost of some communal economic assets which were preserved in Princeville. For most homeowners in Lincoln City, the buyout was an opportunity to move into higher quality housing and in some cases to higher opportunity areas. Gap funding helped them afford higher home prices, although in a small number of cases it led to foreclosures. However, social networks that supported individual economic security were lost when the buyout occurred. Before the flood, neighbors had shared food, rides to work, and childcare – so much so that the buyouts were associated with some job loss and job changes when these communal resources were no longer available.
The floodplain buyout program in Lincoln City affected the community “left behind” in more negative ways. Renters who had previously rented at low cost from the private market struggled to find equivalent housing. Some of them turned to public housing in the neighborhoods around Lincoln City, which had higher rates of poverty. As the working class community in Lincoln City dissolved, the east side of Kinston, an area of severe poverty, lost the social and economic stability that Lincoln City households had offered. While Princeville still suffers high levels of poverty, they retain eldercare networks and have lower levels of crime than do the areas surrounding Lincoln City.

In examining the differences between these two towns and particularly the experiences of Lincoln City buyout participants, I find that several factors mediate or shape the role of property acquisitions in individual and communal economic resilience. These factors include individual factors like property ownership and insurance, contextual factors like historical significance, the housing market, and alternatives available to individuals and communities, administrative processes governing buyout decisions, and the policies that guide or otherwise influence the buyout programs. The paper concludes with several recommendations for post-disaster floodplain acquisition programs to improve the contribution of buyouts to individual and communal economic resilience.

References

Key Words: Buyout, Disaster mitigation, Community development, Disaster recovery, Economic resilience

MULTI-LEVEL CLIMATE CHANGE PLANNING: SCALE, CAPACITY, AND THE ABILITY FOR LOCAL ACTION
Abstract ID: 887
Individual Paper Submission

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Cities and city regions across the world are emerging as critical actors in the struggle to deal with the challenges of a changing climate (Revi et al., 2014; Stone Jr., 2012; The International Bank for Reconstruction and Development/The World Bank, 2010). Although climate change continues to be imagined as a global problem requiring solutions at international and national scales, there has been a growing involvement of municipal governments and other actors at the local (city) scale in dealing with
challenges posed by a changing climate (Bulkeley, 2010). This has emerged partly as a response to increasing frustration with international negotiation processes as well as the growing realisation that the impacts of climate change are going to be increasingly localised, and possibly amplified in urban regions (Stone Jr., 2012). There is also considerable investment that is being directed towards building capacity within cities not only by their own national and regional governments but also by international donor agencies, networks, and institutions to help deal with these challenges. However, the capacity and ability of urban governments to deal with these changes is not uniform. Some of the key challenges that these governments face are a result of the lack of adequate governance frameworks as well as questions of technical capacity and other developmental priorities.

This paper compares the impact that urban governance structures have on the ability and capacity to plan and govern for climate change in two countries: the United States and India. Given the fragmentation of governing structures in Indian cities and the concentration of powers at the regional scale, urban local bodies are unsure of where the responsibility for environmental issues lies and the extent to which they are responsible. There is also a lack of adequate training on these issues within Indian cities. Raising financial resources is also a challenge, given the lack of power that city officials have. Cities in the US, on the other hand, have a much larger degree of autonomy and decision-making power, as well as access to knowledge and financial resources – indeed several American cities are leading the urban response to climate change especially as a result of their political and governance frameworks (Solecki, 2014).

Through primary and secondary research, this paper attempts to understand the institutional arrangements for governing for climate change in a set of Indian and American cities. We aim to understand how differing governance structures as well as differential skill, technical abilities, and access to funding impact planning for climate change. In the Indian context, our findings emphasise how, in the absence of a more formal governance framework, there are nonetheless attempts being made to address these mitigation as well as adaptation challenges, albeit not directly as responses to climate change, but as larger strategies of sustainable development. In the US context, cities have become entrepreneurs around climate change impact mitigation despite state or federal-level denial of these issues.

References

Factoring in population trends is one of the most basic yet critical tasks in planning and policy development, as it helps communities plan for the need, scope, and distribution of future community resources, such as land use, housing, community facilities, and infrastructure (Berke & Kaiser, 2006). Population projections are essential to sound planning decisions for a variety of reasons, including: 1) planning decisions and actions have a long-term and lasting effect, as planning outcomes are rarely discarded once they are implemented or infrastructure is built; 2) the cost of providing infrastructure and community facilities are extremely high, so resources must be carefully stewarded; and 3) using public funds to operate or maintain under- or unused facilities is inefficient and at times unethical. Therefore, population projections need to be considered in planning decisions, they need to be accurate, and they need to avoid optimistic, political maneuvering that seeks to maintain pro-growth planning and development policies and strategies when they are not warranted (Hollande et al., 2009; Pallagst, 2009).

Accurate projections become all the more critical in depopulating cities, since expansion strategies, guided by optimistic forecasts may cause lower population densities, mis/under/unused infrastructure and resources, overburdened social programs, and, in the worse cases, declining city centers and increasing urban sprawl.

This research explores 43 depopulating cities (i.e. cities with 100,000 or more residents as of 1980 that have been losing residents through 2010) to investigate whether or not these cities are chasing growth-oriented planning policies and strategies based on optimistic, inaccurate, or lacking population projections. Data on population, land area, and vacant units were used from the US Census, including the American Community Survey (ACS), for each decade between 1950 and 2010 in order to determine which cities are depopulating. Comprehensive plans and related planning documents for each city were then analyzed in order to determine if the cities acknowledged depopulation trends, and if they forecast future decline or if they forecast future growth. Population projections done around 2000 by local, regional, or state governments for 2010 for these cities were also compared to the actual population of 2010 in order to identify the impact of the projections on land annexation and other infrastructure expansion.

Our preliminary results indicate that, on average for all 43 cities, population declined by 28.4% from the cities’ peaks, land area declined by 2.9%, and density decreased by 49%. Meanwhile, 62.8% of Metropolitan Statistical Areas where the cities are nested in have experienced population growth through 2010. On average, the time lag between when a city’s population peaked and when the amount of land area in the city’s control peaked was 27 years. This suggests that some cities ignored
depopulating trends and instead promoted expansive strategies. Analysis of these cities’ comprehensive plans indicate that 83.7% acknowledged past depopulation trends, regardless of whether their priorities or future strategies were pro-growth or not. However, 30.2% mentioned population growth or did not mention specific future forecasts in their plans at all. In comparing projected population changes for 2010 with the actual population changes experienced, the projections were inflated by about 3.8% on average from what was actually experienced. These preliminary results suggest that there is a mismatch between what cities are experiencing in terms of population changes and the promotion of pro-growth strategies in their plans.

References

Key Words:
population projections, depopulating cities, pro-growth planning

SUSTAINABILITY PLANNING AS CONSPIRACY: A TALE OF TWO TEXAS CITIES
Abstract ID: 913
Individual Paper Submission

PATERSON, Robert [The University of Texas at Austin] rgfp@mail.utexas.edu, presenting author

The 2016 Presidential Elections suggest that conspiracy theory is now part of the “new normal.” Yet historical analyses of conspiracy theories in the US suggest that it has been part of the national political landscape since the inception of the nation, and that it has been far more widespread and enduring than commonly thought. Planners at state, regional and local levels are increasingly finding that planning, and in particular planning that addresses concerns of sustainability, climate change and Agenda 21 related values, is now a possible target for conspiracist leaders and groups (e.g., notable nationally are Glenn Beck and Alex Jones). In the past, planners might have been able to ignore these leaders and their conspiracy narratives as the ramblings of the “lunatic fringe” due to a relatively small number of people organizing and sharing their voiced conspiracy beliefs. However, research shows that it is now possible for conspiracists to use social media broadcasting through Facebook, Twitter, Youtube, Instagram, and other programs to reach as many voters and residents as major news channels, essentially converting computer microphones (and webcasting) into the “mother of all megaphones.” (Bessi et al., 2015) What differentiates this development from similar historical concerns about the possible impacts of technology (i.e., radio and televisions) on democracy and public deliberative processes (such as planning), is that social media “conspiracy” broadcasters have no filtering, no fact checking, and no editorial oversight unlike radio and TV (other than the fear of possible slander suits and civil litigation damages) (Allcot and Gentzkow, 2017). A recent comparative case study suggests that planners are largely uncertain how best to prepare for and respond to conspiracy based allegations especially when planning is framed as part of an overall sustainability framework (Trapenberg Frick 2013).
This paper builds on that prior research focusing on a case study analysis of local community responses to sustainability conspiracy allegations by Infowars.com in two Texas communities. The communities of Dripping Spring and Hutto volunteered to explore district scale plans for their downtowns as part of a US HUD Sustainable Communities Partnership grant (US HUD, 2013). The communities had to be willing to explore what sustainability meant for them in their own local context and be willing to participate in testing scenario planning software in community planning projects to qualify for the program. Both communities were then targeted by Infowars.com and its supporters arrived to disrupt the planning processes and warn of the sustainability conspiracy. Conspiracy supporters warned local residents that they were being controlled through a mind control process known as a Delphi and that the hidden goal of the planning was to deprive them of their property rights. Both communities were aware that Infowars.com news persons and possible conspiracy supporters of that website might be attending the planning workshops and thus had time to prepare, engage with or consider workshop process responses.

The research uses a revelatory case study design drawing from participant observation, interviews with planners and public officials, and content analysis of infowars.com media to understand the strategies and misinformation deployed to disrupt the planning process, as well as the planner and community responses both before and during the planning workshops to the conspiracy charges. The paper reflects on the events and responses and suggests several possible approaches that communities can consider in response to such allegations drawing on social psychology, communication, political science, and dispute resolution theory. There are no “easy” solutions to conspiracy groups and their allegations since dialogue with conspiracy supporters will be problematic as planners are, by conspiracist thinking, complicit co-conspirators of the secretive, ill-intentioned plot. Yet various threads of social science research suggests that information and engagement that results in active analytic thinking, that exposes logic and fact based fallacy, and that conveys empathy for underlying concerns can reduce both the spread of conspiracy beliefs within the larger population, and in some cases, reduce belief among conspiracists.

References

Key Words:
Sustainability, Participatory Planning, Process Design, Conspiracy, Scenario Planning

IMPACT OF REGIONAL COLLABORATION NETWORKS ON SMART GROWTH POLICY: EXTENDING THE INSTITUTIONAL COLLECTIVE ACTION FRAMEWORK
Abstract ID: 920
Research Question:
How are smart growth policy responses influenced by regional level collaboration mechanisms?
While fragmented forms of government can lead to inefficiency, common pool resource problems and externalities, the institutional collective action framework predicts that local governments will coordinate with neighboring jurisdictions and other agencies to adopt smart growth in order to minimize the costs of implementing smart growth policies. We seek to understand whether existing regional collaboration networks---as a form of regional mechanism---impact smart growth decisions at the local level.

Theory:
Scholars applying the Institutional Collective Action (ICA) framework argue that jurisdictions coordinate service provision in such a way that minimizes transaction costs. Transaction costs involved in policy coordination depend upon the nature of services (i.e., asset specificity and service measurability) (Brown and Potoski, 2003), coherence of interest among participants (community homophily), and existing hierarchical structures (i.e., state mandates and Federal rules) (Feiock 2009, Gerber et al. 2013). We extend the ICA framework to studying the influence of regional mechanisms on the adoption of smart growth policies. We make a case that smart growth policies have multiple tools of implementation and each tools differ in character. Depending upon the characteristics of smart growth policies, different agencies have different incentives and motivations in the adoption of these policies. We assume the existing regional networks can affect the costs of coordination depending upon the types of tools being implemented; and thus, influencing local agencies’ decision to adopt certain type of policies.

Data/Methods:
A preliminary results, based on the “Sustainable Florida Communities 2009 Survey” in Florida local governments, highlight the patterns of smart growth policies that were classified into two categories: climate change mitigation and adaptation policies. Out of the 165 valid responses from the chief planning officer of each government, we find that jurisdictions are more likely to adopt smart growth tools that have been classified as mitigation tools rather than adaptation tools. We extend the results by focusing on a single metropolitan area in Florida: Miami-Dade. The region has intense development pressure and implemented Urban Development Boundaries (UDB - a prominent smart growth tool) since 1970s (EPA report, 2012) and incorporated UDB into the Comprehensive Development Master Plan in 1983. We also identified smart growth tools associated with UDB. Based on the 2009 survey, there were 43 valid responses on climate change response policies from the Miami-Dade area. The results show that a majority of the responding jurisdictions have adopted climate change mitigation policies (i.e., compact development, mixed land-use, and transit-oriented development).

A second wave of survey has been developed to identify success of implementation of these tools, motivation of identified agencies in the smart growth planning process and level of coordination. Online survey of 91 local governments, county and regional governments, public service agencies and private/non-profit organizations are associated with implementation of these tools. A social network analysis will be conducted to identify key actors forming the regional networks – organizations’ social
positions and ties are estimated to test the general hypothesis about the association between pre-existing coordination ties and adoption of smart growth policies.

Contributions to the field of smart growth policies:
This paper contributes towards smart growth scholarship by extending the ICA framework to understand how existing collaborative frameworks contribute towards adoption of policies. Further, we contribute methodologically by using network analysis in study of smart growth and further our understanding of collaboration at the regional level.

References

Key Words:
Smart growth, Climate Change, Institutional Collective Action Framework, Social Networks Analysis

BUILDING CODES VS. THE APOCALYPSE: HOW MIAMIANS’ NARRATIVES OF TECHNICAL COMPETENCE KEEP SEA LEVEL RISE AT BAY
Abstract ID: 936
Individual Paper Submission

TEICHER, Hannah [MIT] hteicher@mit.edu, presenting author

In June 2013, Jeff Goodell grabbed national attention with a feature story in Rolling Stone speculating that Miami is an imminent “American Atlantis.” After painting a dystopian near future in which a major hurricane leaves the city sand-filled and dark, Goodell argues that “Miami embodies the central technological myth of our time – that nature can not only be tamed but made irrelevant.” Discussing the frenzied pace of real estate development which continues unabated, he renders the folly of pumping money into this place readily apparent.

Unsurprisingly, almost two years later, lifestyle media pays these warnings no heed. In an article proclaiming Miami “New York South,” Suzanne McGee quotes a “power real estate broker” explaining the growing allure of the city to New York buyers: “They realize that Miami is an urban city with a beach that is always going to be accessible.”

However, sober scientific research on exposure to sea level rise tends to confirm Goodell’s view. In the more restrained language of tables, Hallegatte et al. (2013), a cohort of researchers working for the World Bank and other international institutions, rank the 136 largest port cities globally by exposure, average annual losses, and relative average annual losses (as % of GDP). In all three rankings, Miami’s position signals severe risk.
This raises the question, even as Goodell’s apocalyptic narrative resonates and lingers, what counter-narratives do local built environment professionals enroll in order to inoculate themselves against this apocalypse? How do they continue to confidently operate in good faith in a business as usual mode?

In June 2015, I conducted interviews concerning “flood risk” with seventeen senior decision-makers involved in the built environment in Miami. The respondents had prominent positions in transnational real estate companies, local municipalities, policy organizations, large law firms, and academic institutions. Addressing my focus on the power of narratives and counter-narratives, I conducted analysis of the interviews through Foucauldian Discourse Analysis, which offers a compelling framework for its close attention to power dynamics, speaker positionings and resulting practices.

I found a range of prosaic stories that nevertheless challenged the doom and gloom vision so easily imposed from outside. An academic proclaimed Miami’s underdog fortitude and flexibility, challenging Northeastern elites’ pet critiques of Miami’s superficiality. The mayor of a small suburb, a scientist who fully embraces the consensus on climate change, rejected doomsday prophecies and proposed shifting the story with a community sea level rise festival. A real estate professional upheld the region’s responses to Hurricane Andrew, which included building code and infrastructural enhancements, interpreting this as assurance that Miami was well protected and would once again adapt if necessary.

This reassurance derived from the building code was one of the most common threads throughout the interviews. While the building code may be considered “best practice” for hurricane resilience, it may not even begin to tackle the more wicked problem of sea level rise. However, this disconnect is conveniently elided in the popular imagination. Both the explicit reliance on the building code and the questionable effectiveness of these codes have implications for planning theory and practice. While the planning profession has long eschewed technocratic expertise, this expertise on zoning and building codes still forms a central part of the profession. If other built environment professionals, even staunch adherents to markets, are putting so much faith in codes, this may present an opportunity, providing additional legitimacy for planners to make more radical interventions in an area of practice too often relegated to the technical background.

References

Key Words:
climate change, adaptation, building codes, infrastructure, apocalypse

PRICING VISUAL ACCESSIBILITY OF ENVIRONMENTAL LAND USES IN HOUSING MARKETS: A GEOGRAPHICALLY WEIGHTED REGRESSION APPROACH
Abstract ID: 957
This study uses a geographically weighted regression (GWR) modelling approach to assess the effect of visual accessibility of scenic land uses on the housing prices. Study provides a methodology of estimating households’ implicit willingness to pay (WTP) for the visual accessibility of privately-owned voluntarily-protected scenic-lands in a single family housing market in Worcester, MA. The $ value of premium (price effect) was captured using the visual accessibility variable, developed as a combined weighted measure of visibility, and proximity of scenic land uses from home samples using geospatial analysis. This measurement variable was named as Gravity Inspired Visibility Index (GIVI). The scenic land uses of focus are protected in perpetuity conserving natural, historic, and scenic characteristics. These lands serve as public amenities, and offer direct and indirect environmental and health benefits to the local communities. In past, several parks, trails, waterways, and wildlife areas have been protected using this mechanism also called -- Conservation Easements (CE). The CE are legal agreements signed between private landowners’ and a non-profits, or a government agencies, aimed to perpetually conserve the preservation-worthy lands. Per the agreement, the private landowners restrict any future development rights on their lands, but retain titles, and rights to own and use the land. Owners’ also have the option to either donate or sell the restricted development rights, and claim equivalent value loss of restricted development rights via federal tax credits. Billions of dollars worth of public money is involved as tax credits to incentivize private landowners in conserving such lands. This paper offers useful insights to the local governments and conservation agencies in promoting and spatially planning conservation activities.

A comprehensive review of eight different land uses from multidisciplinary sources (real estate, urban planning, geography and environmental economics), price contributing $ amenity effect (Mittal and Byahut 2016), and role of key variables ‘proximity’ and ‘view’ was discussed. The paper provides a detailed methodology on developing the spatial interaction variable of GIVI developed using 3D GIS and viewshed[1] technology, which was used to estimate the capitalized premium from the preserved scenic land uses.

The paper employs GWR modelling approach in estimating the effect. Both global model (adjusted $R^2= 0.52$, AICc= 29828) and the geographically weighted regression (GWR) models (adjusted $R^2= 0.59$, AICc= 29729) were calibrated to estimate the marginal price effect of scenic land uses as capitalized in neighboring homes (Mittal and Byahut 2017; Nakaya et al. 2014; Brundson et al. 199). The results indicated a capitalized premium of 3.4% on an average observed on the mean home value of homes from the GWR model. The paper offers a useful framework for evaluating effects of scenic land uses, land protection for GIS, urban and regional planning and real estate scholars and professionals. It also offers useful insight to conservation agencies, local governments, professional planners, and real estate professionals for prioritizing land sites with scenic views and for property development.

[1] The viewshed identifies cells in an input raster that are visible from one or more observation points. Binary values are added to the output raster with 1 meaning visible and 0 means not visible.

References
FORMERS VERSUS ZONERS HOW AND WHY COMMUNITIES SHIFT TO FORM-BASED ZONING

Abstract ID: 960
Individual Paper Submission

FAGA, Barbara [Rutgers, The State University of New Jersey] bfaga@e jb.rutgers.edu, presenting author

Zoning is the foundation of city planning. Planners have the power to regulate the use and form of privately owned land—an enormous task. Over the last 15 years, some communities have been divesting themselves of historic Euclidean zoning in favor of the newer concept of form-based code.

The subject of this research is why and how communities make this change. Changing an entire zoning code is an immense project that requires a massive investment of time and money, not to mention perseverance. Does changing code provide an answer to undesirable consequences of Euclidean zoning, or are form-based code advocates correct in their assertion that their approach offers a panacea for everything wrong with planning and development? This is a sweeping question, and one that is asked in hundreds of planning offices by planners, urban designers, politicians, and their communities.

This research examines the state of planning practice surrounding this issue, and the impact of the new form-based code on zoning from 2014 to the present. Key questions in an investigation of theory and practice aspects include: Who and what motivates change? Does it make a quantitative or qualitative difference? What is the overall impact of form-based code in comparative analysis with Euclidean zoning?

The April 2013 annual meeting of the American Planning Association (APA) offered a well-attended short-course webinar on form-based code that included five panel discussions on why cities should change their code. The panels were presented as a three-day forum to discuss the “connection (and disconnection) between regulations imposed by zoning and the resulting pattern and form of cities.”

Packed with standing-room-only attendees, the panels included local government and private practitioners with direct experience with code changes. Critics were not included in the formal program, but lined up for the question portion of the presentations.

Planners supporting Euclidean zoning are called “zoners,” while “formers” are those in support of the new code. The “zoners” in the audience asked the panelists for proof that their claims about form-based code’s benefits were true, because without research their comments were based entirely on opinion. The
discussions ended with the audience cautious, uncertain, and with battle lines drawn. In 2014, the APA stated on their website that “It seems the country has gone head over heels for form-based codes.” [2] Three years later, this assertion has not been borne out. In fact, only .004 percent (387) of 88,000 local governments have adopted the new code. The Form-Based Codes Institute (FBCI) notes that “As of February 2017, we’ve tracked 654 codes that meet criteria . . . 387 of these are adopted, with others in progress.”[3]

In 2014 two research protocols, including online surveys of planning practitioners and case studies of Cincinnati, Denver, and Miami, were used to investigate the intended (and often unintended) outcomes and consequences that emerge with the change from conventional zoning to form-based code within an established community. The resulting body of data indicated that there was no proven positive effect from the adoption of form-based code. Currently, further research is underway, and comparison of the results of the 2014 research with that conducted in 2017 is reported and discussed in this paper.


References

Key Words:
zoning, form-based code, urban design, planning practice

PLANNING FOR EXURBIA: THE ROLE OF LAND-USE PLANNING IN THE RURAL TO EXURBAN TRANSITION
Abstract ID: 1037
Pre-Organized Session: Regional Lessons from the Political Ecology of Exurbia

TAYLOR, Laura [York University] taylorl9.yorku@gmail.com, presenting author

In this paper, I discuss the role of land-use planning in facilitating exurban development. Exurbia is rural residential development driven by a desire to escape the city and suburbs to be closer to nature and the development process is managed through planning policies and practice. In Sprawl and the ideology of
nature (Taylor and Cadieux 2013), we use “environmental imaginaries”, a conceptual framework for analysis from political ecology (Peet and Watts 1996) to demonstrate how exurbanites seek to control how nature is valued. In many rural areas, especially in North America, lands traditionally been in productive use for timber, mining and farming are shifting to amenity uses due to global economic restructuring of extractive industries (Nesbitt and Weiner 2001). This shift is discussed as “reterritorialization” (Brogden and Greenberg 2003), where the idea of landscape and the social and political structures related often go through cataclysmic changes during the shift from resource production to amenity real estate (Taylor and Hurley 2016).

In this paper, I focus on the role of planning in reterritorialization: the designation of land from “rural”, in which resource extraction is permitted, to “rural settlement”, where exurban development is permitted, is accomplished through the regulatory land-use planning process and all of its associated politics. In many places, the rural to exurban transition is the community’s first foray into comprehensive planning and signals a change in state intervention in local matters. Political ecology, with its approach to analyzing the politics of environmental knowledge and ecological change, offers much to understanding rural planning issues.

References


Key Words:
Exurbia, Peri-urban studies, Rural planning, Political ecology, Urban-rural fringe

CONSERVING THE LANDSCAPE FEATURES IN-BETWEEN: POLITICAL ECOLOGY AND DEVELOPER-ADVOCATE-PLANNER NEGOTIATED EXURBAN TRANSITIONS
Abstract ID: 1038
Pre-Organized Session: Regional Lessons from the Political Ecology of Exurbia

HURLEY, Patrick [Ursinus College] phurley@ursinus.edu, presenting author

In this paper I discuss the role of residents and developers in exurban landscapes within the processes and practices of land-use planning in particular place-based contexts. Drawing on exurban cases from the forested ridgelines of southeastern Pennsylvania and the foothills of the Sierra Nevada, I seek to illustrate the politics of engagement and negotiation that characterize the efforts of distinct land-use decision-making jurisdictions to use planning “best practices” to manage landscape transformations associated with the arrival of large numbers of in-migrants from nearby cities and suburbs (Taylor and Hurley 2016; Hurley & Walker 2004). Employing political ecology’s focus on conflict and power (Peet and Watts 1996), the analyses reveal the “decisive moments” (Hiner 2016) and the logics that are
mobilized by these diverse actors within particular planning frameworks to shape specific trajectories of change, revealing the uneven ways in which planning shapes outcomes on the ground (Hurley and Taylor 2016). The findings speak to the ways in which wider social-cultural and economic changes fostered by exurbanization enter into and work through planning practices to influence landscape changes (Taylor and Cadieux 2013). These findings reveal the key ways in which planning serves as a mechanism through which wider conversations within, and contestations among, diverse communities select the landscape features, natures, and types of open space that will be conserved (or not) by ongoing residential development (Hurley 2012).

References


Key Words:
Exurban, Periurban, Political ecology, Land use conflict

CAN INCREASING REGULATORY CERTAINTY THROUGH ‘CODIFICATION’ OF DEVELOPMENT RIGHTS SUPPORT INCREASED AND MORE DIVERSE HOUSING SUPPLY?
Abstract ID: 1049
Individual Paper Submission

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The merits and impact of discretion versus regulatory certainty in land use planning and development permitting have long been of interest to planning and housing researchers (Booth 1996). While some have highlighted the importance of professional discretion, for example, in enabling planners to respond to local intricacies (Gallent and Kim 2001; Harris 2010), housing economists and the development industry have generally regarded local discretion in land use zoning and development assessment to be development constraining, particularly where processes involve politically elected members and local communities (Gyourko et al. 2008; Bramley and Watkins 2014). An assumption underpinning the latter body of research, and the extensive raft of policy reforms to curtail local discretion in planning decisions which such assumptions have inspired, is that increased certainty around development permissibility and the timing of approval will boost housing supply and diversity, but evidence to support this assumption remains lacking.

This paper seeks to address this gap. Drawing on an Australian case study, it examines evidence of the impact of reforms designed to reduce local political and professional discretion in planning decisions by
standardizing and codifying regulation and decision processes. Through an analysis of metropolitan-level data and detailed case studies of three local government areas in the Australian state of New South Wales, the paper examines the outcomes of these reform processes, focusing specifically on ‘codification’. It addresses the following research questions: 1. How has codification changed development rights and the development approval process for different housing types? 2. How has codification impacted development assessment timeframes, approval rates and new construction for applicable housing types? 3. Does the spatial pattern and characteristics of approved residential development accord with the spatial and qualitative objectives for new housing development defined in planning strategies?

The research uses a range of methods including statistical and spatial analysis and semi-structured interviews with planning and development industry representatives. The quantitative data is supplemented with data derived from semi-structured interviews with planning and development industry professionals that is coded and analysed using NVIVO software. The data focuses in particular on the Sydney metropolitan region which is the largest population centre in Australia and the nation’s most expensive housing market.

Preliminary findings suggest that, in the context of strong housing market conditions, the introduction of state mandated complying development codes and non-discretionary development standards has enabled faster development approval and increased overall supply of the target housing types. These findings complicate the assumption underlying many arguments for regulatory reform that simply reducing planning regulation will increase and diversify overall housing supply. By contrast, the findings suggest that increasing regulatory certainty around the permissibility of diverse housing types through targeted regulation can work to enable their development.

References


Key Words:
Land use regulation, Development assessment, Housing

DO MIXED LAND USES MAKE NEIGHBORHOOD SAFER?
Abstract ID: 1054
Individual Paper Submission

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Jane Jacobs and disciples of “New Urbanism” encourage mixing land uses in part because they believe it will enhance neighborhood cohesion and reduce the likelihood of crime. In contrast, scholars in criminology argue that mixed land uses impair informal social control and, hence, increase crime. This paper presents empirical evidence on this controversial issue: do mixed land uses at neighborhood scale reduce or stimulate crime? The paper further examines what kinds of mixed land uses have impacts on what kinds of crime? Taking Baltimore City as an example the paper uses econometric methods to estimate the effects on crime of different kinds of mixed land uses. In our model, we use a victim based crime in neighborhoods as dependent variable, an entropy index of mixed land uses as the main predictor, and include socioeconomic factors as control variables. The results contradict the conventional wisdom. The paper shows that a commercial-based mixed-land use increases crime while a residential-based mixed-land use has no impact on crime. The relationships between subcategories of crime and types of mixed land use are presented as well.

References


Key Words:
Mixed land use, Crime, Violent crime, Property crime, Baltimore

IMPACT EVALUATION OF NEW YORK CITY COMMUNITY BOARD RECOMMENDATIONS IN UNIFORM LAND USE REVIEW PROCEDURE
Abstract ID: 1113
Individual Paper Submission

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Community Boards of New York City are local representative bodies for their Community Districts who take advisory role in reviewing local land use and zoning issues. A change in or variance from zoning resolution must be reviewed by relevant Community Boards through New York City’s Uniform Land Use Review Procedures (ULURP), while recommendations from Community Boards are considered in the final decisions made by the City. In 2016, however, although 40 and 43 of 59 Community Boards in New York City disapproved the Mandatory Inclusionary Housing and Zoning for Quality and Affordability text amendments, respectively, the City Council have adopted the text amendments with modifications. This issue has raised a question of how much influence Community Boards actually make on determinations from the City on general applications for changes in or variances from zoning resolutions.
In the second half of the 20th century, planning theories of communicative turn have emphasized the importance of authentic dialogue among multiple actors, working together to share and learn multiple forms of knowledge, understand each other to reach a consensus, and thus solve complex and contentious urban problems. However, one consistent criticism on current citizen participation mechanism in practice is that most often participation process lacks the links between talk, decision, and action (Abram 2000, 352).

Therefore, the paper evaluates the level of influence that official resident advisory groups hold in land use review process. More specifically, the paper compares the impact of Community Boards recommendations to those of other representations in ULURP process.

To make such comparisons, the paper employs Path Analysis with Logistic Regression method with endogenous variables such as Community Board recommendation, Borough President recommendation, and City Planning Commission decision and exogenous variables such as application type and socio-economic characteristics of Community Districts. Path Analysis method not only provides a graphical representation of the relationship among variables, but also decomposes the influence of endogenous variables into direct, indirect and spurious effects. From the website of the Department of City Planning, the City of New York, reports on three types of zoning related ULURP applications (Zoning Map Change, Special Permit, and Zoning Amendment to Zoning Resolution) that were voted by the City Planning Commission since 2014 have been obtained as data for the paper.

Preliminary research of 202 samples from 2013-2015 have shown that the impact of Community Board recommendation is larger than that of Borough President for all three zoning related application types in ULURP process. Nevertheless, the influence of Community Board recommendation is strengthened by recommendations of Borough Presidents. Yet, the influence of the Community Board recommendation is small for ‘Zoning Map Change’ applications while it is high for ‘Special Permit’ applications (which often deal with modification of parking regulations). Currently, the researcher is reviewing recent data in order to 1) limit the observation period to the De Blasio Administration to eliminate threats to internal validity and 2) add neighborhood characteristics to consider possible spurious associations (e.g. power imbalance) to land use review process.

The paper contributes to planning scholarship in several ways. First, by decomposing the influences of relevant representatives in land use review process, it will position the power of current local representative bodies below or above other representatives of the City. Second, by using socio-economic characteristics of Community Districts as the control variable, it will show a power difference among neighborhoods in New York City in making influence on land use decisions. Lastly, by revealing the status of current resident participation mechanisms in New York City, it will bridge the gaps between planning theories and practice, while giving opportunities to improve current participation process to empower residents.

References

WHAT MAKES MIXED-USE DEVELOPMENT ECONOMICALLY DESIRABLE?

Abstract ID: 1138
Individual Paper Submission

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Mixed-use development has been widely advocated by urban planners as an important planning tool for sustainable urban development that generates many benefits. However, despite the fact that mixed land use is commonly observed in cities, it has not been well defined or explained in existing urban economic theories. Although several researchers have attempted to theorize the phenomenon using congestion and agglomeration externality effects, their efforts are based on highly abstract neoclassical economic models. While these models help to conceptualize mixed land use in theory, the neoclassical approach overlooks the institutional and organizational aspects of the land development process. Moreover, there is an enormous gap between these theoretical models and real world practices where decisions on mixed-use development must be made on the basis of context-specific considerations. This paper has three objectives. The first is to clarify the concept and develop a typology of mixed land use based on a review of academic and professional publications. Building upon the previous studies, the paper proposes a conceptual framework that emphasizes the three dimensions of mixed-use development: the functionalities and services, the physical and spatial arrangements, and the institutional and fiscal structures. For each dimension, a set of variables is identified from existing literature as potential determinants for the success of mixed-use development. To translate the perceived benefits and costs of mixed-use development into monetary values, the second objective is to review and critique the existing literature aimed at bridging economic theories with mixed-use practices. In particular, the paper categorizes past economic modeling approaches based on three spatial scales: the general equilibrium approach at city-level, the hedonic modeling approach at neighborhood-level, the cost-benefit analysis approach at project-level. Based on the review, the paper suggests three limitations of the neoclassical economic approach. The first is that, often determined by the availability of data and methodology, existing literature has investigated mixed-use development at different spatial scales that disconnect with each other. Consequently, findings from models based on larger spatial scales can hardly be utilized to craft guidelines for mixed-use development projects. The second limitation in the literature is a lack of simultaneous consideration of roles of the market with individual agents and hierarchies of public and private organizations. The third limitation is that in the existing economic literature, the service sector has been largely overlooked based on the assumption that the composite daily commodity of households is imported from outside the city at a constant price. Based on the critiques, the third objective of this paper is to propose new analytical approaches to fully understand the question of what makes a mixed-use development economically desirable. The paper employs the transaction cost economic theory as an
alternative framework to comprehend mixed-use development. The paper can inform future planning and development decisions on mixed land use.

References

Key Words:
mixed-use development, neo-classical land rent model, hedonic pricing model, transaction cost economic theory

PLANNING AND MARKETING AN URBAN AESTHETIC IN THE "EVOLVED" SUBURBS AROUND TORONTO, CANADA
Abstract ID: 1152
Individual Paper Submission

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Urbanizing the suburbs has become a primary goal of normative suburban planning theory, policy and practice. Nelson has argued that achieving "a certain level of urbanity" may be necessary for suburbs to succeed in a context of shifting preferences towards urban living and economic factors like rising energy costs, falling incomes, and tighter mortgage rules (Nelson in Grant et al. 2013, p. 394). Gentrification studies have examined the valorization of urban living and capital investments flowing back to city cores (e.g. Davidson & Lees, 2010). This research examines what the valorization of urban lifestyles and built forms means for suburban planning and residential development in the Toronto metropolitan region. Growth management policies established in the Toronto region in 2006 protect a 2 million acre greenbelt by concentrating new residential development through infill and densification. Nodes and corridors served by multimodal transit are planned for the highest densities alongside a mix of office and retail uses. The price of a detached house in the region has also doubled in the past decade, increasing the market for denser, multifamily housing.

This research answers the following questions: How is suburban urbanization characterized in planning and development discourses such as interviews, policies, and housing advertisements? How is urbanism said to add value to place? Who are the envisioned residents of the reinvented, urbanized suburbs? To address these questions, I conducted sixty interviews with planners (n=30), residential developers (15) and municipal politicians (15). I performed a detailed content analysis of advertisements for 304 new-build housing developments to examine place-based marketing appeals across low, medium and high-density developments. My research method also included a close reading of regional and local municipal plans.
I found that suburban municipalities and developers mobilize a discourse and aesthetic of urbanism to compete with the central city for investors and make densifying suburban nodes and corridors attractive for young adult buyers. Multifamily housing advertisements target relatively wealthy, young adult, would-be urban residents who may be priced out of the city core. Plans and advertisements position the densifying Toronto suburbs as the next frontiers for urban capital investment. I argue that by pursuing housing and amenities that cater to high-income households, the urbanization strategy reinforces already-existing social stratification and risks reproducing gentrification dynamics in the suburbs. Studies of place image have shown how post-industrial cities have been rebranded as world-class, youthful knowledge-based economies. My research contributes to the place-branding literature by showing how post-suburbs are also being rebranded with similar strategies, while replacing the image of sprawl rather than inner city industry.

Theorizations of post-suburbanism have focused on politics and infrastructure; my research contributes to this literature by attending to the aesthetic dimensions of suburban urbanization. I draw on literatures from planning and cultural geography (e.g. Ghertner, 2015; Knox & Schweitzer, 2010) to foreground the role of urban aesthetics in facilitating neoliberal growth and redefining political and social issues as problems to be solved through world-class design. In this study, planning policies, interview discourses, and advertisements frame suburban urbanization as a natural and progressive evolutionary process. Planning has long used ecological metaphors to justify gentrification and other policy directions (Lejano & Gonzalez, 2017). I argue that the visions for elite, urbanized suburban nodes are discursively rendered as aesthetically progressive and evolved instead of deliberate and political planning decisions that are open to democratic debate and critique. For planning scholarship and practice, this research demonstrates how although all the "right" policies directing densification and transit-oriented development can be established in suburban regions, an elite and exclusionary urban aesthetic can also be implemented alongside these otherwise laudable planning achievements.

References

Key Words:
suburban intensification, growth management, branding, aesthetics, new-build gentrification

THE ARCHITECTURE OF SEGREGATION: PUBLIC POLICY AND THE SHAPING OF SEPARATE AND UNEQUAL METROPOLITAN AREAS
Abstract ID: 1167
Individual Paper Submission

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Persistent segregation by social class and race casts a long shadow on the United States, harming our citizens and poisoning our politics. In the average metropolitan area, 60 percent of blacks would have to move to a different neighborhood to achieve full integration. In some major metropolitan areas, such as New York, Chicago, or Milwaukee, the figure is 80 percent. The nation is segregated by income as well, with more than 14 million persons residing in high-poverty ghettos, barrios, and slums – a figure which has doubled since 2000. A growing body of research demonstrates the appalling effects of poor neighborhoods on the health, safety, and life chances of those who live in them, particularly children. Segregation and concentration of poverty are not inevitable, but rather are driven in part by public policies and institutional arrangements that have governed the growth and development of cities and suburbs since WW II. The federal government subsidized suburban development that was so rapid it depopulated urban cores; it allowed suburban jurisdictions to use exclusionary zoning to exclude working-class and poor families; and it tolerated blatant racial discrimination in housing markets in violation of the Fair Housing act of 1968.

Using a multilevel longitudinal panel of neighborhoods, political jurisdictions (i.e., cities and suburbs), and metropolitan areas from 1970 onwards, the authors decompose racial and economic segregation and examine the contributions of land use regulations and the pace and exclusivity of suburban development. Segregation is measured by the Index of Dissimilarity, the Neighborhood Sorting Index (NSI), the Gini Coefficient (in a form appropriate for the analysis of neighborhoods), and the Entropy Index.

Every social and economic problem is harder and more costly to solve in the context of highly unequal neighborhoods. Thus, reducing segregation by race and class is an essential first step to fixing failing schools, improving health outcomes for low-income children, and breaking down the walls of distrust that have contributed to racial animosity, growing inequality, and political polarization. This paper presents evidence on the contribution of public policy to these forms of segregation and thus provides support for a policy agenda to foster integration across race, ethnic, and class divides.

References


Key Words:
economic segregation, racial segregation, land use policy, exclusionary zoning

IMPACT OF LAND USE MANAGEMENT AND ZONING REGULATIONS ON COMMUNITY EXPOSURE TO RISKS FROM CLIMATE CHANGE IN COASTAL COMMUNITIES
Abstract ID: 1169
Individual Paper Submission
This research paper focuses on analyzing the impact of land use management and zoning tools on development in the coastal zones at threat from impeding climatic changes. Substantial climate science research indicates that contemporary carbon emissions are likely to result in noticeable global warming for rest of this century as a result of the long residence time of greenhouses gasses and inertia in the climatic system (McGranahan 2007; Sherbinin 2007). Key impacts of changing climatic changes are very likely to result increased sea level rise, and stronger storms in coastal areas. At the same time, coastal communities continue to be among the fastest growing human settlements. Ideally, the risks from climate change to communities can be reduced if people and economic activities could be encouraged to move away from at-risk areas. However, current population trends indicate the opposite, with increasing number of people moving to coastal communities. Consequently, local land use planning is faced with the big task of supporting demands for a growing population, while limiting population exposure to anticipated impacts of climate change and other coastal hazards in these communities.

A recent study by Strauss and colleagues identified 33 US cities with with more than 100,000 residents where 50-100% of the population-weighted area will fall below the future committed (between 2035-2090) high tide line (Strauss 2015). Using this sample of at risk communities, I analyze the impact of local land use and zoning regulations in limiting local population exposure to coastal risks of sea level rise, and flooding based on committed impacts of global warming. Preliminary analysis of the data collected indicates that coastal communities employ a variety of tools to direct growth away from coastal zones. Some of the commonly used tools include overlay districts, impact fees, transfer of development rights, exactions, form-based codes, and stricter building regulations. The cumulative impact of these tools in influencing overall growth within the coastal risk zones is analyzed using a regression model, while controlling for local growth pressures, and socio-economic variables. Preliminary analytical results indicate that these land use and zoning tools have only been partially successful in directing growth away from coastal risk zones. This is possibly so because of two key factors: first, the lack of consistency in delineating areas at risk from coastal hazards, and; second, lack of success in adopting a cohesive safe development strategy for the community. The results also indicate that communities that employ multiple land use management strategies and zoning tools tend to perform slightly better in directing new development away from at-risk zones.

Based on the analytical results of this study I propose a new zoning tool for managing future development in coastal zones. The proposed coastal adaptation floating zone is based on the concept of multifamily residential floating zones first adopted by Village of Tarrytown in New York State in 1950 (Rodgers v. Tarrytown, 96 N.E.2d 731 (N.Y.1951)). A similar idea for a flexible zoning district (Neighborhood Development Floating Zone) has also been proposed to foster green community development by US Green Building Council (Blanchard 2013). Such local floating zones and overlay zones have withstood numerous legal challenges, and are already in use by local governments in thirty states. The proposed coastal adaptation floating zone builds upon similar zoning tools by linking future development intensities in at-risk areas to specific time periods of expected change in high tide lines. The floating zone designation would allow for a regressive change in intensity of land development in identified districts so as to ensure phased reduction in community exposure to increasing coastal hazard risks. This zoning will be applied to two case study communities in order to compare the differences in community exposure to coastal risks between existing zoning districts and the proposed coastal adaptation floating zone designation.

References

Key Words:
Coastal Planning, Zoning, Land Use Management, Sea level rise, Planning tools

FUTURE URBAN GROWTH AND FLOOD VULNERABILITY IN TAMPA, FLORIDA
Abstract ID: 1180
Poster

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Extreme rainfall and rising sea levels due to climate change will inevitably make U.S. coastal cities more vulnerable to floods. Growing populations and urban expansion worsen climate change conditions and enlarge hazard impacted areas. Urban planners have used the 100-year floodplain as standard planning tool to identify flood vulnerable areas, but many existing and future development plans are located in these zones (Brody et. al., 2013; Berke et. al., 2015). Future sea-level rise projections and hazard events will enlarge these flood vulnerable areas.

This research examines flood vulnerability for future urban growth in the lieu of sea level rise using Tampa, Florida, USA as a study site. It answers the question, how much urban land will be endangered in the future 100-year floodplain by the year 2100 when considering sea-level rise? To answer these questions, this research flows this process; (i) forecasting future land use changes in Tampa, (ii) geoprocessing the sea-level rise floodplain by 2100, and (iii) identifying impacted areas of the predicted urban growth in the 2100 floodplain. Future land use change by 2040 will be forecasted by the Land Transformation Model (LTM) with relationships between spatial predictor drivers such as natural, built environmental, and social factors and predicted cell change analyzing how much each factor influences future land use change (Pijanowski et. al, 2002; Newman et. al., 2016). The sea-level rise in 2100 is spatialized using a rising sea level of 4.1ft predicted by the National Oceanic and Atmospheric Association (NOAA) by adding to the base elevation of the 100-year floodplains (Berke et. al., 2015). Future flood impacted areas are calculated from the forecasted land use change and the sea-level rise.

Forecasted urban expansion by 2040 projects urban expansion primarily to the north of Tampa, with small scale development in the southern proportion of the city near the waterfront. The projected 2100 sea-level rise permanently occupies 5.81sq mi, 5% of Tampa’s area, while the current 100-year floodplain covers 42.10sq mi, 36%. Thus, 59% of the land in Tampa city is free from potential flood including 2% of surface water. In the 71.73sq mi urbanized area by 2040 excluding military base and airport areas, only 1.21sq mi (2%) is permanently in the 2100 sea-level rise zone. However, the rising sea level enlarges the floodplains, and 22.40sq mi (31%) of urban is at risk in the 2100 floodplains.
This study contributes to the improvement of predicting urban growth methodology and flood risk. The result will help for city officials and community to identify flood vulnerable areas, to guide direction for urban growth, and finally to establish a more resilient community.

References


Key Words:
urban growth prediction, land transformation model, risk assessment, plan evaluation

INVESTIBLE SUBURBS: BUYING, SELLING AND LENDING IN THE COMMERCIAL PROPERTY MARKETS OF THE BOSTON AND SAN DIEGO METROPOLITAN AREAS SINCE THE GREAT RECESSION

Abstract ID: 1203
Individual Paper Submission

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There are many ways to see the suburbs: residential refuges; a tangle of cul-de-sacs and school fundraisers; clusters of tax-generating retail, office, or industrial buildings surrounded by residential areas. When it comes to commercial space (non-residential real estate and apartments), as planners we tend to be concerned with the form of the buildings; the amount of parking they provide; how, as private property, they pervert democracy; the taxes they generate; or, in a few cases, their economic potential. Rarely noted is their fit into local and global real estate and lending markets. While we know this about single-family homes from the mortgage and foreclosure crises, there are a number reasons to recognize how commercial suburban properties are also embedded in real estate markets, and while this has been done for certain areas of cities like Chicago (Weber, 2015), New York, and London (Fainstein, 1994) it remains largely unexplored in the suburban context (Hill, 2015).

Understanding non-single-family-suburban properties as investible reshapes our conception of commercial space, from how tenants are chosen to the differences between negotiating plans with a local merchant/owner and with a publicly-held owner halfway across the country. Investability means not only that a property can be bought and sold, but that it is expected to generate a specific minimum rate of return for its owners while also repaying the lenders that financed its purchase or refinanced its mortgage. Buildings, then, are, in part, income streams, and should be understood as such, with local property often linked through its owners and lenders (that is to say, investors) to the global capital and property markets. This shapes the types of shops a retail building owner will want as tenants, and
monetizes how they address their investors’ needs when considered in contrast to those of the community. At the metropolitan scale, the market-based nature of office and industrial locations shapes where and when investment is made, and structures the location and quality of jobs. These choices can either reinforce or help remedy a jobs/housing mismatch as well as exacerbating the effects of zoning on the segregation of different types of work and workers. Moreover, repeated buying and selling in hot real estate markets can lead to less savvy owners, who can be particularly difficult when real estate values begins to drop.

As a first step in understanding the parameters and consequences of investibility in the suburbs, this paper draws on a data set of suburban real estate transactions from 2001-2016 along with interviews with local planners, to compare the patterns of real estate sales and investment taking place in the suburbs of a hot, post-crash real estate market, metropolitan Boston, with those of a somewhat less vibrant market—the San Diego metropolitan area. Focusing on retail, office, and industrial properties in these two areas, I set forth an empirical basis for understanding the behaviors of investors, owners, and builders who provide much of the physical underpinning of the remaking of area suburbs (while allowing others to fail).

Understanding how the purchase or financing of a property is linked with global capital markets and buyer or lender portfolios will give planners leverage in negotiating requests to develop or redevelop property, as well as requests for subsidies. And we need to begin thinking about what deep-pocketed investors bring to communities, by working through and documenting the costs and benefits of having a site owned by an entity whose needs are not necessarily those of the community, but whose tax revenue will give a suburb the social service capacity it might not have without them, and whose supply of capital may provide the capacity to remake a dying property.

References


Key Words:
Real Estate, Commercial Property, Land Use, Retail, Offices

INDIGENOUS-MUNICIPAL CO-DETERMINATION OF NEW PATTERNS OF URBAN DEVELOPMENT
Abstract ID: 1205
Individual Paper Submission

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The paper examines the changing relationships between Indigenous groups and local authorities post Treaty settlement. In particular, the research investigates the way in which Indigenous aspirations for
economic development and cultural expression are being embodied in the built environment of Christchurch, New Zealand. It articulates how municipal and Indigenous governments might collaboratively address their respective interests in land and how city planning might facilitate the co-determination of new patterns of urban development (Howitt and Lunkapis, 2010). The research assesses the processes surrounding the construction of Indigenous-led urban development and prioritises opportunities for both Indigenous partners and municipal planners to benefit directly from the shared learning the project creates.

The research makes a number of key contributions to both the scholarly study of Indigenous-municipal relations and governance, and the associated field of professional land use planning policy and practice. The detailed analysis of municipal-Indigenous planning highlights how different histories of Treaty negotiation, options for land tenure, and approaches to local governance shape and are potentially transformed by these relationships (Lane, 2006). This kind of empirical analysis is not only relevant to the academic community, but is also of great relevance to the planning profession as a whole. Existing studies tend to elide experiences of struggle and conflict, foreclosing opportunity for both scholars and professionals to draw lessons from the more challenging of Indigenous-municipal relations.

The project also differentiates itself by foregrounding Treaty principles and by focusing on mechanisms for sharing space and political authority in cities (Barry, 2012). These aspects of Indigenous self-governance and cultural recognition in the built environment have clear planning implications that scholars and practitioners are only just beginning to comprehend (Ryks et al., 2014). Critical attention to discourse is an underdeveloped area of planning scholarship. Hence, the research helps to address a major blind spot in the broader planning literature.

References

Key Words: Indigenous planning, Co-existence, Indigenous self-governance, Indigenous-municipal relations, Treaty settlement

DISASTER RECOVERY PLANNING: BENEFITS AND SHORTCOMINGS OF AN AD HOC APPROACH
Abstract ID: 1215
Individual Paper Submission

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CHANDRASEKHAR, Divya [University of Utah] , co-author
The recovery period after a disaster is typically seen as a special situation involving unique dynamics such as time compression, unanticipated problems, and extreme urgency to restore systems and processes to pre-event states. Often this results in the use of ad hoc planning approaches which circumvent traditional planning norms and typical development actors in favor of speed and efficiency. While it does address the urgency of the post-disaster situation, such an ad hoc approach also has many drawbacks that may serve to limit the effectiveness of post-disaster recovery planning. This paper examines the use of ad hoc approaches in recovery planning, outlines the benefits and shortcomings resulting from treating recovery as a special situation and illustrates how recovery planning approaches can be designed in ways that enhance planning and development processes in the long-term instead of inadvertently counteracting them.

We present three in-depth case studies to illustrate the dynamics of this situation. First, the case of village reconstruction planning in south India after the 2004 Indian Ocean Tsunami, where contrary to ‘normal’ practice, the task of reconstruction planning was given to non-local NGOs to manage and implement. Second, the case of New Orleans after 2005’s Hurricane Katrina, where the task of managing the citywide recovery plan was handed to a non-profit, the Greater New Orleans Foundation. Lastly, the case of New York after 2012 Superstorm Sandy, when the state-led New York Rising Community Reconstruction Program hired consultants to directly work with appointed local planning committees comprised of local business, NGO and civic leaders. These cases are informed by significant multi-year in-depth fieldwork conducted by the authors during recovery from all three events, including interviews, surveys, participant observation and secondary document analysis.

The evidence from these cases, which mirror many other recovery planning processes in other places, illustrates that while ad hoc recovery planning processes have some inherent rationality (e.g. seizing ephemeral funding opportunities and momentum to rebuild) they are nonetheless inherently self-limiting. Based on the long-term recovery challenges faced by the communities in India, Louisiana and New York, we argue that using ad hoc planning approaches that circumvent the usual development processes, and actors, can serve to marginalize local government, complicate plan implementation, and result in “yet another plan” that sometimes ignores, contradicts or supersedes existing plans and planning goals.

Long the least studied of the many aspects of disasters, long-term community recovery has increasingly become a topic of in-depth research and planners have simultaneously taken on larger roles in local recovery processes around the world. This comparative study highlights the practical benefits and limitations of a strategy for addressing community recovery that, while common, appears to be based more on a rationality of opportunism than on any kind of rigorous analytical foundation. We offer that, despite many benefits, this kind of opportunistic, ad hoc recovery planning has severe limitations that can be overcome by better integrating recovery planning into ongoing planning.

References
LAND TENURE, MINERAL WEALTH AND SOCIAL VULNERABILITIES ASSOCIATED WITH OIL AND GAS EXTRACTION IN WEBB COUNTY, TEXAS

Abstract ID: 1226
Individual Paper Submission

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This paper examines the relationship between tenure, specifically land and mineral ownership, and regulatory processes shaping the distribution of benefits and harms resulting from oil and gas extraction (“fracking”) in Webb County, Texas. The study area, located on the Texas-Mexico border along the Rio Grande, has ongoing oil and gas production in the northern (Eagle Ford Shale) and western portions of the county. I hypothesize that tenure, specifically land and minerals ownership, influences communities’ vulnerability to hazards associated with fracking. Drawing from Payne’s conceptualization of tenure (2001), “tenure” and “ownership” in this research refers to a tenure classification scheme that incorporates land and minerals ownership. In Texas, the regulatory regimes heavily favor mineral rights over other property rights. The relationship between tenure and vulnerability strongly influencing the production of social vulnerability can be traced to colonial Texas. As intergenerational wealth accumulated within families through inherited tenure and mineral rights (Montejano, 1987), these families also derived greater political power and influence. In this paper, I unpack the tangible evidence remaining in the wake of the continued wealth and political influence shaping the regulation of land and mineral rights while limiting uses to protect citizens in the community.

Drawing on a Chicanx political ecology and environmental justice theoretical framework, I utilize a mixed method approach to examine this critical case. I first determine spatial influence of various factors on social vulnerability from oil and gas production using the Social Vulnerability Index methodology (Cutter 1996; Cutter and Finch, 2008). I then perform a sensitivity analysis (Tate, 2012) using Hot Spot Analysis, testing how changes in tenure and type of ownership effect vulnerability. I overlay this with the “governance geographies” of different regulatory regimes, including state and local jurisdictions. Finally, I examine land grant archives, deed records, U.S. Census data, and qualitative interview transcripts to map out the relationship between political influence, voter participation rates, land and mineral ownership.

By focusing on the colonial heritage of this area, this paper presents insights into the relationships between land and mineral ownership, political power, and vulnerabilities stemming from fracking. This research has the potential to influence more widely deployed tenure classification schemes and typologies by incorporating minerals and other aspects of land rights and ownership that more accurately reflect local regulatory frameworks, thus allowing for more robust research in policy and planning. This research also complements the risk and social vulnerability literature by demonstrating the role of local, historical context for social vulnerability. This work can improve planning policy making by providing a more nuanced approach to social vulnerability assessments, particularly in areas with significant social
and environmental stresses brought on by the oil and gas industry. And finally, this research adds to growing literature examining the complex political and historical spatialities within the rich post-colonial context of the U.S. Southwest.

References

Key Words:
tenure, border history, vulnerability, extractivism, property rights

PLANNING FOR NATURAL GAS PIPELINES IN OHIO: GOVERNANCE AND OTHER COMPLEXITIES
Abstract ID: 1231
Individual Paper Submission

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While the Dakota Access Pipeline has been a recent and high profile land use/energy conflict, similar pipelines are in development across the US. Shale development in the Marcellus and Utica formations in the U.S. stretch across portions of Ohio, Tennessee, Kentucky, West Virginia, Pennsylvania, and New York. Increased interest in associated natural gas development has meant intensification of hydraulic fracturing (fracking) in these areas. Infrastructure in the form of transmission pipelines are needed to move the natural gas from source sites to distribution networks. There are over 300,000 miles of interstate and intrastate natural gas transmission pipelines throughout the United States (U.S. EIA, n.d.). These pipeline systems, owned by private companies, extend hundreds of miles from the drilling source, crossing local jurisdictions and state lines. Thus, land use changes related to natural gas development extend beyond drilling and development and include pipeline infrastructure siting, resulting right-of-ways, and impacts on current and future local land use planning.

Related planning studies have examined local government policies for fracking and its impacts (Loh and Osland, 2016), as well as tools used for pipeline hazard mitigation (Osland, 2013). Further, Kaza and Curtis (2014) have called for planners to take note of the connections between land use and energy issues, and highlighted the potential for land use conflicts related to pipeline siting. However, the impacts of pipeline siting on local planning efforts and wider impacts on land use governance across jurisdictions is largely unknown. As such, this study will build on the previous work, and asks: what are the impacts of proposed natural gas pipeline siting and construction on local land use planning and multi-jurisdictional governance in Ohio?
This study will focus on a section of the proposed Nexus Pipeline, which is expected to run from eastern Ohio through Michigan up to Ontario, Canada. Within Ohio, the pipeline will run through 9 counties and numerous local municipalities and townships, each their own comprehensive and/or zoning plan. The methodology for the study includes a survey of planning directors in 5 municipalities and all counties along the proposed route in Ohio to explore local planning efforts before pipeline construction as well as existing and anticipated public/private and inter-jurisdictional coordination. We will conduct follow up interviews with willing directors to gather information on local perspective of planning for pipelines, and what planners see as potential impacts to current planning practices. The results of this study are expected to inform planning practice related to land use planning for multijurisdictional infrastructure projects.

References

Key Words: governance, fracking, interjurisdictional planning, land use conflict

THE GROWTH PLAN FOR THE TORONTO REGION AND THE SURGE IN HOUSE PRICES AND AFFORDABILITY: UNDERLYING CAUSES AND POTENTIAL SOLUTIONS
Abstract ID: 1260
Individual Paper Submission

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The Toronto Region has had an unprecedented increase in house prices over the past 5 years. The price of new low rise units, as identified by the Altus Group, has increased from $400,000 to the current price of $995,000. The Toronto region also had a Provincial Regional growth plan, “Places to Grow”, in place over the past ten years and there are proposed changes to plan which effectively makes it more restrictive. There has been a debate regarding whether the surge in house prices has been impacted by the current plan due to land supply restrictions, or the price increases have been largely demand driven. (Amborski, 2016) Obviously, both supply and demand together determine prices. However, understanding the drivers for price increases is necessary in order to undertake policies that will help to mitigate the housing affordability issues and the impacts that it creates. In addition to simple affordability rapidly increasing prices has been identified as having other economic impacts. In the US, the housing affordability issue has been raised by the council of Economic Advisors, been addressed by the Whitehouse, and concerns have been addressed regarding the impact on GDP and income disparity in cities. (Hsich and Moretti, 2015; Ganong and Shoag, 2016)
Within the debate, most economists look at the housing supply issue as being the primary concern due to the regulations that have been put in place. This is consistent with much of the economic literature in the US and Europe. (Glaeser and Gyourko, 2005; Cheshire et al, 2014) Most of the urbanists who argue that the problem is demand driven do not come from an economic background.

This paper examines the current market conditions in the Toronto Region to identify, the key drivers for the increasing affordability problems. It is addressing the question whether the problem in primarily demand or supply driven and whether containment policies and the growth plan have had an impact. An analysis is undertaken of the variables underlying the current market structures and conditions in several housing submarkets, ground related units and apartments (predominately condos). Conclusions are drawn regarding the drivers of increasing prices and affordability. Based on these conclusions, suggestions of potential policies approaches will be provided that may be used by both the Provincial government, who is responsible for the regional growth plan, and local municipalities to help address the rapidly increasing prices and affordability issues in the Region.

Amborski, David, 2016, “Affordable Housing and Land Supply Issues in the Greater Toronto Area”, Centre for Urban Research and Land Development, Ryerson University, Toronto.
Council of Economic Advisors, 2016, Annual report of the Council of Economic Advisors, Washington D.C.

Key Words:
regional growth plan, housing affordability, containment policy
The state of Florida is a prime example of a place where planners, policymakers, and citizens have struggled with the significant challenge of land consumption and the loss of open space. In 2014, the U.S. Census reported that Florida was the third most populous state in the nation. The appeal of living in Florida is not a recent phenomenon; thirty-two years ago, Florida lawmakers passed the Growth Management Act of 1985 and the state has gone through a lengthy progression of land acquisition programs. Historically, these efforts have received bipartisan support. Florida may be a swing state during presidential elections, but its voters have consistently agreed on the importance of land conservation.

Florida began its string of land acquisition programs in 1964 and has had a number of iterations since. The focus of this work, the Florida Communities Trust (FCT) program was enacted as part of Preservation 2000 in the early 1990s. The current iteration, Florida Forever, was approved by seventy-two percent of Florida voters in 1999 (McLeod, 2011). The FCT program represents a marriage of growth management and land conservation by providing fiscal support to local governments that seek to implement conservation-related comprehensive plan initiatives.

The Florida Department of Environmental Protection reports that more than 2.5 million acres of land have been purchased under the Preservation 2000 and Florida Forever programs. This acreage represents diverse types of preserved areas, such as rare species habitats, greenways, and historic sites; further, 11,880 acres are reported as being located within urban service areas. In fiscal year 2009-2010, Florida Forever became an unfunded mandate. However, with the passage of the Florida Water and Land Conservation Initiative in 2014 (a constitutional amendment), some funding has returned to Florida Forever programs, including FCT. The 2017 environmental budget proposals from the Florida legislature include reduced funding for Florida Forever programs despite this amendment. Given the current political saliency of funding for these programs, in depth evaluation is particularly prudent.

In order to tell the full story of land conservation programs and their outcomes, it is important to use a variety of tools to evaluate them. Acreage may be used to hail a land acquisition a success, but there are other ways to assess the efficacy of these types of programs. For example, Lewis and Knaap (2012) evaluated Maryland’s Rural Legacy Program to determine its impact on development outcomes and its ability to further smart growth goals. McWilliam et al (2015) use content analysis to investigate planning policies and processes in relation to environmental planning initiatives. Few studies have evaluated Florida Forever programs in depth, though FCT has attracted academic attention. Coutts (2011) considered whether FCT supported projects that furthered public health while Lee and Feiock (2011) investigated the relationship between local political and demographic characteristics and participation in FCT.

This paper utilizes a qualitative approach to evaluate the FCT program for integration with local comprehensive plans by assessing the ways local governments do (or do not) consider the availability of grant funding in their comprehensive planning process. Further, it shows what types of outcomes local communities experienced by applying for and receiving funding. Using content analysis of plans and interviews with relevant actors, the study goes beyond acreage as a measure of success and considers questions such as: Were partnerships formed? Did the acquisition of land help the locality further its
comprehensive planning goals? Did local communities integrate the possibility of funding into long term goals or did they apply for the funding as opportunities for land purchase presented themselves? The work helps to identify how the FCT program worked and works in practice and offers insight into strengths and weaknesses that may be relevant not only to Florida but also other jurisdictions interested in enacting similar grant programs.

References

Key Words:
Land Conservation, Growth Management, Comprehensive Planning, Land Acquisition, Florida

LOCATION-DEPENDENT SPATIAL PATTERNS, URBAN STRUCTURE, AND INSTITUTIONAL MECHANISM OF URBAN SPRAWL IN CHINA: EVIDENCE FROM THE CITY OF WUHAN
Abstract ID: 1305
Individual Paper Submission

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The profound institutional changes since 1978 in China has brought rapid economic growth and dramatic urbanization process to firstly coastal cities and then spread to inland regional centres, which has generated distinct urban sprawl patterns and urban forms across different locations in China. Contrary to the hot debate of urban sprawl in the North American context, the so-called Chinese version of urban sprawl (Zhang, 2000) has been revealed to closely related to locations, urban structure both internal and external, as well as the institutional arrangements in-between central and local governments to lead urban expansion and land development (Tao et al., 2010; Tian, 2015; Zhao et al., 2015). While the wide application of remote sensing techniques and geographical information system have triggered a boom of research work on investigating spatial patterns of urban sprawl across Chinese cities since the 1990s, the relationship between distinct spatial changing patterns and underlying determinants is hardly been clarified without exploring the local land development process under China’s unique institutional background (Lin, 2010). More importantly, as pioneering mega-cities like Shanghai, Beijing, and Guangzhou discussed extensively in the majority of studies on Chinese urban sprawl, have shown a
slowed trend of urban expansion rate during the last decade, the limited studies of recent fast-growing cities located in the less developed areas, has become a research gap.

The main objective of this paper attempts to provide an analytical framework combining locational conditions, urban geographical (external) and administrative (internal) structures, and institutional mechanisms among different land development players to analyse patterns and driving forces of urban sprawl in Wuhan, Central China. Two research questions are expected to answer based on this study: What are the distinct spatial-temporal characteristics of urban sprawl in Wuhan from 1996 to 2014 compared with other mega-cities in China? How locational factors, urban internal and external structures, and institutional settings among stakeholders of land development are interacted and who is more significant in shaping the spatial-temporal changing patterns identified in the first question? Through employing Landsat TMs and Wuhan Land Use Survey Maps from 1996 to 2014, the first part of this research examines spatial configuration and changes of urban sprawl patterns in the scale of city development area, district, town/township level respectively, as well as quantified the changes by landscape ecological indices. Results indicate that before 2000, the urbanized area expanded compactly along transportation corridors and the urban centre, with main types of infilling and edge-expansion; after 2000, however, the urban sprawl patterns prevailed in suburban districts with outlying growth, creating a multi-nuclei urban development structure with fragmented clustering land patterns extended from the central city to the suburban districts. In the second part of this paper the authors link observed urban sprawl patterns with local land development structure and power relations, which are identified as main drivers based on regression results of variables on geographical condition, planning effects, government structure, transportation development, GDP per capita and population. The results reveal that there is a transformation of determinants shaping urban spatial patterns from transportation and geographical factors to land management intuitions regarding different levels. As the local land institutions emerged gradually in Wuhan’s political hierarchy, the land development competition between district governments, the municipal government, and town-level governments has played a curial role on the evolution of urban structure and land sprawl in Wuhan, reflected as the extensive construction of industrial parks and adjustments of administrative divisions.

The information provided by the land development analysis ultimately helps tailor policies and plans for better land management and reduces fragmentation of new development in the municipality.

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Key Words: urban sprawl, locational characteristics, urban structure, institutional arrangements, land development
RURAL GENTRIFICATION IN LANDSCAPES OF RISK: A REVIEW OF STATES' RETIREE ATTRACTION POLICIES AND THEIR SOCIO-ENVIRONMENTAL IMPACTS

Abstract ID: 1313
Individual Paper Submission

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‘Amenity migrants’ have been defined as affluent urban or suburban populations who migrate to rural areas for specific lifestyle amenities, such as natural scenery, access and proximity to outdoor recreational opportunities, cultural richness, and a sense of authentic or aspirational rurality (Moss 2006; Gosnell and Abrams 2011). The United States Department of Agriculture created a natural amenities scale in the late 1990’s after rural economists identified that only rural counties in “amenity-rich” areas avoided depopulation and experienced rapid growth in between 1970 and 1996 (McGranahan). The USDA’s creation of a natural amenities index captures the decisions of state and local governments to enact and implement amenity-driven rural attraction policies.

Beginning in the 1970’s and continuing today, rural development increasingly occurs in communities by securing access within or along valued environmental goods, particularly for residents with stable incomes and pensions. As such, retiree-attraction policies began as early as the 1970’s, but accelerated after the late 1980’s as towns aimed to rekindle economic growth following widespread rural depopulation and the economic and political challenges of devolution and restructuring. In-migrants often advocate for land use codes and policies aimed to protect the environment and restrict development projects that would greatly increase density or “degrade” rural and scenic character. In effect, the policies to attract in-migrants effectively push out or economically stress lower-income residents. Climate change intensifies the uncertainty of sustaining quality of life in these communities. Despite increasing environmental risks in regions of high amenity migration, the 2016 American Community Survey reveals that nine of the ten fastest growing counties, as measured from domestic migration beginning in July 1, 2015 to July 1, 2016 are in high-amenity rural counties in the West or Sunbelt.

Evaluation of rural attraction policies by academic researchers and public agencies is nearly non-existent. One factor for the absence of evaluation is the lack of published information on retiree-attraction policies and their effectiveness. As such, my review of state rural attraction policies calls for planners to assess the motivational and ethical decisions of state and local governments to enable residential development in landscapes of increased risks.

Foundational to the study is the research question: How do retirees pulled by state rural attraction policies drive and become subject to environmental risks? This paper is a systematic policy review that examines the degree to which states’ rural attraction policies acknowledge the environmental risks and socioeconomic impacts that drive rural gentrification. The paper provides a method for planners and other actors to identify how rural attraction policies create opportunities and challenges to mitigating environmental risks.

This paper contributes an urban planning perspective to the rural and environmental sociology literature on rural gentrification that examines the power relations responsible for defining and distributing social and environmental harms and benefits. The study is the first comprehensive planning-focused review on state retiree rural attraction policies and their environmental impacts. It is also the first to define the geography of which American states most advance or mitigate the socio-environmental impacts of rural gentrification. Like previous amenity migration reviews, this state policy review found that while some
documents acknowledge how conflicts might influence the local actions necessary to protect, maintain, or restore environmental governance and quality (Abrams et al. 2012), most policies failed to stipulate usable environmental management decisions for rural communities.

References


Key Words:
amenity migration, rural attraction, rural gentrification, environmental risks, retirees

EXCEPTION AREAS, FARMLAND CONSERVATION, AND EXURBAN DEVELOPMENT IN OREGON’S STATEWIDE PLANNING

Abstract ID: 1349
Pre-Organized Session: Regional Lessons from the Political Ecology of Exurbia

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In this paper, I discuss the problem of exception areas in Oregon’s statewide land use planning system. Exception areas are zones of residential development that existed prior to the implementation of the first comprehensive plans in the 1970s. Such areas are an ongoing challenge to the basis of Oregon’s planning, which is predicated on a separation of urban and rural uses (Walker and Hurley 2011). Despite regulation designed to encourage the incorporation of exception areas into urban growth boundaries, such areas tend to remain firmly resistant to further urbanization.

I use a case study examination of the Bear Creek Regional Problem Solving Process, an effort to develop a regional plan for the Medford Oregon metropolitan area, to illustrate how exception areas present a problem for Oregon’s planning system. The Medford area has a long history of mixed residential development and small agricultural holdings, which has made implementation of statewide planning rules challenging (McKinnon 2016). While statewide planning regulations call for the incorporation of these areas into urban spaces, these exurban developments face multiple points of resistance to urbanization, including challenging physical infrastructure, fragmentation, and land owners whose “environmental imaginaries” (Cadieux and Taylor 2013) don’t include urbanization.

The problem of exception areas sheds light on broader contestations between diverse communities over what is being conserved and what is being developed (or redeveloped) under the Oregon system.

References

While the nature and impacts of sprawl in developed countries are widely studied (Carruthers & Ulfarsson, 2003; Ewing, Pendall, & Chen, 2003), sprawl in developing countries – a rapidly evolving and diverse phenomenon – is yet to receive adequate attention. New enclaves of high-rise buildings have become some of the most common forms of sprawling development found in the outer suburbs of South Asian megacities. These new “planned communities” are, however, cropping up within vast and often already populated regions of largely unregulated landscapes (Sridharan, 2011; Watson, 2009). The resulting built environment is often a patchwork of new and old settlements interspersed with informality; patterns that are often characterized by stark visual contrasts in housing quality, income disparity, and access to infrastructure, to name a few. With climate change impacts, the evolving patterns of social vulnerability and hazard exposure within these rapidly growing cities need to be addressed by planners.

Despite the visible and the anecdotal evidence, little systematic research exists that looks at the detailed characteristics of South Asian megacities vis-à-vis the spatial distribution of socio-economic characteristics. Moreover, the role of planning entities and actions in mediating these processes are rarely explored. In this paper, we address these questions through a case study of Dhaka (Bangladesh), one of the rapidly growing megacities of South Asia. Dhaka has experienced rapid growth in recent decades through considerable reduction of wetlands, cultivable lands, and vegetation in its fringe areas (Dewan & Yamaguchi, 2009). Within this rapidly growing city, our research asks, whether and how planned residential developments in the absence of a strong regional planning framework marginalized urban poor and exacerbated social vulnerability. We hypothesize that selective development initiatives taken in this city to meet increased housing demand without adequate provision for urban poor create spatial inequality both in urban core and fringe areas. Applying spatial regression at the census tract (i.e. neighborhood) level we evaluate how these residential developments influenced different socio-economic indicators in and around their neighboring areas. We utilized local census data and data of recently developed residential land projects within the metro region over a 10-year period (2001-2011). Different accessibility and environmental amenity measures were applied as control variables utilizing data collected from open source data portals. We found that the distance to residential land projects is a
significant determinant for locations of low-income housing. Also, without any strong publicly supported low-income housing program, concentration of poor households has significantly increased in the flood hazard areas of the city. It further highlights the concerns for climate resiliency of this rapidly growing city. These findings from Dhaka are discussed within the broader context of rapid urbanization in South Asia and policy guidelines are proposed that may ensure resilience and equitable urban development in this region.

References

Key Words:
Sprawl, Social Vulnerability, South Asia, Housing

CAN A GROWING CITY HAVE BOTH DENSE URBAN DEVELOPMENT AND ADEQUATE GREEN SPACE? LONGITUDINAL ANALYSIS OF NEIGHBORHOOD GREENNESS IN VANCOUVER, CANADA
Abstract ID: 1396
Poster
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Central theme or hypothesis:
The objective of this study is to use the Vancouver city as a case study to explore longitudinal relationship between urban development patterns and green space. Rapidly growing cities face significant challenges to maintaining sustainability and livability (Godschalk, 2004). With intense land development pressure, rapidly growing cities often battle sprawl development patterns with urban densification strategies, such as up-zoning and infill development, resulting in compact urban development patterns. In this context, urban green space offers an important and necessary mechanism to ease some of the development pressure and to ensure quality of life of residents living in dense urban environment (Jim, 2004). Green space also offers a range of health benefits, including psychological benefits, promotion of physical activity, and greater social interactions (Groenewegen, van den Berg, de Vries, & Verheij, 2006). Capitalizing on these positive effects of urban green space, many European cities have taken aggressive steps to preserve green space in urban environment (Beatley, 2000). However, rapidly growing cities, such as Vancouver, face significant challenges in preserving adequate green space when different urban infrastructure compete for the same space. The relationship between
urban intensification and supply of green space has not been well understood, and longitudinal understanding of changes in urban green space is still very rare (Haaland & van den Bosch, 2015).

**Approach and methodology:**
We first assess urban development patterns through two data sources: historic building permits data from the City of Vancouver and the major projects inventory (2005 – 2016) from the BC Provincial Government. The major projects inventory includes a listing of private and public sector construction projects in B.C. with an estimated capital cost of $20 million or greater within the Vancouver area. To assess historical trends of urban greenness, we rely on Satellite imageries from the LANDSAT 7 & 8 and processed Normalized Difference Vegetation Index (NDVI) to capture the changes in the intensity and geographic coverage of urban greenness from 2005 to 2016. By linking the historical greenness measures with urban development patterns, we explore the longitudinal relationship between urban development and urban greenness. We also explore whether social and economic forces influence the hypothesized relationship by incorporating possible confounders, such as neighborhood income, racial makeup, and education levels, obtained from the Census data.

**Findings:**
We obtained Satellite imageries from LANDSAT data, and we are calculating NDVI measures through historical Satellite data from 2005 to 2016. The building permits and major projects data are also being processed and combined to quantify urban development patterns at the postal code level. The final data linkage between urban development pattern and the NDVI data will be done in the next few weeks, and we will conduct a series of statistical analyses to examine the longitudinal relationship between urban development and urban greenness in the next three to four months.

**Relevance to planning scholarship, practice, or education**
The study results will help understand whether urban development promotes or inhibit green space. Results will inform planning policies and decisions for determining how much green space would be needed and where to target more consorted effort to provide green space in compact urban environment.

**References**

**Key Words:**
urban development, land use policy, green space, NDVI, longitudinal
LA LA LAND? ON THE PERILS OF LEGITIMATING LAND USE PLANNING BY INVOKING ECONOMIC DEVELOPMENT

Abstract ID: 1446
Individual Paper Submission

KILFOIL, Patrick [McGill University] patrick.kilfoil@mail.mcgill.ca, presenting author

The planning profession has long entertained a close relationship with local growth coalitions as a way of lending legitimacy and credibility to the actions of planners. The grey literature is rife with claims of economic benefits related to particular planning exercises, from small projects to large master planning efforts. Going back to the 1980s, leading scholars have highlighted that “the connection between the economic structure and planning legitimation is now straightforwardly claimed” (Fainstein 1991: 22), and, more recently, that emerging planning approaches must respond to the challenge of economic growth in an era of increasingly uneven development (Chapin, 2012: 6). Planning practice has steadfastly been adapted to respond to the needs of a changing economy, cater to local economic actors and global finance, and heed the call of competitiveness as a worthwhile objective of public policy. However, it remains unclear whether planners actually have the capacity to meaningfully impact economic dynamics that are generally geo-structural in nature and go beyond the local and the regional in scale. As such, some argue that land use planners have been relegated to the role of simply not getting in the way of urban regimes in the pursuit of economic development (Healey 1998). The absence of reliable evidence to either support the claim that planners can be active agents in the promotion of local economic development or inform counterclaims of renewed legitimacy for planning unencumbered of economic diktats is troubling.

This contribution aims at addressing this problem by asking a simple question: what is the impact of various approaches to land use planning on the economic performance of cities? While answering such a question may have proved difficult in the past due to a fragmented understanding of the factors that impact the economic performance of regions, the recent institutional and evolutionary turn in economic geography highlight quite clearly that ‘institutions rule’ (Ketterer and Rodriguez-Pose, 2016). Moving beyond truisms such as better institutions contribute to improved economic performance requires confronting taken for granted notions such as the idea that land use planning necessarily has the capacity to affect the economic trajectory of cities.

This research project uses the work of several organizations such as the European Commission and the OECD to disseminate land use planning ‘best practices’ (Nadin and Stead, 2008) as a way of evaluating whether certain approaches deliver on the objective of improving economic growth in cities. In particular, the claims of better economic performance related to a particular planning policy regime – the comprehensive integrated model – are assessed with regards to its impact on GDP, employment and population growth. Using regression models on cross-sectional data from over 100 functional urban areas between 2001 and 2011, we find little evidence to support the hypothesis that comprehensive integrated planning contributed in a systematic fashion to better economic outcomes in metropolitan scales. This finding underlines the need for more research into the impact of planning on economic growth and regional development in order to better inform public policy. More importantly, it underlines the necessity for planners and planning educators to question the relationship between planning and urban growth coalitions, as it may obscure other sources of legitimation beyond market logic.

References

Key Words:
Economic development, legitimacy, growth coalitions, land use planning
PRE-ORGANIZED SESSION: PLANNING AS PROCESS: INTERACTIONS OF COMMUNITY, LAND, AND FOOD
Proposal ID 5: Abstracts 69, 71, 72

SUERTH, Lauren [University of Wisconsin-Madison] lsuerth@wisc.edu, organizer
LINKOUS, Evangeline [University of South Florida] elinkous@usf.edu, proposed discussant

We explore the relationships among rural/peri-urban communities, land use regulations, and food systems and reinforce the notion that food systems intersect with multiple fundamental planning practices. Brinkley examines the physical and social geographies of food supply chains, Horst analyzes the emerging trends in farm landowners, and Suerth explores the meanings and experiences around accessing agricultural land. Individually, the papers identify strategies and actions for conducting food systems planning, but together they demonstrate that people engage places and policies through various interactive processes. People continually make and remake their communities through everyday experiences and relationships that follow informal rules. Planners must understand how informal activities relate to formal practices and anticipate how they create change. The session discusses the interactions among social, political, and economic processes for communities, policy, and food and the conditions that create, reproduce, or transform informal and formal rules.

Objectives:
- Theory and practice of food systems planning
- Planning for peri-urban and rural communities
- Systematic and pragmatic understanding of land ownership models and land access processes

PANACEA OR PROBLEM: COMPARING PARALLEL GOVERNANCE STRUCTURES FOR DISASTER RECOVERY
Abstract ID: 4
Individual Paper Submission

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Parallel structures of governance have increasingly become the normative model for governments to respond to and recover from catastrophic disasters. These structures can be defined as entities vested with special authority and powers that allow them to bypass the established norms and procedures of governance and work across and outside of conventional governmental boundaries to co-ordinate and execute disaster reconstruction and recovery. Although the reasons for the establishing of parallel structures vary, some of the common arguments are: that the current system of governance is slow, inefficient, and inadequate to address the rapidly shifting and dynamic conditions of post-disaster recovery; that disaster recovery is an emergency situation that warrants emergency measures including a special entity set up to solely focus on recovery issues and mitigate crises without the distractions of day-to-day governance; and that a powerful structure established outside the current system of governance can check corruption and offer greater accountability during post-disaster reconstruction.
Framed as a way to improve the speed, efficiency, and accountability of post-disaster governance by harnessing the uncertainties and complexities of disaster recovery processes, we argue that these structures are however, unable to eliminate conflict or address local capacity building, and often undermine local institutions, raising questions whether parallel governance structures in post-disaster contexts are truly efficient and better.

This paper compares multiple parallel structures of governance set up to address recovery, based on their roles and responsibilities, organizational structure, management and staffing, and time frame. It specifically examines the following parallel governance structures set up after disasters: the Project Implementation Unit (PIU) established after the 1999 Marmara earthquake disaster in Turkey; the Gujarat State Disaster Management Authority (GSDMA) established after the 2001 Gujarat earthquake in India; the Interim Haiti Recovery Commission (IHRC) established after the 2010 Haiti earthquake in Haiti; the Reconstruction Agency established after the 2011 Great East Japan Earthquake and Tsunami in Japan; and the National Reconstruction Authority (NRA) established after the 2015 Nepal earthquake in Nepal. The paper aims to understand the promises and perils of such structures that lie outside the domain of established modes of governance.

The research utilizes qualitative data from field interviews in Turkey, India, Haiti, Japan and Nepal and mining of archival data from government documents, reports and news articles.

The findings of this paper would be of interest to planners and policy makers engaged in post-disaster recovery efforts globally.

References

Key Words:
Disaster Recovery, Governance, Disaster Governance

GEOSPATIAL DIMENSION FOR ACTIVE LIVING: JACKSONVILLE (FL) CASE STUDY
Abstract ID: 14
Individual Paper Submission

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Background:
Many municipalities in U.S. are deploying various urban planning approaches to resolve problems caused derived from conventional zoning, particularly, the lack of support for physical activity.
Although considerable studies regarding the relationships between built environment and physical activity, many studies have suggested objective and reliable measures of urban form that encourages more opportunities for physical activity. Thus, this study develops a quantified methodology to evaluate active built environment, an urban form that promotes more opportunities for physical activity.

Study Design:
The City of Jacksonville was selected for: first, Jacksonville city is one of the cities having highest diabetes ratio in the Florida State; second, detailed GIS data are available for the city. The methodology consists of two parts: first, based on prior research, this study categorizes and aggregates GIS variables, which consist of active built environments, such as landuse mix level, distance to open spaces, accessibility to public transit, and availability of sidewalks. Second, this study builds a GIS model to assess the geospatial dimension and the GIS modeling yields a suitability map ranked by composite scores reveals the spatial distribution of cell-based quantified outputs.

Results:
The GIS map shows the scores, which mainly consist of between 3 and 6, as well as their spatial distributions. In descriptive statistics, this case ranges from 0.06 to 8.99 (M = 2.86, SD = 1.84). The distributions of active built environment index are skewed to the left since the median is greater than mean.

Conclusion/Contribution:
The GIS-based visualization method provides an expanded set of tools that can help urban planners and public health professionals to understand the relationship between urban form and active built environments. In addition to visualizing the results, the modeling process has the potential to present changes over time (e.g., before and after); this is because the GIS modeling process can not only show existing active built environment conditions but can also show what future active built environment conditions could be. These map-based visualized results are useful to provide more valuable information to health and public policy professionals to cooperate to resolve mutual challenges.

References

Key Words:
Active living, Physical activity, Urban form, geospatial dimension

OLDER ADULT’S WALKING BEHAVIORS AND ITS CORRELATION WITH WALKABILITY INDEXES AND PERCEPTIONS: IN A NATURALLY OCCURRING RETIREMENT COMMUNITY CONTEXT
Abstract ID: 26
Individual Paper Submission
Despite vast research on older adult’s walking behavior, there still need to investigate how behavior is influenced by the built environment and perceptions of it. In previous research, the relationship between walkability scores and walking behavior has been done for the general population and/or in large metropolitan areas (Leslie, et al., 2005; Bracy, et al., 2014; Cole, Dunn, Hunter, Owen, & Sugiyama, 2015). In this study neighborhoods identified as Naturally Occurring Retirement Communities (NORCs), neighborhoods that were not planned for retirement but has a large percentage (±40%) of older adults living in it (Hunt & Gunter-Hunt, 1985), were the target of the research. This research analyzes the relationship between walkability scores and behavior, perceptions and behavior, and a combination of walkability score, perceptions, and behavior. Also, this study will look at both utilitarian walk and leisure walk.

The objective of this research is to understand these relationships and find out the answers to the following questions; (1) how well does walkability scores predict walking behavior of older adults living in NORCs within a Tallahassee (mid-size city)? (2) Does perception of neighborhood walk-friendliness influence walking behavior? (3) How well do walkability scores and perception combined help predict walking behavior? And (4) does adding perception to the model have statistical significance in predicting walking behavior?

This research will analyze data from the “Older Adult Neighborhoods Survey” to better understand older adult’s perceptions of walkability and walking behavior. The survey was carried out in 2013-14 and involved face-to-face structured interviews with 445 adults aged 65 years or older and living in NNORCs in Leon County, Florida, within the mid-sized, low-density city of Tallahassee. From the survey, specific sets of questions regarding perception and behavior were quantified and codified in SPSS software. The walkability score data on the Walk Score was collected in 2016 for each address present in the data set, and a GIS-based walkability index (Frank et. al. 2010) was also calculated for each address. The control variables for the models will be the participant’s age, race, gender, self-reported health status, if the participant has driven in the past 30 days, lives alone, for individual characteristics. Additionally, for neighborhood characteristics there are two control variables, one is the percentage of households that are low-income, and the other is the percentage of the population with a college degree. These control variables are a proxy for low- and high- income neighborhoods. This quantitative research looks at three different regression models where behavior is the dependent variable in all three models. In the first model, the walkability scores collected from walkscore.com and the GIS-based walkability index will be the independent variables. In the second model, the perception score will be the independent variable. Finally, in the third model, walkability scores and perception will be the independent variable. The analysis will comprise of the interpretation of all three models individually, as well as a comparison between the results of all three models.

The findings of this research will be important to help understand the relationship between walkability scores and behavior in a unique setting involving NORCs in a mid-size city. It will expand on previous research and reveal important indicators of older adult’s perception in walking behavior. The results will allow planners to consider how older adult perceive their built environment and implement policies/plans/projects that are reflective of such perception. Moreover, the research findings can impact how the built environment is designed to improve walkability and increase the rates of physical activity among older adults living in mid-size cities.
Obesity is an epidemic in the United States, and like many places in the country, Hamilton County, Ohio has experienced a rise in the obesity rate. In Hamilton County, 62% of adult residents and 31.2% of children ages 10-17 are overweight or obese.

There are factors beyond the traditional determinants such as genetics, health care, and behavior that affect obesity (Barton and Grant 2006). Amongst non-traditional determinants, physical environment and sociodemographic factors are of particular interest to planners, and their significance has repeatedly been highlighted in planning and public health literature (Day 2006). It is also imperative to include these determinants at both — the individual-level (e.g. individual’s access to food) and neighborhood-level (e.g. neighborhood’s built environment) (Poortinga, et al. 2011). The primary purpose of this paper is to explore these relationships to identify important determinants of obesity.

**Research Questions:**

How do built environment and access to health-related facilities impact obesity?

What level of influence do sociodemographic characteristics have on obesity?

Obesity (BMI) is analyzed using the following variables: 1) individual-level variables such as race, income, educational attainment, employment status, age, access to healthy food, and access to physical activity location; and 2) neighborhood-level variables such as neighborhood socioeconomic status, built environment, community food security, social support, and safety. The variables are either obtained from the 2010 Greater Cincinnati Community Health Status Survey or calculated using GIS. A neighborhood is defined by creating a 1-mile buffer around the 1199 individuals that participated in the analysis.
survey. Individual eating and physical activity habits/behavior are also included in the study as control variables.

Access variables are calculated using an innovative GIS model that is based on a spatial interaction model. This model questions the underlying assumption of many access studies – that a person travels to a destination solely based on distance. Also, to make the sample data representative of the county population (for key characteristics such as race and income), a new weighting technique is used. In addition to making the sample data comparable to the county data, this technique also makes the individual data point representative of the neighborhood in which they live.

The data is analyzed using regression techniques. Since the data is spatial in nature, it would typically violate the assumption that observations are independent of each other. Thus, the emphasis was placed on testing for spatial dependence in the data. The dependent variable (BMI) and the overall model both did not show spatial dependence, and thus spatial error model or spatial autoregressive model were not used. Instead, SLX (spatial lag of X) model was used to account for spatial dependence between BMI of an individual and explanatory variables of the neighbor.

The initial results (revisions in progress) suggest that while race, income, and individual eating and physical activity habits are associated with obesity, built environment and access to various health-related facilities (such as grocery store or park) does not have a significant impact. These initial results support the mixed findings in the literature about the relationship between built environment and obesity.

While there are studies that explore the relationship between obesity and its determinants, there are only a few that investigate the association comprehensively using a broad range of factors at different geographic levels, as done here. Moreover, the use of a new weighting technique and new access measurement technique makes this research unique and unlike other existing studies. By identifying major determinants of obesity, the findings provide an evidence base for directing future planning policy decisions and implementation strategies at local and regional levels.

References

Key Words: Obesity, Built Environment, Food Access, Physical Activity, Social Determinants of Health

ACCESSING AGRICULTURAL LAND
Abstract ID: 69
Pre-Organized Session: Planning as Process: Interactions of Community, Land, and Food

SUERTH, Lauren [University of Wisconsin-Madison] lsuerth@wisc.edu, presenting author
“One of the things about land, how do you get access to land at all ... Living in or farming near a city is ideal but it is almost impossible to rent or buy unless you have a lot of money …”

Land is an essential component of agricultural production but we take for granted that we know how farmers secure, maintain, and transfer land. From a strict legal perspective, land access is a set of rights and responsibilities to an object. While this description seems sufficient, it implies that meaning and behavior are determinate and it assumes that people interact with land in a neutral and objective manner. Yet, we know this is not true (Geisler, 2000; Hann, 1998; Parker, 2013). Land access is an embedded relationship where people integrate social, environmental, and cultural relations with economic processes.

My objective is to describe the processes associated with renting, purchasing, and transferring land and the relationships to different social, political, and financial institutions. The study establishes personal experience as the basis for theory and follows grounded theory methods to develop an intimate relationship with participants and data and to systematically discover, analyze, and explain approaches that impact land access in a relevant manner. It assumes that people generally understand and use policy in a passive manner because they develop legal consciousness throughout their life and through everyday experiences and they mobilize policy according to these understandings (Falk Moore, 1978; Tamanaha, 1997). They do not distinguish between particular legal concepts or jurisdictions when performing activities and I operate in a similar manner to understand how people and policies interact. Most policy evaluations acknowledge two elements: legal content and bureaucratic administration but ignore one: user interaction. I elaborate this discussion by evaluating how farmers, landowners, governments, and organizations understand and interact with social, political, and financial systems to access land in Wisconsin and by connecting the findings to the viability and functionality of land and food systems policies and planning practices.

Wisconsin is a rich agricultural state and people are renting, purchasing, and transferring agricultural land in a variety of ways so the jurisdictional boundaries provide an appropriate and constant policy context. I collect interview, observation, and document analysis data through a framework of planning and market approaches that affect land access (Daniels, 1999). It includes specific land use, business finance, and life estate programs and policies that are available in Wisconsin, such as agriculture districts, business incorporation, and capital gains. Each approach is a dependent variable so the framework drives my sampling decisions but the inductive research design leaves room to collect data on how participants combine approaches to address their situation. Thus, the data describes the social processes that farmers realistically employ to access land and how farmers could use policy.

Land access is dynamic and complex because farmers interact with the issue in different ways and through different institutional systems throughout their career. According to my preliminary results, beginning farmers search for the physical space and financial capital to rent or purchase land, mid-career farmers manage their business to payoff debt and build equity, and late-career farmers formally transfer or sell their land to the next farming generation. I develop this information into a typology that planners and policy makers can use to design, implement, and evaluate land use and food system policies.

References

This article examines the rising farmland costs, recent buyers and the changing future of farm ownership in the United States. Agricultural land ownership has important implications for food systems and for farmer livelihoods, rural economies and the environment. There has been recent global attention to changing ownership of agricultural land, particularly related to institutional and agribusiness purchase of land (sometimes called ‘land grabs’), as well as amenity ownership by non-farmers. This article examines the changing ownership of agricultural lands in the United States, specifically focusing on Oregon, a state with a history of small farms and family ownership and of farmland protection and strong land use planning. We first review the history and recent trends in farmland ownership in the United States and in Oregon. Next, we examine the county records for all Oregon farm properties that sold between 2010 and 2015. We provide summary statistics and maps, by county and by region, on annual number of transactions, price per acre, and the type of owner. Our findings demonstrate a rapid turnover in Oregon farmland, particularly in the Willamette Valley and in Hood River, and for prices many times higher than suggested by the United States Department of Agriculture's Census of Agriculture. In the Willamette Valley for example, farm properties sold for about $50,000 per acre, and much more for smaller parcels. Such high prices present challenges for beginning farmers and for those interested in smaller-scale, sustainable agriculture. Mid and large-scale agribusiness, investment companies, and real estate and development interests comprise a significant portion of the buyers and an even larger portion of the overall land. We examine a few of the recent buyers in closer detail to understand their motivations and the likely impacts to rural communities, farmers, and the environment. We conclude by making some observations about the implications for the future of agriculture in the Western United States, and the potential role of land use planning and community organizing in responding to or contesting these trends.

References

GEO-SOCIAL NETWORKS BUILT AROUND LOCAL FOOD
Abstract ID: 72
Pre-Organized Session: Planning as Process: Interactions of Community, Land, and Food
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Re-localizing food distribution is expected to geographically concentrate social and economic capital toward values that are beneficial to both consumers and producers. Yet, both the theory of how communities benefit from purchasing local food and the practice of promoting local food lack foundational empiric evidence that makes spatially explicit the procurement typologies and the communities that are connected. This research pilots a method for understanding, not only the geographic patterns of local food supply chains, but also the social networks formed around local food. This method, in turn, is expected to help improve both the theory and practice of re-localizing food systems, thereby helping scholars and policymakers to identify and correct for inequities while also recognizing successful practices and opportunities in situ. Findings are based on a novel dataset from Chester County, Pennsylvania encompassing 1087 connections between 117 farms and 637 locations. Farms primarily engage with one marketing typology. The most common typologies are wholesale distribution and direct-marketing to consumers through Community Supported Agriculture and farmers’ markets; both market typologies have an average reach of over 50km and are predominately oriented toward nearby urban areas. A third type of farm network is characterized by collaboration with restaurants, amongst farms and through the local food bank. Interviews with policymakers and market managers ground-truth findings and relate findings to state and local regulations. Land-use regulations are, unsurprisingly, identified as the chief impediment to growing the local networks.

References

PHYSICAL ACTIVITY AND EXTREME HEAT: HOW APPARENT TEMPERATURE MODIFIES THE EFFECT OF BUILT ENVIRONMENT FEATURES ON OUTDOOR PHYSICAL ACTIVITY LEVELS
Abstract ID: 98
Individual Paper Submission
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Key Words:
local food, land-use, CSA, social network analysis
The United States is in a physical activity crisis, with less than half of adults in 2015 meeting national physical activity guidelines. This lack of activity is a major public health concern, as physical inactivity is associated with a greater risk of premature death and several chronic diseases such as cardiovascular disease, diabetes, and 13 types of cancer. When developing interventions to improve physical activity levels, public health researchers utilize the ecological model of health behavior, a layered framework that accounts for environmental and policy factors along with the traditional individual and social factors of other health behavior models as elements influencing health behavior. The literature identifies several built environment factors such as land use mix as correlates of physical activity. Another environmental factor found to associate with physical activity is weather, with the majority of studies finding a positive correlation between outdoor temperature and physical activity. But the few studies assessing physical activity levels in hot and humid climates tell a different story: an increase in outdoor temperature past a certain point is associated with a decrease in physical activity levels. This research examines how temperatures in three cities (Atlanta, Detroit, and Phoenix) within different US climate regions impact physical activity levels. While past research identifies which built environment factors associate with physical activity, this work evaluates whether outdoor apparent temperatures modify the effect of built environment factors on outdoor physical activity levels. This research utilized data from the NSF-funded 3Heat Study collected from July-August 2016. The sample consists of a spatial and demographic mix of ~55 adults per city. Collected household characteristics include home address, age, sex, race, and household income. Physical activity intensity, duration, and location come from 7-11 days of 24-hour, continuous, self-reported records completed by each study participant. For each day of activity, participants wore iButtons that collected air temperature and relative humidity every 5-10 minutes. Built environment factors were selected based on literature review and availability as secondary data across all three cities. To test whether outdoor apparent temperatures modify the effect of built environment factors on outdoor physical activity levels, this research ran five independent OLS regressions based on five outcomes: physical activity minutes at (1) light intensity; (2) moderate intensity; (3) vigorous intensity; (4) moderate + vigorous intensity; and (5) light + moderate + vigorous intensity. The independent variables of interest were outdoor apparent temperature at activity time, land use mix, walkability index, neighborhood tree canopy cover, distance to parks, and neighborhood type. Each regression controlled for household characteristics, weekends, city, and precipitation. Anticipated results are that increases in outdoor apparent temperature at activity time will decrease the effect between built environment factors that are positively associated with minutes of outdoor physical activity at all intensity levels, with the greatest effect modification taking place at higher intensity levels of activity. Another expected outcome is that increases in temperature at activity time will have an insignificant effect, or increase the positive effect, between vegetative elements of the built environment and minutes of outdoor physical activity. With the proportion of individuals living in urban areas projected to increase over time and the heat island effect resulting in warmer temperatures in cities over nearby rural areas, the findings from this study can inform future physical activity programming of built environment features in cities.

References


Key Words:
Physical Activity, Apparent Temperature, Built Environment, Ecological Model of Health Behavior, Public Health

**TREES, AESTHETICS AND PEOPLE’S CHOICES OF PHYSICAL ACTIVITY: A CASE STUDY OF DENVER’S RESIDENTIAL STREETS**

Abstract ID: 150
Individual Paper Submission

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Street trees can advance the physical activity conduciveness of urban settings by providing shade and offering a pleasant ambience for mental restoration. The link between physical activity and the natural elements of cities, including trees, has received growing attention for the past decade. At the street scale, scholars have studied the association between physical activity and objectively measured tree canopies or aesthetic characteristics of the street (Almanza, Jerrett, Dunton, Seto, & Pentz, 2012; Franzini et al., 2010). However, there is very limited literature on how people subjectively assess street trees for physical activity. In this research, I investigated how trees and their aesthetic qualities affect people’s choices about physical activity in Denver’s residential streets. The results of this research can inform City of Denver’s and other cities’ streetscape guidelines about how the selection of plants and arrangement of landscape features can advance streets in terms of walkability and sun safety.

This project was conducted as the second phase of a broader ongoing study. The first phase was carried out using a population-based survey and neighborhood audits that were conducted across 58 block groups in Denver, Colorado (Comstock et al., 2010; J S Litt, Schmiege, Hale, Buchenau, & Sancar, 2015; Jill S Litt et al., 2011). The preliminary statistical analyses of the key outcome of the first phase provided a basic understanding of the correlation between physical activity, trees and their attributed aesthetics. The second phase of the project aimed to examine the green space aesthetic concept and its relationship with physical activity in detail. I applied a mixed-method approach in this phase. First, I selected a sample of five neighborhoods that better represented a variation in SES levels, tree canopy density, and morphological characteristics. These case studies were selected from the studied neighborhoods in phase 1. Next, focus groups were conducted in each neighborhood. Through visual landscape assessment and mental mapping techniques, I identified a list of variables that were predicted to affect people’s choices about physical activity on residential streets. I applied both qualitative and quantitative methods to interpret these data and make conclusions. Urban streetscape guidelines relevant to these neighborhoods were further analyzed for physical activity and sun safety considerations.

My preliminary results suggest that street tree desirability for physical activity is a function of the type and size of trees, available shade, the type of surrounding landscape (natural vs. manicured), landscape...
condition (kempt vs unkempt), sidewalk type, and street vista points. Users’ level of engagement in outdoor activities and socio-economic status influence their choices of streetscape for physical activity. The diversity of trees on the street is shown to be an important factor in attracting more people for physical activity. Landscape design guidelines were found to contain little reference to physical activity promotion and sun safety, and there is considerable opportunity for consideration of behavioral factors in further rule development.

References


Key Words:
physical activity, streetscape, urban health behavior, healthy community, landscape visual assessment

ACCESS TO FOOD SYSTEMS IN A DEVELOPING COUNTRY: THE CULTURE AND PRACTICE OF PURCHASING FOOD ITEMS IN MUMBAI, INDIA

Abstract ID: 175
Individual Paper Submission

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Would access to fresh foods differ between cities of a developing country compared to that of a developed country? In the western world, we have a rampant discussion on food security with food desserts as the basis. Do developing countries experience the same phenomena of food desserts? This paper provides a snapshot of food availability and access in a metropolis of a developing nation: Mumbai, India. The food retail system in Mumbai is dominated by an informal network of operations that is not captured in academic discourse or research literature.

Fresh fruits and vegetables have traditionally been sold in street markets comprising of vendors that sell their produce off of carts and temporary spots on the streets and these markets have sprung up and established themselves along the railway lines that form the backbone of transportation in the City. This study maps out, using GIS, the points where fresh fruits and vegetables can be accessed along the two main railway lines in City, the Western Line and the Central Line. This includes the informal network...
within a one kilometer buffer from the railway lines. Subsequently, a discussion of the culture of fresh produce purchase, the implications for access-equality and a qualitative analysis of the level of proliferation of these informal points within the built environment of the City are developed.

In the case of Mumbai, India, the role of density, the informal economy, transportation systems and the domestic/household structure have woven an intricate web that has resulted in a distinct infrastructure of food systems that has diverted the food desserts phenomenon but has harvested other forms of injustices that relate to the quality of the product.

References


Key Words:
Food Systems, India, Accessibility

VARIABLES AFFECTING DAILY FRUIT AND VEGETABLE INTAKES IN A HISPANIC LOW-INCOME COMMUNITY OF AUSTIN, TEXAS

Abstract ID: 179
Individual Paper Submission

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Background: Obesity is a known risk factor for mortality and various chronic diseases. However, it affects minority, low-income population subgroups disproportionately. Hispanics are of particular concern given their high prevalence of obesity and associated chronic conditions. Studies showed that daily fruit and vegetable (FV) intakes were correlated with the obesity development. Although, Austin has been voted as one of the healthiest city in the US, few studies investigated people’s FV intakes and none of them focused on the low-income, Hispanic communities. This study investigated people’s eating behaviours in a predominately Hispanic, low-income neighbourhood in Austin, TX and aimed to identify factors affecting people’s daily FV intakes in the neighbourhood.
Methods: Go! Austin Vamos! Austin collected cross-sectional data from a random sample of adults (≥18 years) of two low-income, predominantly Hispanic neighborhoods in Austin, TX (2013). Bivariate and multivariate logistic regression models were used to estimate the association of self-reported sociodemographics, perceived barriers, and perceived neighborhood environment, with meeting USDA daily FV intake guidelines (≥2.5 cups of FV per day, self-report). Independent variables with a significant association (p<0.10) with FV in the bivariate models were included an initial multivariate model. Except sex, age, and race/ethnicity, variables with p<0.10 were dropped from the final adjusted model. Results: Participants (n=119) were mostly female (77%), Hispanic (80%), and low-income (63% <$5,000/yr). The final model indicated that having a greater variety of healthy food options in the neighbourhood (OR: 23.1, 95%CI: 2.56-208) and can easily find them at neighbourhood stores (OR: 2.7, 95%CI: 1.7-3) would significantly increase residents’ likelihood of meeting daily USDA FV intake recommendations. Ages, being a Hispanic, and never married were all negatively correlated with the likelihood of meeting daily USDA FV intake recommendations.

Conclusion: Increasing the availability and variety of healthy food options in the neighbourhood stores are possible solutions to increase residents’ FV intakes in low-income, predominantly Hispanic communities. However, more comprehensive studies are needed for any further policy recommendations.

References


Key Words:
Fruit and Vegetable Intake, Hispanic, Low Income
In western countries, it is generally known that people in low-income communities has larger chance of facing obesity. First, low affordability and accessibility to healthier food resources has leaded them to routinely resort to fast foods, resulting in poor dietary habits. And second, public amenities related to daily physical activities, such as playgrounds, sidewalks and recreational facilities are less available in those areas, compared to otherwise locations where tax money is abundant.

While the rate of obesity has increased in Asian countries, partly due to the economic growth and adoption of western lifestyles, it is noteworthy that obesity population is not concentrated in low-income communities, unlike western countries. Countries in Asia have differing urban forms, transportation systems and recreational amenities, and within those, the factors explaining obesity should be also different. Understanding interrelated relationships between physical activities, socioeconomic status (SES) and neighborhood environment with obesity is important because not only they all have impacts on obesity but also influence each other, and they change as the context shifts.

In this backdrop, this study aims to investigate the unique and interrelated relationships between physical activities, socioeconomic status (SES) and neighborhood environment with obesity in the context of Asia, with specific focus on Seoul, South Korea. Seoul is one of the representative mega cities in Asia, and currently witnesses rapid increase of obesity rate. Structural Equation Modeling (SEM) is the main statistical methodology, to decipher intertwined various constructs of obesity - physical activity, SES and neighborhood environments. The detailed indicators of such constructs are the following. Six physical activity variables (physical activity at work, physical activity for recreation, physical activity for travel, physical activity for exercise, sedentary time and walk time), seven SES attributes (education, job, income, work hour, family type and parents' education) and eight neighborhood environment variables (area of apartment complex, green space area per person, number of exercise facilities, subway provision, street connectivity and local streets in analytical unit dong).


The findings of this study suggest implications for urban design and planning. Urban designers, planners and policy makers can benefit from this study for minimizing health inequality in the city and providing citizens more opportunities to live healthier.

References

Key Words:
Obesity, Physical Activity, Socioeconomic Status, Neighborhood Environment, Structural Equation Modeling
PLANNING THE CITY OF GOOD (AND NEW) NEIGHBORS: REFUGEES’ EXPERIENCES IN THE FOOD ENVIRONMENT IN BUFFALO, NEW YORK

Abstract ID: 351
Individual Paper Submission

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Over the past decade the United States has resettled an average of 62,000 refugees per year, about a quarter originating from Myanmar (referred to here as Burma). Although refugees may have come from “food poor” countries, time spent in the United States, a “food rich” environment, does not equate to better health outcomes for resettled Burmese refugees. Studies suggest that refugees’ length of residence in the United States is associated with lower intake of fruits and vegetables; an Americanization of diet. Furthermore, risk factors for noncommunicable chronic diseases such as cardiovascular disease and cancer increases over time. With little preparation for navigating through western-oriented food environments, resettled Burmese refugee communities may be especially susceptible to cultural and economic inequities that ultimately contribute to food disparities.

We question the extent to which local government plans are designed to support or hinder access to culturally appropriate, nutritious food among refugees from Burma living in resettlement cities in the United States. By focusing on a qualitative case study of Buffalo, New York, the paper is based on open-ended interviews with local government officials, food systems stakeholders (e.g. ethnic grocery store owners), representatives from civil society groups, and Burmese households (of the nine Burmese ethnic groups we interview Karen and Burmese, as they are the largest). Thematic analysis of interviews is supplemented by a document review of comprehensive plans, zoning codes, and other plans and policies adopted by the municipal government in Buffalo, NY.

It is evident that traditionally, local governments play minimal roles in refugee resettlement, as resettlement agencies and other civil society groups are the main point of contact for resettled refugees. Yet local government policies impact the lives of refugees and accessibility of certain foods. Results from the study carry implications for how comprehensive plans can better support the creation of healthier environments for refugee populations and how local government in Buffalo can support the large refugee population. In addition to inclusion in plans and planning processes, we call for long-term leases on community gardens, diversity among leadership positions, support and response to diverse community capacity, and collaboration across sectors.

References

Key Words:
Food, Refugee, Food Security, Burmese

DECENTERING THE ACADEMY IN COMMUNITY ENGAGED FOOD SYSTEMS EVALUATION RESEARCH
Abstract ID: 469
Individual Paper Submission

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This paper explores several cases of university involved research and evaluation on food systems programs in New Mexico. The paper proposes a collaborative and participatory approach to food systems program evaluation, based in the author’s experience since 2007 with participatory evaluation with the American Friends Service Committee, food systems grantees of the WK Kellogg Foundation – NM, the La Cosecha Subsidized Community Supported Agriculture Program, and participants in the Bernalillo County Agricultural Collective. The paper focuses on destabilizing the tendency for university partners in food systems evaluation research to reinforce hierarchical systems of knowledge creation. The paper analyzes and valorizes organizational, farmer and consumer knowledge and argues for evaluation research models that center on the co-creation of knowledge, policy and action in food systems research.

References

Key Words:
food systems, community engagement, decentering planning expertise

THE NEW NORMS OF FOOD WASTE AT THE CURB: EVIDENCE-BASED POLICY TOOLS TO HELP CLOSE THE FOOD SYSTEMS LOOP
Abstract ID: 560
Individual Paper Submission

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Much of the developed world maintains linear food systems characterized by the unidirectional flow of food from one end of the system (i.e., production), to the other. In the U.S., the latter is predominantly characterized by landfiling food waste, generating a quarter of the country’s methane emissions. Closed-loop food systems, on the other hand, capture uneaten food for input into another process in the food system (Kennedy, Cuddihy, & Engel-Yan, 2007), and can reduce or eliminate many of the negative socio-ecological impacts of linear food systems.

Organics collection programs (OCP) are an integral part of closed-loop food systems as they are designed to capture and transform food waste into compost or biogas. As cities in California face statewide mandates to improve landfill diversion and reduce greenhouse gas emissions, many are developing curbside OCPs to generate compost or biogas. With food waste constituting the single largest municipal solid waste stream entering landfills, OCPs are low-hanging fruit. Yet while most cities focus on transforming the systems of provision (e.g., infrastructure and institutional aspects) in implementing OCPs, few engage the social aspects of food waste (Bulkeley & Askins, 2009). The current research develops evidence-based policy tools to help cities improve OCPs and close the loop on urban food systems.

I present findings from the second of a two-part randomized, controlled field experiment (n=370) conducted with residents in the first city with a curbside program in Orange County, CA. The first experiment found that cities can expect significant increases in food waste diversion behaviors by providing supportive infrastructure, though these improvements plateau. The second experiment tested whether communicating the new community norms of food waste separation increased participation. While norm communication has been tested on an array of pro-environmental behaviors (Osbaliston & Schott, 2012), this was the first testing normative messaging on household food waste separation in the context of OCPs. The findings suggest that norm communication increases separation behavior and reduces drop out among those who tried food waste separation for the first time.

To explain food waste separation behaviors, furthermore, I draw on the Theory of Planned Behavior (TPB) which models volitional behavior (Ajzen, 1991). The longitudinal nature of this study also provided an opportunity to examine the fit of the TPB under changing structural conditions (before and after curbside carts). The TPB models volitional behavior as a factor of behavioral intention which in turn is a factor of perceived benefits, subjective norms and attitudes toward the behavior. The TPB has been used to predict other pro-environmental behaviors such as energy conservation (Abrahamse & Steg, 2009), household recycling (Tonglet, Philips, & Read, 2004), food waste reduction (Visschers, Wickli, & Siegrist, 2016), and backyard composting (Ghani, Rusli, Biak, & Idris, 2013). This is the first application of the TPB to food waste separation within a curbside OCP. The results indicate that absent supportive infrastructure, behavioral intention fails to predict separation behavior, but with the curbside carts the TPB model becomes a good fit for predicting food waste separation.

These findings underscore the interplay between social and structural aspects of food systems in particular, and of environmental policy implementation more broadly. This research will be of interest to both practitioners and scholars alike, particularly those working at the intersection of food systems, social science, and the built environment.

References

PERCEIVED ACCESSIBILITY TO DESTINATIONS: DOES IT VARY BY OTHER ENVIRONMENTAL FEATURES IN THE NEIGHBORHOOD?

Abstract ID: 593
Individual Paper Submission

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BACKGROUND: Destination accessibility is a key to creating walkable communities which are promoted for their health, environmental, and transportation benefits (McCormack et al., 2008). While objective measures of accessibility such as distance to or number of destinations have been popularly used in previous studies, the underlying perceived dimension of the accessibility is the actual factor driving behavior changes (Lin and Moudon, 2010). Further, the perception of accessibility can be influenced by other neighborhood qualities such as safety and aesthetics (Giles-Corti and Donovan, 2002). Both objectively measured and perceived accessibility and other neighborhood features have been found to be associated with walking behaviors. Yet, there has been limited research examining how perceived accessibility can be influenced by not just the actual proximity and the number of destinations but also various environmental aspects of a neighborhood, especially among a population group vulnerable to environmental risks.

OBJECTIVE: We examined the associations that the three domains of neighborhood environments including safety hazards, aesthetics, and socio-behavioral risks, may have with perceived accessibility to recreation and utilitarian destinations among adults aged ≥50 years.

METHOD: Online and paper surveys were completed by 394 adults belonging to a large integrated healthcare system in Central Texas. Participants reported demographic data (e.g., gender, age, income), health behaviors (e.g., physical activity), and neighborhood perceptions. Perceived neighborhood
environments (independent variables) were measured by three domains: (1) safety hazards including crime, traffic, and injury related safety, sidewalk conditions, lighting, etc.; (2) aesthetics including street and building maintenance, trees and natural things, attractiveness of buildings and homes, etc.; and (3) socio-behavioral risks including presence of strangers, stray dogs, and drug dealers, etc. Using land-use and street data and the ArcGIS tool, we objectively measured proximity to destinations, density of land uses, and street connectivity. Logistic regression was used to predict two outcomes: perceived accessibility to recreation destinations (parks and open spaces) and perceived accessibility to utilitarian destinations (shops, stores, and services). After controlling for personal factors and objective environmental measures in the base model, we estimated a partially adjusted model by adding one independent variable at a time. Statistical significance level was set at P<0.05.

RESULTS: In the base models, we found that individuals who were male, more physically active, and lived in more compact and connected neighborhoods were more likely to perceive having access to recreation destinations. We also found that individuals identifying as non-Hispanic white and having a college degree were less likely to perceive having access to utilitarian destinations. Accessibilities to both recreation and utilitarian destinations were positively associated with the actual number of destinations.

In the adjusted models, crosswalks, pedestrian signals, and proper lighting on the streets were associated with perceived accessibility to recreation and utilitarian destinations. Traffic volume and speed were also important predictors of recreation accessibility. Neighborhood maintenance and attractiveness were highly correlated with both recreation and utilitarian accessibility. Perceptions of neighborhood disorder such as abandoned houses, vacant lots, litter trash, and broken glass were associated with decreased recreation accessibility. Seeing other people walking or biking in the neighborhood was strongly associated with both recreation and utilitarian accessibilities.

CONCLUSION: While the proximity and the number of destinations in a neighborhood were relevant to improve perceived accessibility, improving neighborhood quality warrants further attention as a promising strategy to improve accessibility perceptions. Neighborhood conditions related to transportation infrastructure, maintenance, aesthetics, and social support appear important for both recreation and utilitarian accessibility which can lead to promoting walking to those destinations. This study will inform planners and decision makers who can use this information for designing safe and activity-friendly communities, especially in areas with vulnerable middle-aged and older adult populations.

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Key Words:
Recreation Accessibility, Utilitarian Accessibility, Neighborhood Environment, Walking
The United Nations Population Division projects 60 percent of the world’s population will reside in urban regions by 2030. The population growth will result vast expansion of impervious surfaces in urban environment risking urban greeneries. With limited opportunities to access greeneries space, residents often settle in an environmentally unhealthy neighborhood with poorer air quality, traffic congestions, and dilapidated urban structures with higher ratio of the impervious surfaces, which could even worsen their health and wellness. Research suggests quality of life (QOL) as a factor that contributes to the public well-being. Specifically, Bedimo-Rung and his colleagues (2005) suggest the direct relationship between health-related quality of life (HRQOL) and urban green space, which presumably support public health. While a body of literature has investigated the direct relationship between urban greeneries and health-related outcomes, such as obesity, mental health, and quality of life, little has examined the extent to which types of greenery is related to HRQOL (Koohsari, et.al, 2015; Sallis, et.al 2015). We anticipate in finding the impacts on HRQOL; 1) different vegetation types and growing behavior induce different health results; and 2) community’s demographic, economic, and physical/land-use environmental characteristics are also associated with the public health conditions. Previous literature has limited in its analysis by utilizing two-dimensional (2D) remote sensed/aerial imagery to measure the green space. For example, the 2D analysis fails to include vegetation profiles such as vegetation types (trees, shrubs, and grassland) and vegetation growing behavior in urban area. In our research, with methodological advance, we conduct three-dimensional (3D) space analysis by extracting vegetation information from LiDAR and CIR data to examine the urban greenery impacts on HRQOL. Our study area is Houston, Texas, like any mega city in the United States, which has struggled with the rapid increase of socially and economically vulnerable population in urban area. The data from the Centers for Disease Control and Prevention (CDC) are used to analyze the spatial pattern of chronic disease (obesity, mental health, stroke and asthma). By using a structural equation model (SEM), this research will show a comprehensive outlook of the associations among demographic, economic and physical environmental characteristics to health. Our ultimate goal is to develop a sustainable solution which can be implemented as a formal part of urban design, thereby contributing the health and welfare of the general public and its environs.

References

While the literature on food systems planning has grown significantly since Pothukuchi and Kaufman’s (2000) path-breaking article, few scholars have asked about the role that local and regional planners can play in food distribution systems. To the extent that much of this work has focused on North America and Europe, even less is known about food systems planning in the Global South and Asian countries. To fill these knowledge gaps, this study examines an attempt in South Korea to move from a centralized planning model to regionally-focused agrifood distribution systems. This national government-led initiative, however, is occurring in the midst of a pre-existing local food movement that has been growing over the last decade. As the government supports a move from wholesale market regulation to direct sales models, this study examines: 1) factors that motivated the Korean government to shift food distribution systems to a more decentralized model 2) the successes and challenges of this effort from a social, logistical and economic perspective and 3) the ways that local government planners, market actors and community-based stakeholders – especially those already involved in local food movements – have been affected by and influenced the policy’s implementation.

South Korea, one of the strong regulatory East Asian states that experienced rapid economic growth in 1960-80’s, has long had a publicly-regulated food policy that was based on national economic interests (Burmeister, 1999; Müller, 2014). Despite central government efforts to improve the distribution of agricultural products over the past few decades, the dominance of a limited number of licensed middlemen wholesalers has resulted in high consumer prices and a declining share of the profits for farmers. A recently enacted national food distribution policy in 2013 may be weakening the monopoly middlemen have had in the food chain. This policy, focused on promoting direct sales between farmers and consumers, aims to expand alternative, local food channels. An analysis of detailed masterplans, however, reveals that even though the central government appears to have devolved a great deal of autonomy to local governments and civic initiatives in promoting direct sales and local food projects, it is attempting to incorporate pre-existing, bottom-up movements under national authority through a policy apparatus. The overriding question, then, is whether the introduction of state-led deregulation and apparent decentralization of food distribution channels will continue to build the growing local food movement or curtail innovation.

To answer this question, this study employs a qualitative case study method. It focuses on Seoul, the capital city known nationally for its innovations in urban food policies, such as urban agriculture and a locally-sourced school lunch program. The study also looks at the rural town of Wanju, an emerging illustrative model for successful Korean local food strategies. Methods include semi-structured interviews with local officials, local direct food distributors, and grassroots activists as well as document analysis of national policy acts and local ordinances, the national government’s masterplans and municipal governments’ regionally-focused direct sales projects. Findings suggest that innovative food systems planning – especially when bolstered by national-level policies that enhance local government autonomy – can play a vital role in (re)invigorating not only rural but also urban areas in terms of economic development and social capital (Pothukuchi and Kaufman, 1999; Sonnino, 2009). As part of a
larger dissertation, this investigation of South Korea’s food policy shift offers insights about potential food systems changes in Asian and other Global South countries with comparable political and economic backgrounds in addition to providing Korean food system planners with guidance about effective strategies for developing alternative food distribution models.

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Key Words:
Food Systems Planning, Food Policy, Agrifood Distribution, Decentralization, Local governance

MEASURING THE VULNERABILITY OF THE REGIONAL FOOD SYSTEM IN JAPAN
Abstract ID: 648
Individual Paper Submission

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The purpose of this paper is to measure the vulnerability of the regional food system in Japan through input-output analysis in order to assist planners and policy makers to design and establish a resilient and sustainable food system at the local, the regional, and the national levels.

Over the past decades, linkages among Japanese farmers and food manufacturers have rapidly expanded and intensified at the different levels of the Japanese food system. Yet over the past years, extreme weather, as well as natural and manmade disasters, and possibly climate change, have caused an increase in the vulnerability at different levels of the food system in Japan, along with the vulnerability of food systems around the world (Stave and Kopainsky, 2014; Goetz, 2016). Previous studies on the vulnerability of the Japanese food system have focused on the impacts of the shortage of imports which Japanese farmers and food manufacturers critically depend on (Kabuta, 2014; Tanaka and Hosoe, 2011). Indeed, 34 percent of annual production outputs and 61 percent of annual calories consumed in Japan are imported.

This paper focuses on the impact of extreme weather events, and possibly climate change, on the domestic agriculture in Japan, based on Ghosh’s model (Ghosh, 1958; Kabuta, 2014). The data set utilized for this study builds on an interregional input-output table in 2005, the most recent dataset available, provided by the Japanese Ministry of Economy, Trade, and Industry. The geography is Japan’s nine regions and the unit of observation is the region. The method is input-output analysis, based
on an input-output table for the 53 industry sectors for Japan’s nine regions. This study focuses on the two industry sectors related to food system: (1) agriculture, fisheries, and forestry; and (2) food processing industries. More specifically, this study focuses on the impact of extreme weather events, and possibly climate change, on rice production in the Southern Kyusyu agricultural region, which has resulted in a decrease of 30 percent in rice production in 2010 due to record high temperatures in the summer, 1.64 degrees Celsius higher compared with average summer temperatures from 1971 to 2000. Preliminary findings show that there are interdependencies among farmers and food manufacturing industries and regions in the Japanese food system. First, at the national level, the decrease in agricultural production (1.67 percent) and the decrease in processed foods (1.22 percent) negatively impacts other sectors. Second, in the Kyusyu region, the decrease in agricultural production (0.82 percent) negatively impacts other sectors: e.g., the supply of processed foods within the Kyusyu region decreased by 0.92 percent and the supply to adjacent regions declined by 0.18 percent in 2010. These results indicate that the Japanese food system was negatively impacted by record high temperatures in the summer of 2010. If such extreme events continue, Japanese planners and policy makers may want to think about designing and implementing a resilient and sustainable food system to ensure sufficient food supply for Japan.

References


Key Words:
vulnerability, food system, input-output analysis, inter-regional linkages, inter-industrial linkages

MISSION DRIVEN INTERMEDIARIES IN BUILDING OUT THE AGRICULTURE OF THE MIDDLE
Abstract ID: 670
Individual Paper Submission

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Increasingly, food systems work connects “local” food with mainstream markets, characterized by massive, oligopolistic, globally organized distributors and food manufacturing conglomerates that achieve efficiencies through low-cost, standardized production methods and supply chains, in order to anchor and “scale up” the production of local food. In scaling up local food systems, a growing body of research has found that new intermediaries play a key role in aggregating food from large numbers of small growers and work within wider networks of suppliers, distributors and consumers of local food. The question of scale for a food system that originated by defining itself as “local” introduces philosophical as well as logistical questions about growth and how to generate it – how may alternative food production systems increase output to meet increased demand without compromising the alternative values, such as commitment to small and medium-sized farms, humane and environmentally safe production methods, high quality produce, and community values, that the system developed around?

This paper examines, through in-depth interviews, what we call “mission-driven intermediaries,” which demonstrate long-term commitment to the local food project while successfully improvising to survive in a highly competitive and corporatized industry. We report on novel businesses in North Carolina that have roots in the non-profit sector, yet have become for profit or “organizationally mixed” enterprises. Mission-driven intermediaries tackle two broad challenges. One is bearing the risks, virtually unilaterally, of building out food infrastructures where none exist, almost from scratch, and the second of building and retaining trust as they wrestle with cost and revenue gaps to find price points that will support sustainable practices even while they learn how to scale up.

This research documents the effort to build a middle ground in the American food system. We argue that the growth and economic viability of sustainable local food systems call for mission-based intermediary organizations that not only bridge and cultivate new spaces in alternative food chains, but are also financially sustainable and commercially successful. Mission-driven intermediaries operationalize the value-orientations of non-profit, food activism as a deep well of trust, where shared environmental and equity values (the ‘mission’) permit long-term cooperation among different businesses and facilitate problem solving and toleration of mishaps. These organizations represent a process of institutional recombination, where establishing new, locally-rooted, values-based food practices involves working with existing institutions -- farmers, consumers, government agencies, universities – in new ways. The non-profit origins of wholesale businesses creatively develop resilience in pursuing new forms of food production, processing, marketing, and sales. Institutional heterodoxy leverages lateral alliances with diverse entities, varied sources of working capital, longer periods for payments, mobilization of community organizations and statewide non-profit groups, and de facto subsidies of a skilled professional staff accepting lower salaries and returning all to weather setbacks and develop new business options. The process of uncovering problems, reorienting resources and building partnerships to confront new challenges related to expanding and embedding local food practices eventually leads to the creation of new standards, processes and indeed local food supply chains quite distinct from their original formulations. Mission-driven intermediaries are successful by inverting the idea of local to hold up the alternative food systems values without constraining themselves to the nebulous spatiality of the term and by leveraging both public and private resources together.

As communities grapple with how to support equitable food systems, there are many lessons from this case. This paper argues that the term “local” misses the true values motivating the food systems project, and that public resources play an influential role in supporting the deep levels of creativity exhibited by mission driven businesses of all kinds.

References
HAPPINESS AND URBAN PARKS: ESTIMATION OF THE MONETARY VALUE

Abstract ID: 695
Individual Paper Submission

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Contemporary urban life generates numerous physical illnesses and chronic stress that lead to diseases such as cancer. Residents who live in large cities (e.g., New York, Tokyo, London, and Seoul) are likely to experience such physical stresses that decrease individual subjective well-being. Scholars have emphasized that urban parks, green spaces, and recreational places are important for providing residents with physical and emotional benefits in a variety of ways (Grahn and Stigsdotter, 2010). Much empirical evidence supports the idea that natural amenities (e.g., urban parks, forests, and green belts) in an urban area contribute to the quality of life of urban dwellers. For example, natural amenities not only function as important environmental services such as purifying air and water, filtering noise and wind, and stabilizing microclimate in urban contexts, but also provide social and psychological services that improve residents’ subjective well-being (Chiesura, 2004). Also, urban parks offer opportunities for contact with other people, which enhances social engagement and cohesion of those who live alone or are isolated (Pfeiffer and Cloutier, 2016).

In spite of this important role of urban parks, less scientific attention has been paid to the effects of urban parks on the subjective well-being of urban dwellers. Although previous studies have focused on specific functions of urban parks, such as improvement of physical health, reductions in stress, and increases in recreational activities, most of them have not addressed the relationship between urban parks and human well-being as a concept encompassing physical, mental, and social domains. Subjective well-being (individual happiness) is affected by living environment characteristics such as public services, transportation infrastructures, and natural amenities as well as individual characteristics such as age, marital status, income, and physical health (Cloutier and Pfeiffer, 2015). Thus, comprehensive assessment based on individual subjective well-being is necessary for evaluating the impact of urban parks.
Taking this perspective, this study seeks to explore the relationship between individual subjective well-being and urban parks using individual survey data for self-reported happiness. Specifically, the objective of this study is to address two questions that are pertinent to the issue of the relationship between urban parks and subjective well-being. First, I focus on how urban parks influence the subjective well-being of local residents. Second, I estimate how much residents value urban parks. I use the Seoul Survey Data (SSD) conducted by the Seoul Institute between 2005 and 2015, and employ fixed-effects panel models to estimate the effects of urban parks on the subjective well-being of urban dwellers. In addition, in order to estimate the monetary value of urban parks, I use the average marginal rate of substitution between urban parks and household income. The fact that urban parks positively affect individual well-being is not new, but this approach with the self-reported survey data is novel in terms of providing additional insight to city planners. Valuing public goods such as urban parks is also important to suggest policy implications for sustainable communities.

References

Key Words:
Urban Park, Happiness, Willingness-To-Pay, Seoul

IDENTIFYING PEDESTRIAN AND BIKE COLLISION HOTSPOTS AND SPATIAL MODELING OF STATE ROUTES IN WASHINGTON STATE
Abstract ID: 713
Poster

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The primary purpose of this study was to detect high-risk pedestrian-bike collision locations and to investigate the correlates of collision occurrence using police records of pedestrian-bike collisions on main street highways (MSHs) in Washington State. 183 cities and small towns with 3.2 million residents have main street highways (625 miles) running through their city limits in Washington State. Between 2001 and 2012, 23.2% of the total pedestrian and bicycle collisions occurred on MSHs, which represent only 8.9% of the state route network. The study aimed to understand the effects of environmental and socio-economic factors on main street highway routes that had a large proportion of pedestrian-bike collisions.

Identifying and ranking high-risk collision zones is essential to develop efficient countermeasures for pedestrian and bike safety. High risk pedestrian-bike collision locations were first identified by using Planar Kernel Density Estimation (PKDE). Then, a novel Network Kernel Density Estimation (NKDE) approach was used to address the fact that pedestrian-bike collisions usually occur on a linear roadway.
network. The NKDE is more appropriate than PKDE for density estimation since the PKDE tends to overestimate the collision point density values.

Two pedestrian-bike collision models were estimated as a function of variables related to micro and macro environmental characteristics. First, a case-control model served to estimate the occurrence of the pedestrian-bike collision. Second, the study applied a negative binomial model to estimate the number of pedestrian-bike collisions at intersections and mid-blocks on state routes. The study found that intersections have a higher probability of collision than mid-blocks in all models. Also, a positive relationship was confirmed between roadway width and pedestrian-bike collisions risk. Population and housing density were positively associated with collision risk. And, low-income households and minority (non-white) groups were at higher risk of a pedestrian-bike collision. Lastly, a specific land use type (cultural activities, amusements, public assembly land uses) was found to be correlated with a higher probability of collision. The results from this study can be used to prioritize pedestrian-bike safety measures.

References


Key Words:
Pedestrian Safety, Bike Safety, Hotspots, Spatial Modeling

FROM PIZZA TO TACO: HOW DOES THE INTERACTION BETWEEN ITALIAN AND MEXICAN FOOD ENTREPRENEURS IMPACT THE FOOD LANDSCAPE OF SOUTH PHILADELPHIA?
Abstract ID: 765
Individual Paper Submission

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Immigration scholars pay extensive attention to the impact of immigrants on receiving communities (Smith and Edmonston 1997, Singer 2008). The post 1965 immigrants differ in their legal status, their destinations and places of origin compared to the European immigrants of the early 20th century (Massey 2008). Nevertheless, some groups do share many similarities with their earlier counterparts including their initial employment patterns, their entrepreneurial spirit, and their reliance on family members in business development (Vitiello 2014). The food industry embodies an environment where the similarities among old and new immigrants outweigh their differences. In fact, the food industry has
always been among one of the largest employers of immigrants in the US (Jennings et al. 2013). In addition, many newcomers have settled in neighborhoods previously occupied by earlier generations of immigrants (Vitiello 2014). Despite these similarities, little is known about how the interaction among the old and new immigrants reshapes the urban fabric of receiving communities (Vitiello 2014). This study aims to bridge these gaps in the literature by focusing on how the interaction among old and new immigrants in a shared employment sector - food industry- contributes to the revitalization of old immigrant gateways.

The goal is reached by probing two research questions 1) How do immigrant entrepreneurs participate in the supply chain of ethnic foods? 2) How are immigrant-owned food businesses shaped by their environment and in return how are these businesses impacting the environment of receiving communities? The study adopts a qualitative research design using multiple case studies to gain an in-depth insight about the complexities of the relationship among different group of immigrants. The cases are selected from the Italian and Mexican businesses along the 9th street market located in South Philadelphia. A historically Italian neighborhood, it is now home to many immigrants and refugees from Southeast Asia and Latin America. The market was initially established by the early Italian immigrants but faced extreme deterioration in the late 20th century. The influx of immigrants since the mid-1990s and their settlement in this neighborhood has significantly revived the market. A market inventory and a pilot survey of retailers on 9th street contextualize, complement, and helped identify interviewees, who include six Italian and Mexican entrepreneurs representing three types of food retail (bakery, butchery and grocery). Secondary data including historical literature, property ownership data, archival reports and catalogs are used to augment the findings. Field observations are also used to capture information about store products, customers and movement of people and products throughout the market.

The findings show that Italian immigrant entrepreneurs create an environment that facilitates the entrance of Mexican immigrants into multiple roles in the food market by providing access to employment, skill training, market information and business literacy. In return, the Italian entrepreneurs benefit from the revitalization of the market as Mexican entrepreneurs occupy vacant properties, establish new businesses, and attract an enlarged and diversified clientele. This study has significant implications for re-emerging immigrant communities across the US where old and new immigrants live and work together. The study offer planners, local governments, and immigration agencies that work toward integration of new immigrants an example of a success story where the interaction between old and new immigrants creates a pathway for upward mobility of newcomers, expands the wealth of old immigrants, and collectively revitalizes receiving communities.

References

Key Words:
Immigrant entrepreneurs, Food enterprises, Revitalization, Receiving communities

NEIGHBORHOOD BUILT ENVIRONMENT AND FOOD CONSUMPTION
Abstract ID: 870
Individual Paper Submission

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Recent research shows that healthy food consumption is largely associated with economic status of the household rather than the physical environment (Beaulac et al., 2009; Drewnowski and Kawachi, 2015; Handbury et al., 2015). This implies that building new supermarkets in low-income neighborhoods may not improve nutritional outcomes (Clary et al., 2017; Cummins et al., 2014; Rummo et al., 2017). This has disturbing implications for spatial policies aimed at improving food access and healthy behaviors even when these policies and programs are being rapidly adopted across the U.S. (Cummins et al., 2014; Elbel et al., 2015; Sturm and Hattori, 2015). While obesity or obesity-related behaviors are associated with the types of food stores in a neighborhood (Gordon-Larsen, 2014), there is little about how these stores influence consumption patterns of different food types which are linked to health outcomes. For example, walkable neighborhoods with supermarkets might be more conducive to frequent purchase of fresh fruit and vegetables and parking amenities near convenience stores might encourage sugary drink consumption. This project seeks to better understand how local spatial factors shape food decision making of households, controlling for other characteristics.

We use household consumption pattern data from the 2010 Nielsen Homescan dataset in four metropolitan areas (Birmingham, AL; Chicago, IL; Minneapolis, MN; and Oakland, CA), geographically matched food resources from 2010 Reference USA and built environment data from the 2010 Smart Location Database at the neighborhood level. Using mixed models, we examined the association between neighborhood food availability and the types and amounts of food purchased. Further, we examined whether households purchased more food if they live in neighborhoods with a built environment facilitating purchasing food. We focused on the purchases of four types of food groups, including snacks, sweetened beverages, packaged fresh fruits and packaged fresh vegetables. We measured neighborhood food availability by the numbers of and the distances to grocery stores and convenience stores in the household’s home neighborhood. We examined three dimensions of the broader neighborhood built environment context, which are road density, parking spaces and mix use. Adjusting for neighborhood socioeconomic status deprivation and household socio-demographic factors, a shorter distance to the nearest grocery store is associated with more packaged fresh fruits and fresh vegetables purchased; a shorter distance to the nearest convenience store is associated with more sweetened beverages purchased. We also found that a greater number of convenience stores is associated with more sweetened beverages purchased. We found that, given the same distance to the nearest grocery store, households living in neighborhoods with a higher road density and more parking spaces purchased more packaged fresh fruits and vegetables. We demonstrate that the home-based neighborhood food environment is related to the types and amounts of food consumed; food consumption decision is moderated by neighborhood built environment characteristics. Therefore, neighborhood environmental factors are importantly related to dietary outcomes, reinforcing the importance of including such factors in interventions that seek to effect dietary improvements. Further, our results also indicated that the presence of convenience stores may have different implications with respect to accessing different types of fresh produce. Therefore, monetary policies such as subsidies to small stores to increase access to various produce should complement spatial policies to ensure a better access to healthy food.
The relationship between crime and space: visual exposure and access

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Citizens’ anxiety has been increasing due to the crime happening frequently and sophisticated. Because crime is one of the major elements that threaten the safety of our society, people require careful and systematic responses. However, unlike the past, crimes are happening in unexpected patterns even in everyday living space. For example, recently in Seoul, a homicide occurred in subway Gangnam station where the considerable volume of floating population was congested.

This shows that despite the rapid evolution of crime, the current crime prevention system has not coped with the crimes properly. Therefore, new measures which can prevent crime are required. In this context, the new and noticeable progress for the crime prevention is the application of the theory of Crime Prevention Through Environmental Design (CPTED) which intended to prevent crime through the improvement of urban spatial environment.

There are several studies that have found that natural surveillance among CPTED principles is a long-established crime prevention strategy (Cozens and Love, 2015) and highly effective in preventing crime. However, these studies have limitations in that most study cases approached qualitative research methods such as questionnaires. This was because the quantitative approach was difficult in defining a spatial extent of natural surveillance or geographical manipulation and calculation. In this sense, this study attempts to identify the relation between the areas where CCTV cannot detect or people cannot watch on the streets and places where actual crimes occur.

Surveillance can be divided into three categories, technical surveillance with equipment such as CCTV, demographic surveillance with people such as pedestrian or floating population, and spatial structure...
surveillance with the quantified visual perception on the street by reflecting the physical building shape and road width.

To conduct these three comparative analysis in the research area, Seongbuk and Jungang area, Jinju City, Korea, the actual crime places, 100 cases in 2012, the locations of 16 CCTVs were identified. The floating population was counted by the number of the mobile phone users in the every 50X50m grid street space using GIS by time, sex and age. The mobile big data were collected by the private telecom company of Korea.

As to visual perception, the WLVAE model was utilized to quantify how far people observe surrounding areas spatially from the standing position. In the meantime, since the characteristics of each crime are different according to the crime types, this study analyzed theft and violent crimes, which are occurring with high frequency in the research area.

The visual perception surveillance areas (VPSA) utilize the modified WLVAE model developed by Cho and Kim (2011) in Korea, which complements the shortcomings of the Visual Access & Exposure (VAE) proposed by Archea (1984). VPSA by this model can quantify: (1) the possibility of observing another person’s behavior, visual access (VA), and (2) the possibility of being observed by another person, visual exposure (VE).

The results of the analysis showed: first, in case of CCTV, CCTV surveillance areas and actual crime occurrence points are inconsistent, and it can be confirmed that there are blind spots. This points out that it is necessary to relocate CCTV or improve mechanical performance of CCTV. Second, the theft crimes were mainly concentrated in the lower point of visual exposure, but the violent crimes were not correlated with the visual exposure. Third, theft and violence crimes occurred mainly in the places where the number of surveillance is less due to the small number of floating population. Fourth, it was found that theft and violence crimes occurred more in the places where the visual exposure was lower and the floating population was less. Therefore, the results show that additional crime prevention measures such as strengthening patrols and environmental improvement to secure natural surveillance are required. As shown above, this study is expected to contribute to enhance safer city against crime.

References

Key Words:
Crime Prevention, Surveillance, Floating Population, Visual Perception, CCTV

FOOD SECURITY, CRITICAL INFRASTRUCTURE AND NATURAL HAZARDS: A LINK BETWEEN ENGINEERING AND PLANNING METHODS
Abstract ID: 917
Individual Paper Submission
For households of all income levels, and especially for those that are food insecure, food access can be threatened by natural hazards (Cutter, 2017). Natural hazards can damage critical infrastructure such as the transportation or electric power network, which may disrupt the food supply chain which relies on roads to provide access to grocery stores and electricity to preserve food. The high interdependencies between infrastructure services within the food supply chain make it vulnerable to unpredictable and cascading consequences (Ayyub, 2008).

While planners have recognized the importance of food security and hazards, little research has been done to link the topics (Cutter, 2017). Planners have explored the causes of food insecurity and how to improve vulnerable population’s access to healthy food (Pothukuchi, 2004; Raja et al, 2008). Engineers have researched how natural hazards impact critical infrastructure. However, connecting social science and engineering methods requires an interdisciplinary approach in order to understand how disruptions are a threat to household food security (Vilijoen and Wiskerke, 2012). This paper attempts to integrate the two approaches.

The main goal of this research work is to explore the potential use of quantitative risk assessment (QRA) methods as a tool to link social science and engineering concepts. This paper argues that QRA theory, specifically logic trees, are a potential tool to integrate engineering and planning methods. We present results from structured interviews with small and large food retailers in Galveston and Beaumont, TX, two communities that have experienced major hurricanes in the past 10 years. Their significant levels of food insecurity, and food supply chain dependent on critical infrastructure make them valuable case studies.

The results of the interviews help deconstruct the risk of events that may cause a reduction in food security capacity. These events are identified based on the experience of food retailers as they prepare for or recover from natural disasters. In this fashion, logic trees provide a basis to modeling the probability of reduced food security after natural hazards due to disruptions in critical infrastructure.

References


Key Words: food system, food security, natural hazards, infrastructure, food retail
STRESS EXPERIENCES IN NEIGHBORHOOD AND SOCIAL ENVIRONMENTS STUDY (SENSES): A PILOT STUDY TO INCORPORATE BIOMETRIC SENSING INTO COMMUNITY-ENGAGED ASSESSMENTS OF THE BUILT ENVIRONMENT

Abstract ID: 935
Individual Paper Submission

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Background: Community volunteers have been successfully enlisted in urban research as "citizen scientists," most often using photos, audio, and survey instruments to gather objective and perceived neighborhood data. However, most studies that employ citizen scientists focus almost exclusively on external factors, such as measures of ambient noise or air pollution, but neglect other opportunities for data of potential relevance to residents, local stakeholders and decision-makers. Notably, no citizen science studies have leveraged the participatory and technological potential of the biosensor-oriented "quantified self" movement, though the concept is increasingly familiar to the public with the proliferation of wearable devices and behavior-tracking applications.

The task of identifying specific elements of neighborhood environments (observable and unobservable) that contribute to individual wellbeing presents a unique opportunity to engage community residents in collecting and analyzing their personal biometric data, as well as local environmental data, in ways that can potentially mobilize health-enhancing improvements to local environments. This paper describes findings from a pilot study to build and test a scalable model for integrating individual physiological data with neighborhood-based contextual and perceptual information in a process designed to activate both residents and decision-makers.

Methods: An existing community-engaged research model, called Our Voice, has previously empowered residents to collect and analyze data about built environment features that they feel support or hinder wellbeing. Using a tablet-based application, participants take geocoded pictures of their surroundings and record attendant audio narratives on neighborhood assessment walks. Following walks, participants then join facilitated meetings alongside local decision-makers to discuss results, build consensus and generate realistic solutions to identified issues. Prior Our Voice studies have documented impacts at individual, community, built environment, and policy levels. To understand if/how biometric data affect the existing Our Voice program, 30 participants will be recruited from the same neighborhood in Santa Clara County, CA and randomly assigned to groups (15/group): original Our Voice (OV alone), or enhanced Our Voice (OV+) that includes the use of a wrist-worn electrodermal activity sensor as a measure of stress. OV+ participants will also be provided with GIS-generated "heat maps" to spatially visualize high and low stress recorded during their walk.

Expected Outcomes: Compared to OV alone, OV+ is hypothesized to increase the number/variety of neighborhood features identified by participants. This pilot will begin to develop an empirical foundation for understanding how local environmental stressors are perceived and biologically experienced by residents, including differences in stress responses between and within participants, and how such information can be used to drive positive neighborhood changes. The start-up phase of this pilot is underway, with data collection set for May-July 2017. The overall timeline for this project is based on prior experience conducting Our Voice research, with additional time to develop systems for collecting and analyzing biometric data.
References


Key Words:
built environment, community engagement, neighborhoods, stress, wellness

BEYOND HEALTHY FOOD ACCESS: REEXAMINING FOOD SYSTEM PLANNING THROUGH AN EQUITABLE GROWTH LENS

Abstract ID: 952
Individual Paper Submission

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Food system planning has focused largely on enhancing access to healthy, affordable food options in low access communities and strengthening the link between community and regional production and consumption. In general, food-based economic development efforts have been limited to infrastructure and micro-enterprise development, e.g. food hubs and healthy corner store programs. The field’s emphasis on healthy food access addresses important health equity concerns by increasing the quality, affordability, and availability of fresh and nutritious food options, but it does little to address the underlying causes of food inequity, which are overwhelmingly economic.

Paradoxically, the food industry compounds these inequities by paying some of the lowest wages in the US economy.[1] With roughly 1 in 6 Americans employed in the food industry, the economic consequences of these low wages are not insignificant.[2] As such, gains in food sector job quality and wages have the potential to improve the economic conditions at the root of food insecurity for over 50 million Americans.

This paper argues that equitable growth strategies (e.g. supporting entrepreneurs of color, raising the floor on low-wage jobs[3]) must become a larger part of food system planning if the field is to realize its vision of “healthy, sustainable local and regional food systems [that] support and enhance the overall public, social, ecological, and economic health of communities.”[4] This paper draws on the regional equity literature, participant observation, interviews, and document review to showcase equity-driven innovations in public sector food planning based on lessons from two city-led food-based economic development projects in Madison, Wisconsin. The first case centers on a new public market project. The second centers on the redevelopment of an Oscar Mayer processing facility that closed in 2017 after more than a century of serving as a major local employer.

Madison offers a rich case study context for equitable food sector development because of the
dichotomous health and economic opportunities available to its residents. On the one hand, Madison is already part of a vibrant regional food system. Located in Wisconsin’s highest grossing agricultural county and adjacent to one of the largest concentrations of diversified organic and CSA farms in the US, the Madison area has a robust local food economy and is home to the nation’s largest producer-only farmers’ market and a growing number of thriving small-scale food processing businesses. It has also repeatedly ranked in the top ten US cities on a variety of national livability rankings, including bikeability, happiness and health, and best place to raise a family.

On the other hand, the city faces pronounced racial disparities on indicators ranging from unemployment rates to child poverty. As a 2013 report by the Wisconsin Council on Children and Families noted, “African Americans already fare worse than whites on virtually all status indicators in virtually every part of the nation. What is extraordinary about Dane County’s numbers, however, is the sheer magnitude of the disparities that we found in many of the most fundamental status indicators.”[5]

The question for Madison is how to promote growth that lifts up all its residents. This paper discusses how the city has worked to address this challenge head on and identifies the specific ways in which food-based economic development projects have contributed to this work.


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Key Words:
food systems, equitable growth, job creation, planning process, racial equity

**MICRO-LEVEL SPATIAL PREDICTORS OF OBESITY**
Abstract ID: 967
Individual Paper Submission

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Obesity continues to be a public health problem in the United States, with some 35 percent of Americans considered to be obese when measured by body mass index (Flegal et al. 2012; BMI). Indeed, some 69 percent of Americans are considered overweight (Ogden et al. 2012). While there are several studies that examine the socioeconomic (e.g., McLaren 2007) and even transportation (e.g., MacDonald et al. 2010) determinants of obesity, there are less studies of micro-level spatial determinants of obesity. The central concern of this paper is to examine the relationship between micro-level spatial characteristics and obesity. We hypothesize that micro-level spatial characteristics that discourage physical activity and encourage unhealthy eating will be associated with more obesity.

This study utilizes primary data collected from 370 participants in and around a revitalizing downtown and midtown of Detroit to examine how socioeconomic characteristics, physical activity, transportation usage (particularly time spent each day in a car), the density of bus stops, and micro-level spatial characteristics are associated with obesity. This paper is most concerned with micro-level spatial characteristics close to the residences of respondents. Among these characteristics are a measure of walkability (based on the number of vacant parcels in the immediate neighborhood), sidewalk condition (good or poor), distance to parks, and distance to gas stations and package stores (the latter 2 serve unhealthful snacks). We use a spatial autoregressive model to regress socioeconomic characteristics, physical activity, transportation usage, and these micro-level spatial characteristics on BMIs. We find that all of our micro-level spatial variables of concern are associated with obesity. In particular, less walkability, poor sidewalk condition, longer distances to parks, and shorter distances to gas stations and package stores are associated with higher BMIs. Not surprisingly, we also find that poorer residents and those who engage in less physical activity are also more likely to be obese. We did not observe a relationship between daily time spent in a car and the density of bus stops on BMI. These latter results are likely because Detroit is a car dependent city (there is little variation in the variable that captures daily time spent in a car) and there is not much variation in bus stop density across our study area. The results of our study confirm the importance of upstream planning in determining health outcomes (see Botchwey et al. 2015 for a review) and help make the case for a larger role for planning in order to improve health outcomes.

References

Key Words:
Obesity, Body mass index, micro-level spatial determinants, walkability, sidewalks
DEVELOPING PROBLEMATIC PERFORMANCE VALUE SCORE: TIES THAT BIND INDIVIDUAL HEALTH CONDITIONS, ENVIRONMENTAL BARRIERS AND PROBLEMATIC BEHAVIORS.

Abstract ID: 986
Individual Paper Submission

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Mobility, defined as the ability to move independently, contributes to delaying fragility and disability in older age, improving well-being and the potential for living independently for the elderly. Mobility is influenced by several factors including health conditions and functional limitation, as well as physical, social, and psychological environments. The World Health Organization’s (2001) International Classification of Functioning, Disability, and Health defines inability participating in activities as a product of both individuals and their surrounding environments. User disability is caused by environmental factors that generate barriers impeding a person’s ability to perform daily activities. Achieving balance between a user and his/her surrounding environments (or person-environment fit) is required to maintain health and well-being of people.

This study investigates how the relationship between health conditions and environmental factors are perceived as problematic performance for environment users. The data collected by the Center for Inclusive Design and Environmental Access (IDeA Center) with Design Effectiveness Survey (2009) is analyzed to understand the effectiveness of the environmental design for each activity both within and across participant groups and conditions. Data includes participants’ health conditions (legs/feet mobility conditions; arms/hands mobility conditions; back/neck mobility conditions; sight conditions; hearing conditions; cognitive conditions), environmental barriers, and individual responses to problematic environments, as well as other demographic factors, for example, individual gender, age, income, and so on. By applying a multinomial logit model, the three responses for perceived problems of ‘always’, ‘sometimes’ and ‘never’ in each activity question were assumed as three independent and irrelevant choices. Problematic Performance Value (PPV) scores, then, were calculated by aggregating the estimated sub-probabilities where the individual probability was decomposed to the structures of probability constrained by participant group/condition. The score was aggregated from the estimated individual responding probabilities to the three responses.

The result will present specific characteristics of environmental barriers that strongly relate to health conditions. A higher PPV score would indicate more problems the user would face performing activities in certain environments. PPV scores in the respect to different health conditions and environmental barriers would play as a guide to design a problem-free environment. These guidelines of environmental design features could be filtered through people with comparable conditions and help them modify their environments that best suit their specific needs. The result will not only help improve user experiences but also promote equitable usage of space among the different population who have different conditions.

References


Key Words: Problematic Performance Value, Environmental barrier, Problematic behavior, Health conditions, Environmental Design

ASSOCIATIONS BETWEEN NEIGHBORHOOD ENVIRONMENTS AND FALLS AMONG COMMUNITY-DWELLING OLDER ADULTS OVER TIME
Abstract ID: 1012
Individual Paper Submission

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Background:
Falls, the most frequent cause of injury among older adults, are substantial barriers to walking and active living [1]. Falls typically occur on physical environmental settings (e.g. floor, step) by interacting with personal factors (e.g. age, comorbidities) and behavioral situations (e.g. walking, getting up/down) [2]. Promoting safe environments associated with fall prevention throughout the life course is critical for health and quality of life among older adults. Due to the combination of increased physical and psychological vulnerability, mobility limitations, and changing patterns of spatial use with age, the quality of neighborhood environments play a major role in maintaining health and mobility among older adults [3, 4]. Although home-based or individual risk factors for falls among older individuals have been well studied, relatively little is known about the relationship between fall events and neighborhood environmental features.

Objectives:
The objective of this study is two-fold: Firstly, it examines the relationship between outdoor environmental factors and fall events among older adults through a cross-sectional analysis. Secondly, it identifies whether changes in outdoor environmental attributes influence changes in falls through a longitudinal analysis (using the data from a 12-month prospective cohort study).

Methods:
We used the data from 5,243 community-dwelling adults aged ≥65 from the 2011 and 2012 National Health and Aging Trends Study (NHATS), a nationally representative sample selected from 35.3 million Medicare beneficiaries aged ≥65 living in the United States. Dependent variables were self-reported fall events within the last month from each survey time (2011 and 2012) and fall changes operationalized as the history of a fall in 2012 minus the history of a fall in 2011. Main exposures included perceived outdoor environmental conditions (e.g., litter/ broken glass on sidewalks, graffiti on buildings, vacant or deserted houses, any broken windows in front of the home, and uneven walking surfaces in the area leading to the home) and social environments (e.g. knowing each other, social support, trust). Logistics regressions were performed to obtain unadjusted and adjusted risks, and 95% confidence intervals (CIs)
of the outcome variable (fall events in 2011 and 2012, and changes in fall events from 2011 to 2012) in relation to the perceived neighborhood environment variables.

Results:
Overall, compared to 2011, participants had a 2.5% increase in 2012 in the likelihood of having a recent fall within the last month. The results from the cross-sectional analysis showed that negative outdoor environments (i.e., litter/broken glass on sidewalks, graffiti, broken windows, and uneven surfaces or broken steps) were associated with increased fall events in 2012, but only litter/broken glass on sidewalks were significantly correlated with increased falls in 2011. In addition, older adults who reported having supportive social environments (i.e., people in community know each other well, willing to help each other, and can be trusted) had a lower risk of falling in both 2011 and 2012. In the longitudinal analysis, participants who perceived the neighborhood environment to be deteriorating compared to the last year (i.e. more litter/broken glass on sidewalks and more uneven walking surfaces in the area leading to the home) reported increases in their fall events.

Implications:
Our findings suggest that safe and well-maintained outdoor environments may help prevent falls among those older adults who actively engage in outdoor activities. Environmental interventions including reducing litter on the sidewalks and uneven walking surfaces as well as promoting social support and neighborhood trust seems important for reducing fall events among older adults. Thus, Policy and planning strategies to reduce fall-related hazardous environments can help public health experts and gerontologists as well as urban planners to create safe neighborhood, which can contribute to promoting and maintaining their health, mobility, and wellbeing.

References

Key Words:
Neighborhood environment, Risk of falling, Older adults

SAFETY, COMFORT, AND ATTRACTIONNESS FOR ACTIVE COMMUTING TO SCHOOL: RELATIONSHIP BETWEEN PERCEIVED AND OBJECTIVE MEASURES
Abstract ID: 1024
Individual Paper Submission

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Background:
Active commuting to school is an important source of promoting physical activity and preventing obesity among children (Tudor-Locke, Ainsworth, & Popkin, 2001). Several researchers have developed measurement methods to capture both the macro-scale (e.g., residential density or street connectivity) and the micro-scale (e.g., sidewalk conditions or street designs) elements of the built environment that may influence children’s walking and bicycling behaviors (Zhu & Lee, 2009). Despite the cumulating evidence on built environmental correlates of children’s walking, little has been known regarding the relationship between the objective and the perceived dimensions of the built environment. Given that children’s active commuting to school is heavily influenced by the quality of the street environment near home and school (Kerr et al., 2006), it is important to understand how micro-scale street features influence the degree to which people feel safe, comfortable, and attractive for walking and bicycling.

Purpose:
Focusing on the micro-scale street environments, this study examines if the objective measures are correlated with the corresponding perceived measures (i.e., safety, comfort, and attractiveness) known to be important for walking and bicycling to school among children and parental attitudes. This study focuses on safety, comfort and attractiveness as the most consistently reported perceived environmental correlates of active commuting to school (Pikora, Giles-Corti, Bull, Jamrozik, & Donovan, 2003).

Methods:
Environmental audits were conducted for 841 street segments located within a ¼ mile buffer from 18 elementary schools in Seattle, Federal Way, and Auburn in WA. The audits were performed by certified auditors who completed a 4-step training and certification process. The audit instrument was developed to capture spatiophysical and spatiopsychosocial aspects of walking and bicycling (Moudon & Lee, 2003). Spatio-physical aspects of walking and bicycling include roadway characteristics (e.g., vehicular lanes, on-street parking, bus stops, traffic calming devices, etc.), environments along roadway (e.g., building conditions, lighting, sidewalk conditions, and trees), and land uses (e.g., residential, commercial, vacant property). Spatiopsychosocial aspects of walking and bicycling include environmental perceptions related to safety, comfort, and attractiveness. Average housing value along the street segment was measured using King county appraisal data. Unadjusted regression analyses were used to identify significant micro-scale street environments (independent variables) predicting each of the three perceived walkability variables (outcome variables). A p-value of .05 was used to determine the statistical significance in this study.

Results:
Overall, roadway characteristics and environments along the roadway were the most important for all three environmental perception measures (i.e., safety, comfort, and attractiveness) variables. Unattractive items (e.g., graffiti, broken bottles), vacant housing, drainage problems, and the number of lanes were negatively associated with safety, comfort, and attractiveness of walking and bicycling. Street parking and sidewalk buffer were positively associated with safety, comfort, and attractiveness, as street parking and trees between sidewalks and vehicular roadway can provide an adequate buffer between pedestrians and automobile traffic. Signs related to crime watch or surveillance warning were positively associated with safety, comfort, and attractiveness as they may help control physical disorders. For street trees, tall deciduous trees and shrubs were positively related with safety, comfort, and attractiveness perceptions, whereas tall evergreen trees were not significantly associated with any of the environmental perception outcomes. Especially in street segments with low housing value (<$89,000; 25th percentile), tall evergreen trees in private property were negatively associated with all environmental perceptions.
Implications:
The findings indicate the importance of safe and well-maintained street design to promote positive perceptions for walking and bicycling. Specific strategies may include reducing vacant housing, drainage problems, graffiti, and litter, and providing adequate buffer and visual cues or signage to discourage crimes. Thus, environmental audit instruments tailored to effectively capture the micro-scale street environments for children could help urban planners/designers identify street design strategies that can improve perceptions of safety, comfort and attractiveness, which can in turn lead to promoting children’s active commuting to school.

References


Key Words:
Environmental audit, Safety, Comfort, Attractiveness, Active commuting to school

INVESTIGATING THE IMPACT OF URBAN FORM AND URBAN AGRICULTURE ON LOCAL CLIMATE.
Abstract ID: 1060
Individual Paper Submission

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Extreme heat events are responsible for more annual fatalities in the United States than any other form of extreme weather [1]. Urban centers are particularly vulnerable to the threats of excessive heat as most cities are home to large populations of lower income individuals who often lack access to air conditioning or adequate healthcare facilities. Urban populations are also more likely to be exposed to extreme heat due to the urban heat island (UHI) phenomenon. As the global population continues to urbanize, the number of vulnerable individuals will continue to increase making urban heat island mitigation strategies all the more important.

This research explores urban agriculture as an urban heat island mitigation strategy. Though previous work has examined the role of vegetation in mitigating the UHI effect [2], the potential of urban agriculture as a mitigation strategy has yet to be investigated. This paper presents the results of a land cover analysis, which investigates the climate effect of urban agriculture on local temperatures. The research is conducted in the city of Atlanta, GA, as Atlanta has one of the fastest growing urban heat
islands, and has exhibited significant increasing trends in heat waves [3].

This paper is a continuation of previous research that investigated the conversion of underutilized properties, such as vacant and distressed parcels, to urban agriculture using a local climate simulation model. My research shows that urban agriculture sufficiently decreases high nighttime temperatures during hot summer months, which is an important finding from a public health perspective as nighttime temperatures are a better metric for capturing negative health effects from extreme heat than daytime temperatures.

In this research, I use satellite temperature, land cover data, and urban form metrics to estimate how the percent change in urban agriculture impacts local temperatures. I create urban form typologies based on Atlanta’s urban morphology. The urban form typologies are based on characteristics that have been used to define “local climate zones” [4]. This analysis investigates whether the urban form of the neighborhood plays an important role in how well vegetative strategies perform in reducing temperatures. Specifically, I investigate how urban form at the neighborhood scale impacts the relationship between urban agriculture and local climate. As such, I argue that urban agriculture should not only be placed in cities but that the morphology of the built environment should be taken into consideration when selecting locations for urban agriculture.

This research builds on work currently examining the potential of urban agriculture to effectively revitalize neighborhoods with vacant properties and reclaim brownfield sites in urban areas. When designing heat mitigation strategies, it is important for planners and policy makers to quantify the difference between vegetative approaches in order to understand the trade-offs they are making climatically, environmentally, and socially. As such the results of this research can help guide planners when selecting between vegetative UHI mitigation strategies and may further support the burgeoning urban agriculture movement.

References


Key Words:
urban agriculture, urban heat island, extreme heat, urban form

EXPLORING GEOGRAPHIC ACCESS TO PRIMARY HEALTHCARE AND ITS RELATIONSHIP TO BUILT ENVIRONMENT

Abstract ID: 1112
Individual Paper Submission

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Background & Research Objective

The role of adequate access to primary healthcare, especially for vulnerable population, has been well documented in recent studies (Andersen, Davidson, & Baumeister, 2013; Bodenheimer, & Smith, 2013; Davy, Harfield, McArthur, Munn, & Brown, 2016). However, limited access to primary healthcare has been a growing concern for the overall population, and especially in rural and poor urban areas have limited access due to a shortage of physicians (MDs) in these communities (Huang & Finegold, 2013). One proposed solution to alleviate the primary care shortage is to expand the advanced registered nurse practitioners (NPs), who can provide high quality of care at lower costs than physicians, are more likely to work in underserved areas and are well positioned to fill the gaps in health care delivery.

The Health Resource and Services Administration (HRSA) designates as Health Professional Shortage Areas (HPSAs) for individual or contiguous counties, those areas that are greater than 30-minute travel time to primary healthcare providers. However, current methods employed by HRSA may not: 1) accurately depict the ability of individuals to receive care across administrative boundaries, nor 2) consider built environment barriers for accessing healthcare.

Using the state of Florida and the Orlando Metropolitan Statistical Area (MSA) as case studies, the goal of this research is to: 1) identify urban form factors that may affect access to primary healthcare providers, and 2) in the assessment of healthcare access, consider the availability of NPs to meet rising demand for primary care by measuring health care accessibility to both NPs and MDs.

Study Design

This study develops a multi-dimensional approach to develop spatial measures of accessibility to primary care providers (both NPs and MDs) and quantifies the relevant urban form components by employing Geographic Information Systems (GIS). First, global and local spatial autocorrelation methods are applied to determine the population to be considered as medically underserved. Second, GIS network analysis is used to calculate travel time from census block centers to the nearest NPs and MDs. Last, an Ordinary Least Square (OLS) regression is used to assess the impact of urban form characteristics to primary health care providers’ accessibility, and to verify previous research that has suggested that places with more sprawl have less accessibility to health care providers.

Variables used to define urban form include size, density, cluster, and centrality of the residents, and were adopted from Galster, Hanson, Ratcliffe, Wolman, Coleman, & Freihage, (2001), and Knaap, Song, & Nedovic-Budic (2007), who employed metrics to describe land development along geographical dimensions. Practice location of MDs and NPs are acquired from 2011 American Medical Association and 2013 Florida Board of Nursing Database, respectively.

Principal Findings

Results provide a more detailed outcome of health professional shortage locations compare to HPSAs. High clusters of spatial availability and less travel time is found in urban areas in the state. Compare to MDs, access to NPs appears to have a greater tendency to take longer travel time in rural areas of the state. Considering both NPs and MDs as primary health care providers, about 85.67% of the population of Orlando MSA has access to the nearest provider in less than 5-minute drive, which represents remarkable levels of accessibility. From the perspective of urban form variables, density shows a
positive and proximity a negative and significant correlation to all primary care accessibility measures; whereas mixed-use shows both positive and negative correlation (p<0.05).

References

- Huang, E. S., & Finegold, K. (2013). Seven million Americans live in areas where demand for primary care may exceed supply by more than 10 percent. Health Affairs, 10-1377.

Key Words:
Primary Healthcare Provider

MOTTAINAI!: USING A CULTURAL CONCEPT TO PROMOTE SUSTAINABLE FOOD WASTE BEHAVIOR IN TOKYO AND KYOTO
Abstract ID: 1182
Individual Paper Submission

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Sustainable infrastructure and policies have basis in individual behaviors and historical cultural concepts. In this study I research how the Japanese communities of Tokyo and Kyoto integrate the cultural concept of “mottainai” into food systems planning, with a focus on food waste and resident behavior. Mottainai is a word of Buddhist and Shinto origins, and in English translates to “what a waste” or “don’t be wasteful”. It reflects a spiritual veneration of objects; it is believed that all natural and human made objects and resources have intrinsic value (Minobe 1982). This concept is a well-known and accepted value in Japan so much so that it is part of the country’s environmental policies. The key research questions I aim to answer are: how do the sustainable policies of the city of Tokyo and Kyoto define and use “mottainai”; and, how do they apply it to their food waste policies and strategies?

In 2001, Japan passed the food recycling law. The law encourages businesses to reduce, reuse, and recycle food waste. Tokyo is uniquely situated as a place of waste creation and leader in environmental sustainability. As part of its 10-year climate change strategy, Tokyo aims to reduce greenhouse gas emissions by 25% from 2000 level by 2020. Since 1997 Kyoto has become well known in Japan for being a leader in sustainability (Kusakabe 2013). In 2008 Kyoto adopted a plan to become the Environmental Model City (EMC), with a commitment to significant reductions in greenhouse gas emissions. Kyoto has also implemented a food systems program that collects organic waste and converts it to biofuel, which is used to fuel the city’s garbage trucks and buses.
I use social practice theory as the framework for this research. Social Practice theory looks at social practices and how they have changed over time (Goel and Sivam 2014). Social Practice theory has recently become popular amongst geographers and planners to understand sustainable, and unsustainable, behaviors. The theory is appropriate because the relationship that an individual has with their food is a cultural and social practice (Pothukuchi and Kaufman 1999). The benefit of using the social practice theory for this type of research comes from the combination of examining food systems at the individual and community scale.

First I discuss the research of the food waste management strategies and policies in each city. Second, I will present data gathered from in-depth guided interviews and observational analysis of food waste management strategies and policies of Tokyo and Kyoto. In each case I identify community-based food waste management strategies; find the common interpretations and perceptions of mottainai in each city; and analyze the local and global implications of mottainai as an environmental philosophy.

Despite the two cities’ very different approaches to sustainable practices, social practice theory helps us see how “mottainai” influences community engagement and pro-environmental behaviors in each case. This Japanese cultural concept bears some similarities to Western notions of frugality (“waste not, want not”) and environmental stewardship, and its use by Japanese authorities may shed light on how North American and European municipalities can use similar cultural constructs within social marketing campaigns aimed at behavior change.

References


Key Words: Food waste, Food systems, Mottainai, Tokyo, Kyoto

UNDERSTANDING FOOD ACCESS: EXPLORING OBJECTIVE AND PERCEIVED MEASURES OF ACCESS THROUGH THE HEALTHY IN A HURRY CORNER STORE INITIATIVE IN LOUISVILLE, KENTUCKY

Abstract ID: 1191
Individual Paper Submission

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In the on-going discussions on urban food systems, experts define access mostly through objective measures such as socio-spatial analysis, pricing, availability and volume while the voices from families and residents go unrecognised. Consequently, we are left with only a partial view of access even though it remains a crucial element that impacts food policies and ultimately, health equity outcomes. And despite our limited understanding of food access, substantial resources have been directed toward food
access interventions such as mobile food trucks, community gardens, farm-to-school programmes and corner store initiatives. For example, the City of Metro Louisville-Jefferson County, Kentucky implemented the **Healthy In A Hurry Corner Store Initiative** (HHCSI) from 2010 to 2012 to improve community access to healthy food with the ultimate goal of reducing disparate health outcomes across the city. To better understand community perception of food access, I have utilised this intervention for my analysis.

This research evaluated this healthy corner store initiatives through three research questions: 1) How has the Healthy Corner Store Initiative affected ‘objective’ access to healthy food in food insecure communities? 2) How has the HHCSI affected residents’ perception of access? And 3) What factor(s) most influenced residents’ perceptions of access? And these questions were explored through a mixed-methods approach and used a multiple case-study method of inquiry where four neighbourhoods were selected for paired comparisons. Objective measures of access were analysed using geographical information systems data of corner store locations and sales receipts from produce sales from a participating corner store. While measures of perceived access were examined through analysis of semi-structured interviews of community stakeholders including residents across the four selected neighbourhoods.

I found that although objective access (availability and accessibility) was improved in the initiative areas, only residents located within a half-mile radius of the corner store expressed the notion that they perceived that their access to healthy food had improved. Residents in the two comparative neighbourhoods (non-corner store initiative) expressed that they had high food access compared to residents in the two corner store initiative neighbourhoods. Finally residents over 65 years of age perceived the corner stores as being accommodating to their ability to access healthy food.

These results build on the thesis of this project that our conceptualisation of food access must be expanded in order for us to adequately understand food insecurity and how residents thrive in areas of deprivation. Grounded in critical planning theory – a communicative and democratising praxis, I expand our notions of food access to five dimensions – acceptability, accessibility, accommodation, affordability and availability, which provide a more holistic conceptualisation. This study highlights the importance of relationships between corner stores and families in improving food access, values the knowledge of and empowers the marginalised, as it develops a more complete understanding of the foodways of residents. Ultimately, these results are instructive for planners and decision makers, and decrease the gap between food insecurity and food justice.

References

Climate change projections indicate that extreme events related to sea level rise, storms, drought, heat waves and wildland fires will occur with increased frequency and severity, which can devastate community infrastructure, housing and economies. These extreme events are also predicted to intensify existing exposures and inequities rooted in social determinants of health in cities and urbanizing regions (Patz, 2014). Research on how urban planning measures to mitigate climate change can also generate health co-benefits is growing. For example, reducing the incidence of heat stress and other heat related illnesses can be achieved by strategies that also reduce greenhouse gas emissions, such as urban trees and shade, green roofs, connected green spaces and smart growth design (Harlan and Ruddell, 2011). However, in the context of climate change adaptation planning, urban planners and public health practitioners continue to operate in disciplinary silos. Additionally, there is limited research in the scholarly literature on the value–added benefits that planners bring to implementing public health climate adaptation projects and plans in practice. This paper seeks to respond to the need for interdisciplinary perspectives on climate change, urban planning and public health, and answers the following research question: How can urban planners facilitate the implementation of public health climate adaptation projects and plans?

The Center for Disease Control and Prevention (CDC) provided funding and technical guidance to sixteen states and two cities in developing climate adaptation interventions and plans using the Building Resilience Against Climate Effects (BRACE) planning framework. At the state level, the BRACE program is intended to be iterative in nature, seeking input from public health practitioners, epidemiologists and climate scientists to direct technical assistance and resources to county public health departments to: 1. Identify vulnerable locations/populations; 2. Implement public health interventions/adaptation projects and 3. Develop, monitor and evaluate climate adaptation plans (Conlon et al., 2016; Marinucci, Luber et al. 2014). Notably absent in the discussion is the role of urban planning specialists and practitioners in the adaptation plan development and implementation process.

This research project examines the implementation of BRACE in the State of Florida. Florida’s physical exposure in the Gulf Coast region to several climate hazards, moderate to high proportions of socially and medically vulnerable populations and conservative State government and legislature, make it a critical case to study the process of adaptation planning to climate change (Petkova et al., 2015). Public health adaptation projects in eight counties were assessed via document reviews and interviews with state administrators of the program as well as adaptation project managers. I argue that collaborative projects which incorporated urban planning perspectives and expertise produced more sustainable projects and plans than those which did not engage with planning. Further, the projects which were broader in scope were implemented by administrators with educational backgrounds in both urban planning and public health. However, administrators of these projects also faced challenges with navigating the political constraints of working in the absence of state legislation on climate change.
Initial findings emphasize the critical and cross-disciplinary position that urban planners should occupy in the public health adaptation planning process. It also provides guidance to planning and public health practitioners on reaching across disciplinary silos in order to develop more integrated climate adaptation projects and plans.

References


Key Words:
Climate change adaptation, Public health, Urban planning, Florida BRACE

PROGRESSIVE FOOD SYSTEMS PLANNING IN THE TRUMP ERA

Abstract ID: 1211
Roundtable

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In this roundtable we aim to articulate direction for progressive food systems planning in the Trump era. The implications of a Trump presidency (or perhaps more accurately, of an era characterized by austerity, populist, racist and authoritarian politics and the dominance of the corporate food regime) on the movements for more just, sustainable food systems are profound. While the full impacts are yet to be realized, we anticipate negative consequences on both rural and urban food issues ranging from farmworker and food system worker well-being and agriculture-related water pollution to food insecurity and healthy food access.

We acknowledge that this federal policy direction is not exactly new. The history of US agricultural and food policy over the past 150 years includes a range of unjust and unsustainable practices, including the dispossession of Native Americans from their land to enable white settler forms of agriculture, slavery
and unfulfilled promises of 40 acres and a mule, the push for farmers to “get big or get out,” and volatile and incomplete support for anti-hunger efforts.

Activists and scholars are calling on municipalities and states to advance stainable, just food systems, alongside other broader progressive planning changes, in spite or even because of the current federal policy climate. In the past decade, some local governments have been taking steps in supporting, nurturing, incubating and helping reform and possibly transform the food system. Such steps range from establishing public contracts for good food purchasing (i.e. Los Angeles), securing long term land tenure for low income and small-scale food producers, enhancing access to healthy food (i.e. by doubling SNAP dollars at farmers markets), regulating negative environmental impacts of production, discouraging consumption of sugary drinks, and raising the minimum wage of food systems workers. However, this move is both uneven among cities and far from comprehensive.

We believe that progressive planning for more just, sustainable food systems is both possible and imperative in this current era. North American planners may draw from the inspiration of other places, which have advanced the good food movement, even under non-progressive national governments, such as Belo Horizonte, Brazil.

Planners can also think beyond traditional government-led planning, and continue and expand their work with community-based organizations, social justice organizations, and values-driven businesses to make positive change.

Panel participants will provide 3-5 minutes of comments, and be ready to engage in dialogue with others in the room, on one or more of the below prompts:

- theorizing "progressive" planning for just, sustainable food systems;
- the relationship between social movements for food sovereignty and food justice and policy change;
- immigrant issues including farmworker and food system worker well-being;
- food systems issues in rural America;
- the relationship between economic inequalities, economic restructuring, the lack of social safety nets and food insecurity;
- funding food systems planning amid an era of austerity and neoliberalism;
- alternatives to government-led change (i.e. community organizing); and
- and other relevant angles or issues.

References


Key Words:
LAND USE PATTERNS AND RESIDENT PERSPECTIVES ON HEALTH AND PHYSICAL ACTIVITY IN A NEIGHBORHOOD OF CONCENTRATED POVERTY: IMPLICATIONS FOR PUBLIC HEALTH INTERVENTIONS

Abstract ID: 1240
Poster

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Syracuse, New York has the dubious distinction of being the U.S. city with the highest level of poverty concentration for black and Hispanic residents among the nation’s 100 largest metropolitan areas (Jargowsky, 2015). This study examines one of the poorest neighborhoods in Syracuse, the Southwest neighborhood, using a fine-scale analysis of urban form that is coupled with detailed survey data about resident health, health behaviors, and neighborhood perception. A long-term goal of this research is the design of diabetes prevention programs to increase physical activity among neighborhood residents. Therefore, the study sought to understand the relationship between physical conditions in the neighborhood and resident perceptions and behaviors that might support, or detract from, neighborhood-based physical activity interventions such as walking programs. The study hypothesis was that neighborhood conditions were a detraction to walkability, thus making walking programs a less preferable choice for diabetes prevention. Spatial analysis and descriptive statistics for the Southwest neighborhood revealed characteristics common to disadvantaged neighborhoods: fragmented urban form with high numbers of vacant lots and vacant buildings; absentee landowners and a high percentage of renter-occupied housing; a high poverty rate (48%); and a high crime rate in the context of the city as a whole. An in-person randomized survey, conducted with 121 neighborhood residents aged 40 or older, revealed health characteristics commonly associated with residents of disadvantaged neighborhoods [e.g., high rates (25%) of self-reported diabetes]. However, the survey results also challenged the idea that the neighborhood was not a good place to live [e.g., high levels (71%) of neighborhood satisfaction]. Related to outdoor physical activity, the majority of respondents reported, for example, that they see people being physically active in the neighborhood, think that it is safe to walk through the neighborhood during the day in spite of the perception that the neighborhood has a high crime rate, and recognize many or most adults that they see in the neighborhood. Health status and health behavior survey results suggest that public health interventions, like diabetes prevention programs, are needed in the neighborhood. The results also indicate that health interventions can be designed to take advantage of high social capital, cohesion, and overall positive associations with the neighborhood from residents who have lived there, in many cases, for decades. The neighborhood may be among the nation’s most challenged, as indicated by levels of concentrated poverty and associated physical conditions, but the neighborhood also has positive characteristics that can provide a foundation for neighborhood-based physical activity programs. Urban planning interventions can similarly respond to, and build upon, the strong sense of community that can remain in even the most challenged neighborhoods.

References


Key Words:
concentrated poverty, neighborhood perception, physical activity, health

HEALTHY PLANNING METRICS
Abstract ID: 1241
Individual Paper Submission

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The built environment is a key determinant of community health (Sallis et al. 2009). Planners are in a unique position to improve community health by shaping the environments where people live, work, and play. Therefore, it is critical that planners document, measure, track, and design built environment elements that are known to be key determinants of health. Assessing the built environment becomes especially significant because it can modify, exacerbate, or reduce health inequities (Gordon-Larsen et al. 2006).

There has been a demand in the literature to create a succinct but effective healthy built environment metrics (Corburn 2009). With the aim to strengthen multi-sector coalitions and integrate health into planning practices and decisions, APA has developed a set of Healthy Planning Metrics that can be used to assess, measure, monitor, and report progress toward healthy planning goals. This project addresses three research questions: 1) Which key built environment elements can planners influence to promote health?, 2) Which indicators can planners use to assess the built environment for health, and 3) Which policies should be used to improve health through built environment?

The tool leverages existing indicator systems, indexes, interactive maps, and literature about social determinants of health. Moreover, an advisory committee was formed consisting of four members. The committee members were expert in the field of healthy urban planning and had either worked in the field as a practitioner, scholar, or both. The committee was consulted individually and as a group during the various phases of the project.

Based on the research and feedback from the committee, we have identified the following five domains where planners could intervene to improve health – active living, food systems, environmental exposure, emergency preparedness, and social cohesion. Each of these five domains is further divided into sub-domains to create a total of fourteen sub-domains. For instance, Emergence Preparedness domain has three sub-domains – Hazards, Climate Change, and Infectious Diseases. These domains were selected based on the following criteria: relevance to field, magnitude of impact, feasibility of measuring, equity, and ability to change. Key built environment indicators and policies are identified for these categories to not only promote health but to also provide tools to analyze and measure health inequities.
There are many indicators and metrics to measure built environment; however, most of them are not exhaustive. They are limited in their approach, in a sense that they underscore the importance of active lifestyle and healthy food system but overlook the importance of other domains (e.g. hazards and natural environment) which have direct effect on human health. The metrics proposed here goes beyond the traditional domains of healthy urban planning to include topics such as green infrastructure, housing, mental health, and traffic safety (to name a few). The attempt is to direct the planning field into new avenues of research, practice, and education that connects these different topics. For example, green infrastructure influences health in major ways, by providing a space to do physical activity, a place to strengthen social capital and improve mental health, and a way to prevent pollutants from entering the water system, but not much research has been done to explore these connections.

The field of public health uses established national, state, and local public health surveillance systems to track health, something planning has yet to tackle – until now. APA’s broadly-applicable healthy planning metrics enable planners to measure planning elements that affect community health and are useful for integrating into regular planning processes and creating monitoring plans for evaluating progress toward community goals. As planners adopt consistent metrics in diverse communities, there will be new opportunities to measure changes over time and compare across geographies.

References

Key Words:
Health, Built Environment, Environment, Active Living, Food Systems

WALKING AND SAFETY PERCEPTION: THE ROLE OF NEIGHBORHOOD DISCORDANCE
Abstract ID: 1286
Individual Paper Submission

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Previous studies have documented links between community environments and travel behaviors such as travel mode share and walking behaviors (Saelens & Handy, 2008). Preferences for walking underlying residential location choices are believed to modify the associations between built environments and walking behaviors (Cao, Mokhtarian, & Handy, 2009). However, only a small number of studies have examined the interrelationships between objectively evaluated neighborhood quality and residential preferences for walkable neighborhoods (Frank et al., 2007; Schwanen & Mokhtarian, 2007; Van Dyck et al., 2011). Furthermore, little is known about how concordance and discordance between objective
neighborhood qualities and neighborhood considerations affect walking behaviors. This study aims to examine walking behaviors and perceived safety of those who live in a condition called “neighborhood discordance,” defined as a mismatch between the preferred versus actual/current neighborhood environments. This study further tests the roles of neighborhood discordance in urban versus rural environments separately, as previous studies have shown the varying roles of neighborhood environments across different community settings.

Using the survey and GIS datasets (n=630 respondents) from two recently completed research projects, one conducted in two rural towns and the other in four urban towns in Texas, this study examined the potential association that neighborhood discordances (walkability and safety) may have with walking for transportation, and perceived safety. Using the GIS techniques, neighborhood walkability and safety were systematically evaluated in terms of infrastructure, greenery, crime and crash risks, destination land uses, and density, which were objectively measured within a 1km sausage network buffer from each respondent’s home. Multilevel modeling approaches were considered to account for the nested data structure at the town level and the community setting level. Multiple path models were established to examine the direct and indirect pathways between neighborhood concordances and the three outcome variables (i.e. walking, perceived safety) using generalized structural equation modeling (GSEM) techniques. Statistical significance was identified at a 0.05 level, and all analyses were performed across the total sample (n=630), and urban (n=294), and rural (n=336) subsamples.

Traffic and walking related perceived safety, objectively measured pedestrian infrastructures (e.g. crosswalks, sidewalks), street connectivity, and violent crimes were common environmental correlates of discordances. Both preference discordance (having no walkability preference but living in walkable neighborhoods) and walkability discordance (having a walkability preference but living in non-walkable neighborhoods) were negatively associated with walking for transportation among the rural subsample, while only the preference discordance was negatively correlated with walking among the total sample.

For safety, safety discordance (having a safety preference but living in unsafe neighborhoods) was linked to lower perceived safety among the total sample and urban subsample. However, preference discordance (having no safety preference but living in safe neighborhoods) was linked to higher safety perception among the urban subsample. It may be due to the possibility that residents who did not have safety preference may not have high expectations for the actual safety conditions, leading to high levels of perceived safety given similar objective conditions. Discordances did not play any significant role for walking among the urban subsample, and for safety among the rural subsample.

Through a comprehensive examination of the links among residential choices, residential preferences, walking behaviors, and perceived safety, this study suggests the importance of being able to select a neighborhood that matches an individual’s residential preference. An adequate supply of walkable neighborhoods can bring its intended benefits especially when properly matched with the population that prefers living in walkable neighborhoods. Furthermore, this study provides additional insights on the dynamic relationships among residential preference, walking, and safety.

References

Key Words:
Walkability, Safety, Neighborhood Discordance, Walking, Perceived Safety

THE DIFFERENCE COMMUNITY ENGAGEMENT MAKES IN COMPREHENSIVE PLANS: ADDRESSING HEALTH DISPARITIES IN CALIFORNIA COMMUNITIES

Abstract ID: 1310
Individual Paper Submission

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This is the third phase of a qualitative study completed to explore the role that community engagement plays in the successful adoption and implementation of comprehensive plan policies that address health disparities in California cities. Using interviews and review of minutes from public hearings and meetings, this phase of the study documents community members’ assessment of: 1) The process of development and adoption of comprehensive plan policies addressing health disparities; and 2) The role that community members believe that community engagement plays in the success implementation of adopted policies and programs. This third phase of the study compares community members’ assessments with Phase I and Phase II results, which documented the assessments of city planners, public health agency staff, and community organizers. The results from the first two phases of this research were reported at ACSP’s annual conferences in 2014 and 2016.

An extensive body of research has established that low-income communities and communities of color experience significant health disparities (Morello-Frosch & Lopez, 2006) related to characteristics of their environment, including exposure to air and water pollution, lack of access to healthy foods, and inadequate provision of recreational spaces (Hutch, Bouye, Skillen, Lee, Whitehead, & Rashid, 2011). At the same time, the relationship between planning and health has received increasing attention, resulting in an increased focus on health in community planning efforts, including the adoption of comprehensive plans (Kraft, Lee, and Brennan, 2012). In California, a significant number of cities have added health elements to comprehensive plans to address community health, as well as to address health disparities in communities of color and low-income communities. The efficacy of these elements in affecting the health of low-income communities and communities of color has yet to be thoroughly examined. Moreover, planners attribute the success of policy documents such as comprehensive plans to the quality and diversity of community-wide engagement, as well as engagement of others (agencies, officials, community leaders) responsible for implementation of policies. While the literature encourages participation, there are very few studies that actually evaluate the role that stakeholder involvement plays in the implementation of plans. Recent studies that included an evaluation of the quality of community engagement in plan-making reveal that stakeholder advisory groups rarely reach
beyond the concerns of their specific constituencies (Sayce, Shuman, Connor et al, 2013) and, in low-income communities and communities of color, policies addressing health were less successful than in higher-income and less diverse communities, despite similarly active community partnerships (Brennan, Kemner, Donaldson, & Brownson, 2015). This study suggests the need for a better understanding of the context, resources, and strategies used to implement healthy policies and strategies, including those included in comprehensive plans/health elements.

References

- Morello-Frosch, R., & Lopez, R. (2006). The riskscape and the color line: examining the role of segregation in environmental health disparities. Environmental Research, 102(2), 181-196.

Key Words:
Health disparities, Community engagement, Comprehensive plans, Policy-making, Diversity

RETHINKING ENVIRONMENTAL GOVERNANCE TO ADDRESS AMERICA’S LEAD POISONING EPIDEMIC: PLANNING TO TRANSFORM OUR TOXIC COMMONS

Abstract ID: 1346
Individual Paper Submission

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Human lead exposure remains the foremost legacy problem of our built environment in the United States. Lead is a highly toxic multisystem poison for people of all ages, and children are especially susceptible. Its widespread presence in old paint in buildings built before 1978 still poses the existential threat of permanent cognitive impairment, neurological damage and behavioral problems to children in American cities in 2017, as it has for the past century (Rosner & Markowitz, 2016).

During the decades of rapid expansion of America’s cities in the early twentieth century, a commonly used household product, paint, contained up to 70% lead (Rosner & Markowitz, 2016). Today, exposure to lead may be America’s foremost environmental injustice, disproportionately injuring children in low-income and communities of color and children living in older housing (Lanphear et al., 2016). From 2007-2010, “approximately 2.6% of U.S. preschool children had a blood lead concentration ≥5 μg/dL, which represents about 535,000 US children 1 to 5 years of age (Ibid, p4).” The risk of lead exposure is not evenly distributed across and within cities and states; there are wide disparities in lead poisoning rates within cities such as Philadelphia, Milwaukee, and others (McClure et al., 2016).
This paper reports on the first of a two-part project that seeks to identify and describe the principles and characteristics of economic and environmental governance structures that might help to effectively address “our toxic commons” – the over 40 million homes, institutional, and commercial buildings thought to retain lead paint. The first part of this research examines the multiscale institutional evolution of American efforts to prevent lead poisoning, as rules and programs were developed by the federal, state and municipal agencies responsible for health and housing, and summarizes their current successes and failures. I use the qualitative methods of directed content analysis and historical analysis to describe the development and status of lead protection programs, focusing especially on the US EPA’s Renovation, Repair and Painting (RRP) Rule. After April 2010, the EPA’s RRP rule required contractors to use lead-safe practices during renovation and construction work in housing and child-occupied facilities built before 1978. As the dust from lead-containing paint is the major source of childhood lead exposure, the RRP program addresses a critical protection goal (Kennedy et al., 2014; Lanphear et al., 2016).

Federal government documents from the past 35 years on lead exposure, regulation, and programs were used for the historical analysis, and data from recent (2012-2017) journalism, government, scientific, and non-governmental organization articles and reports on the status of state and local lead policies and programs in 50 states and over 80 cities were reviewed to evaluate current governance challenges and to describe the major issues in their implementation.

Initial results indicate that financial and capacity shortfalls now often limit the implementation of the EPA’s RPP rule (e.g., through lack of awareness), the local enforcement of RPP, and other municipal lead protection policies (LPP), reducing the effectiveness of these programs. Problems identified by urban actors as preventing more effective implementation and outcomes in lead poisoning prevention include insufficient funding for educational outreach to facilities and community members covered by the RRP rule, and for hiring and training inspection staff. Despite constraints, some locales have documented reductions in child lead poisoning rates following their implementation of the EPA’s RPP. Results suggest that a significant restructuring of the economic governance of lead programs and policies, with a renewed political commitment for lead protection for all, is needed for cities and states to protect the millions at risk of lead exposure and to prevent future tragedies.

With shortfalls undermining the implementation of effective municipal LPP Programs, this research next uses two case studies of collaborative adaptive planning approaches and models of the economic governance of “the commons” to identify principles and practices that may provide opportunities and new funding mechanisms to address the obstacles forestalling quicker progress in lead poisoning prevention (Dietz et al., 2003).

References
NEIGHBORHOOD GREEN SPACE, PERCEIVED SAFETY, AND SOCIAL SUPPORT AMONG OLDER ADULTS: RESULTS FROM THE NEIGHBORHOOD QUALITY OF LIFE STUDY FOR SENIORS
Abstract ID: 1392
Individual Paper Submission

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Central theme or hypothesis:
Access to green space has been associated with a wide range of health benefits, including lower mortality rates, and reported well-being and mental health benefits (Groenewegen, van den Berg, de Vries, & Verheij, 2006). One potentially important pathway linking green space and health is through increased social contacts; green space provides a healthy place to convene and may be particularly important to retain social support for older adults (Maas, van Dillen, Verheij, & Groenewegen, 2009). However, previous research has indicated that safety concerns may impede access to park facilities (Weiss et al., 2011) and reduce physical activity levels among older adults in public outdoor spaces (Mowen, Orsega-Smith, Payne, Ainsworth, & Godbey, 2007). The objective of this study is to investigate whether concerns regarding traffic, pedestrian, and personal safety influence the relationship between access to green space and neighborhood social support among older adults. We hypothesize that individuals with greater access to green space will report increased social cohesion and greater participation in neighborhood social life after adjusting for socioeconomics. We posit that individuals with greater safety concerns report lower levels of social interaction than would otherwise be predicted based on their green space access.

Approach and methodology:
Data for this study have been drawn from 647 independent-living seniors who participated in the NIH funded Neighborhood Quality of Life Study for Seniors (SNQLS) in Seattle-King County, Washington and Baltimore, Maryland. A series of mixed-effects linear regression models were estimated to model neighborhood social life and neighborhood social cohesion as a function of green space access, with three distinct interaction terms introduced for each of the perceived safety measures.

Findings:
Results indicate that green space access is positively related to neighborhood social support. Our results also confirm that the overall effect of green space on social support is greater in safer neighborhoods compared to less safe neighborhoods. Interestingly, however, the positive effect of green space, especially natural landscaping and street trees, on social support appears to be more pronounced in less safe neighborhood, and concerns about personal safety outplay other safety issues, such as traffic or pedestrian safety. This suggests that, for older adults, urban design elements, such as landscaping and street trees, seem to matter more for social support in neighborhoods with lower perception of personal safety.

Relevance to planning scholarship, practice, or education:
Results inform municipal and regional decision makers and planners the importance of green space and
green infrastructure on the mental health and well being of older adults. Results bolster existing sustainability planning efforts with important co-benefits stemming from investments in the natural environment and help inform new policies and programs that are responsive to the unique needs of older adults.

References


Key Words:
green space, perceived safety, social support, social cohesion, older adults

REINVENTING PUBLIC TRANSPORTATION PROGRAMS TO FIGHT OBESITY EPIDEMIC: A PILOT STUDY IN EL PASO, TEXAS

Abstract ID: 1429
Individual Paper Submission

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BACKGROUND
The current land use in American cities features single-use and low-density built environment, which is associated with automobile dependence and low levels of physical activity. This leads to serious implications for obesity and associated co-morbidities. Some previous literature suggests the potential of public transit in encouraging physical activity. However, there are limited intervention studies investigating their causal relationships, especially among high risk populations. In mid-2018, the City of El Paso, Texas, will open two connected Bus Rapid Transit (BRT) corridors. This offers a unique, time-sensitive opportunity to evaluate whether, how, and why new BRT service increases physical activity, and to support public policies for active and healthy cities. In preparation for a large longitudinal case-control study, we conducted a cross-sectional pilot study to examine physical activity levels among the riders and non-riders of existing BRT services.

PURPOSE
This study is to share (1) methodological insights (e.g. recruitment strategies) learned from the pilot study, and (2) preliminary findings from the survey regarding the barriers and facilitators of transit/BRT use and physical activity impacts of transit/BRT use.

METHODS
We designed and tested the following recruitment strategies: door hanger delivery, home visit, posting flyers in local businesses and community centers, setting up recruitment booth in the farmer’s market and community events, displaying a large poster at BRT stations, USPS Every Door Direct Mail®, and hiring a professional flyer distribution company. We distributed paper and online surveys to residents living along the existing BRT corridor during Oct.8 to Dec 23, 2016 by applying different sets of recruitment strategies to different stations. Some of the participants also tracked their travel and physical activities using the accelerometer, GPS, and the travel diary in the forms of hardcopy and/or Smartphone App. Some of those who used Smartphone App attended a focus group to share their user experience on the app and paper diaries.

RESULTS
We collected 170 online surveys and 140 paper surveys. The recruitment strategies with high yield ratios were recruitment booth (n=68, ~20%), home visit (43, ~5.1%), and door hanger (67, ~2.8%). Most cost effective strategies were USPS service (n=54, 2.25%, ~$25/respondent), flyer (11, ~$40), and door hanger (~$46). Per-respondent cost included a $10 gift card and personnel time.

In terms of the survey respondents, 29.7% were bus riders, 59.7% were female, 71.0% were of Hispanic origin, 55.2% were renters, and 32.3% and 44.6% with household income less than $20,000 and $30,000, respectively. Regardless of the respondents’ transit use status, the top three barriers were bus schedule not meeting my needs, lack of bus stops near places I visit, and difficulty in planning the routes. The top facilitators were related to safety and comfort while riding the bus and when walking to/from the bus stop. Findings also suggested that there are latent demands for transit use. The majority reported their wanted to use public transit more in the future, and want to recommend public transit to their family and friends. Also, Riders reported 10 more minutes of moderate physical activity per week than non-riders (226 vs. 216 min/week).

DISCUSSION AND CONCLUSION
Results from the pilot study suggest that the BRT system has large potential to attract latent demands for transit by offering economical, comfortable, fast, and safe services. It may also enable users to generate more physical activity. The Bus Rapid Transit system has gained its momentum in many US cities, which are enthusiastic about retrofitting the car-dependent built environment with public transit. This project will make significant contributions to health- and transportation-related policies for these cities, by documenting the causal impact of BRT on travel and physical activity.

References


Key Words:
Public Transportation, Physical Activity, Recruitment stratagy, Obesity, Public Health
Track 9 - Planning Education and Pedagogy

PRE-ORGANIZED SESSION: ACTIVE LEARNING METHODS FOR TEACHING URBAN PLANNING
Proposal ID 12: Abstracts 136, 138, 139

WIETERS, K. Meghan [The Ohio State University] kmeghanwieters@ou.edu, organizer, proposed discussant

This session will explore from a variety of pedagogical perspectives and tools on the essential quality of engaging students in active learning. This can include reviewing how more simple activities that ask the student to formally use the concepts taught in lectures and reading may improve understanding. In many of the papers for this session, review of how real world projects where students must engage with the community and learn how to adapt ideas they have learning in courses to real life situations will be reviewed and discussed as critical to developing planning professionals. This session will also include how students are challenged to work with perspectives that vary from their own to achieve community-based planning, particularly in changing political climates.

Objectives:
- Analysis of the essential need for planning courses to continue to engage students with active learning and community engagement.

PRE-ORGANIZED SESSION: COMMUNITY PLANNING AS A TOOL FOR UNDERSTANDING DEMOCRATIC PARTICIPATION
Proposal ID 13: Abstracts 140, 141, 142

GRAHAM, Leigh [John Jay University, CUNY] Igraham@jjay.cuny.edu, organizer, proposed discussant

This session will discuss concepts and tools on engaging students in active learning and addressing issues of democratic participation. Many of the threads for this session may touch on how activism, civic discourse, and community education are essential to both good community planning and fully engaged students.

Objectives:
- Community planning is a tool for understanding multi-level participation.

WHY SOME ARTICLES IN PLANNING JOURNALS GET CITED MORE THAN OTHERS
Abstract ID: 104
Individual Paper Submission

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Central theme:
Planning scholars create knowledge through research and commonly disseminate that knowledge in academic journal articles, hoping to influence theory, practice, and subsequent scholarship. While there is no perfect measure of an article’s influence, the most commonly used measure is the citation count, equal to the number of times an article has been cited since its publication (Stremersch et al. 2015). It is a convention to consider articles with higher citation counts to be more influential than articles with lower counts (Bornmann et al. 2012). To the extent that the citation count for an article is an accurate measure of its influence it stands to reason that planning scholars might be able to increase the influence of their research by employing strategies that increase the chances of their articles being read and cited. There is a growing literature outside the planning discipline that explores factors that help to explain why some articles get cited more than others, and a recent comprehensive review summarized findings from that literature (Tahamtan et al. 2016). While there has been recent interest in citations and journal impact factors in urban planning (Goldstein and Maier 2010; Sanchez 2017), no studies have examined why some articles in planning-related journals get cited more than others. We seek to address this gap in our understanding of planning research and its influence by addressing the following question: Why do some articles in planning journals get cited more than others?

Approach and methodology:
We created a database that contains details on urban planning journal articles, their authors, and the journals in which they were published. We collected every article published in 35 different urban planning journals between the years 2011 and 2016. For each article we entered into the database (1) the article’s citation count, (2) measures of the article’s length, publication date, title, and keywords, (3) the number of authors, their previous citation counts, and their sex, and (4) the journal’s impact factor. We used multilevel modeling to examine whether these variables appear to have an effect on article citation counts.

Findings:
We find that citation counts for articles in urban planning journals vary with different characteristics of the articles themselves, the authors of the articles, and the journals in which the articles were published. Our findings point to particular strategies that planning researchers can employ to increase the citation counts of their research.

Relevance to planning scholarship and practice:
Our research is important because it speaks to the ability of planning knowledge to guide action. If planning articles are scarcely read and cited, they are unlikely to influence action; on the other hand, if planning scholars can employ particular strategies to make their articles more visible, they can possibly increase the degree to which planning knowledge is incorporated into problem-solving and decision-making in practice settings.

References


Key Words:
Citation counts, Impact factors, Planning journals, Research impact

THE MEDIUM IS THE MESSAGE: TEACHING NEGOTIATION AND COMMUNICATION SKILLS THROUGH TEAM-BASED LEARNING
Abstract ID: 136
Pre-Organized Session: Active Learning Methods for Teaching Urban Planning

BOYER, Robert [UNC Charlotte] rboyer1@uncc.edu, presenting author

Interpersonal communication, conflict resolution, and multidisciplinary teamwork rank among the most valued skills to planning employers (Ozawa and Seltzer 1999), yet these skills are not easily acquired in a traditional classroom setting. Furthermore, while current Planning Accreditation Board (PAB) standards cite “Written, Oral, and Graphic Communication Skills” as required elements of an accredited planning program, these guidelines appear to emphasize the ability of an individual planner to transmit their ideas to the public rather than the ability to navigate the political and conflict-laden interactions inherent to the planning profession (PAB 2017). Planning instructors can employ experiential learning and studio courses that simulate the political ‘wickedness’ of the real world (Kotval 2003; Balassiano 2011), but such courses are relatively resource intensive, can pose ethical and logistical challenges, and are generally only accessible to graduate students or upper-level undergraduates.

How can planning educators integrate critical communication and teamwork skills more broadly across the planning curriculum without displacing time devoted to factual content?

This paper offers team-based learning (TBL) as an instructional model that integrates interpersonal communication, task delegation, complex problem solving, and negotiation into lessons designed to transmit factual knowledge related to topics like planning history, human settlements, and contemporary socioenvironmental dilemmas. In TBL students are divided into small permanent teams at the beginning of the semester. Team members collaborate on quizzes, in-class assignments, and out-of-class projects, while completing individual and team-based elements of each assignment. While assignments revolve around factual content, curriculum design and the design of specific assignments require students to solve complex problems through collaboration and clear communication with team members. Thus, students learn critical communication skills and course content simultaneously.

The paper is organized into three sections: Section One will discuss the theoretical model of team-based learning and the existing research on TBL and other “active learning” models in higher education; Section Two will detail TBL as applied in an introductory undergraduate urban planning course at the University of North Carolina at Charlotte; and Section Three will discuss the results of a survey administered to students of a TBL course. The survey will probe student perceptions about the value of
specific assignments and specific resources in the classes, comparing team-based elements to individual elements.

References


Key Words:
Education, Active learning, Communication, Team-based learning

REVISITING DON SCHÖN'S THEORIES OF REFLECTIVE PRACTICE: SYNTHESIZING EXPERIENCES FROM FIVE PLANNING STUDIOS

Abstract ID: 138
Pre-Organized Session: Active Learning Methods for Teaching Urban Planning

RAMASUBRAMANIAN, Laxmi [Hunter College] laxmi@hunter.cuny.edu, presenting author

Planning studios are an integral part of the curriculum at many planning schools. Their popularity has waxed and waned as academic scholars, practitioners, and students have struggled to maximize the benefits of a conventional studio curriculum that includes a space to “teach” professional practice, while minimizing a range of pragmatic challenges. In sum, most scholars would agree that some form of capstone experience that helps integrate knowledge learned through lecture and seminar courses is highly desirable. Yet, there is disagreement about how to accomplish these goals in a contemporary graduate planning program. Judith Grant Long (2012) provided an excellent overview of the historical evolution of the studio and its potential to create new kinds of learning, new models of knowledge production, and new modes of practice.

Using Long's paper as a starting point, I propose to conduct a critical evaluation of five studio projects that I have taught in the last decade. As the lead studio instructor, I will evaluate studio projects that addressed a variety of planning themes – gender inclusive planning, comprehensive planning, coastal resilience, accessibility, and aging in place. Studio clients included elected officials, planning agencies, non-profit, and advocacy organizations. Each studio project has been regarded as “successful” using metrics like client satisfaction and positive reviews from the professional community. Four projects were based in the United States while one studio was set in India.

In this paper, I want to critically self-reflect about these studio experiences. Specifically, the main research question I want to consider is: In what ways have Donald Schön’s theories of reflective practice that involve double loop learning and continuous and critical reflection shaped the studio processes and final outcomes. I will examine the extent to which the theories of reflective practice informed 1) goal setting,
2) problem solving/problem-posing, 3) team work, 4) professionalism, 5) inter-group communication, and 6) public interest. Some of these topics are listed as desired learning outcomes based on a survey of studio courses conducted by Nemeth and Long (2012).

I have a wealth of data about the five studio projects. In addition to e-mail student communications with me (the instructor), and the final reports submitted to the client, I also have a range of process-oriented work products that were developed to facilitate learning among the studio team members. Students who participated in these studio classes are now planning practitioners and some of them are willing to reflect about their experiences in a structured way. Above all, there is an advantage in examining studios taught within the same planning program. The core values of the program, the student profile, and the core curriculum have not changed significantly over the last decade.

I anticipate that this critical reflection will help those planning scholars interested in the intersections of theory/practice and studio-based teaching become better educators. In addition, I anticipate that these reflections can stimulate additional conversations about how reflective practice, originally framed in the context of design-thinking adapts to planning practice that considers policy and programmatic outcomes in addition to spatial transformations. This work will inform and support a wider conversation about the assessment of studio teaching within planning programs.

References

Key Words:
studio, pedagogy, evaluation, reflective practice, curriculum assessment

CHALLENGES AND OPPORTUNITIES ENGAGING STUDENTS IN POST-DISASTER RECOVERY: LESSONS FROM HURRICANE MATTHEW
Abstract ID: 139
Pre-O rganized Session: Active Learning Methods for Teaching Urban Planning

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Hurricane Matthew formed on September 28, 2016 and dissipated on October 10, 2016. But before the hurricane dissipated, it journeyed across Haiti, Cuba, Dominican Republic, Lucayan Archipelago, and the southeastern United States, killing over 1600 people and causing an estimated $10.5 Billion in damages. In North Carolina, there were an estimated 26 deaths. Heavy rains caused massive flooding in a number of Eastern North Carolina communities, with the total damage yet to be fully assessed. Long-term recovery efforts are currently underway.
A spring 2017 studio course for Master’s students in the City & Regional Planning Department at UNC-Chapel Hill focused on post-Hurricane Matthew disaster recovery planning. The primary goal of this course was to offer technical assistance to four communities that are the most vulnerable and have the lowest capacity to plan for recovery. Student teams assessed each community’s long-term recovery needs and capacity. The information collected and the analysis undertaken by the students and faculty informed long-term recovery planning efforts that are currently underway by the Hurricane Matthew Disaster Recovery and Resilience Initiative, a think tank developed to assist with long-term recovery.

This presentation focuses on the challenges of and opportunities to study disaster recovery efforts in real time during a semester studio course. There are a number of challenges to this type of work, including the tensions between speed and deliberation in recovery, local and state politics, sociohistorical processes that affect community perceptions and decision-making, and meeting the needs of socially vulnerable populations. Despite these challenges, engaging with elected officials, state officials, FEMA, residents, and other key stakeholders offered an invaluable learning experience for students. This course engaged with a planning process that is dynamic and evolving on a daily basis. As a result, students learned that disaster recovery compresses the planning process in time and space, which required that students be flexible and adaptable to the changing environment. These are valuable lessons that they can carry into their planning practice.

References

Key Words:
engaged scholarship, applied classrooms, service-learning

WRITING NEIGHBORHOOD WIKIHISTORY: WIKIPEDIA AS A PEDAGOGICAL TOOL TO TEACH PLANNING HISTORY AND DEMOCRATIZE KNOWLEDGE
Abstract ID: 140
Pre-Organized Session: Community planning as a tool for understanding democratic participation

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Simultaneously celebrated and loathed by academia, Wikipedia has actively attempted to make inroads with the academy by engaging university professors to use Wikipedia exercises as tools to educate students. While studies exist on the role of computers in planning education, particularly the use of city simulation software such as the SimCity game series, Second Life, and the role of MOOC’s, no literature on structured projects using Wikipedia exist in planning literature. This small gap exists despite Wikipedia’s five pillars requiring many of the same skills planners use in the drafting of plan documents such as general and specialized research, verifiable and reliable communication and information, and originality. By using Wikipedia as a peer-reviewed tool and the classroom as pedagogical laboratory, this research analyzes and reports the results of three experiments to teaching neighborhood historical research methods to undergraduate students at The Ohio State University. The paper argues that the exercise replicates many features of the plan research process and that the structure of articles, particularly around neighborhoods, democratizes knowledge by moving information from
less accessible books, journals, and source material into the public realm. Wikipedia is one of the most important tools in writing histories that are accessible for all.

References

Key Words: Education, Technology, Wikipedia, Neighborhood, Undergraduates

AN EPIC BUZZ FOR A CHANGE
Abstract ID: 141
Pre-Organized Session: Community planning as a tool for understanding democratic participation

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SCHLOSSBERG, Marc [University of Oregon] schlossb@uoregon.edu, co-author

Cities’ inability to innovate often comes not from a lack of knowledge about better solutions to pressing problems, but in an inability to put knowledge into practice effectively and efficiently. University students, through projects and assignments contained in their regular academic coursework, have unique capacities to help, while also gaining educational and workforce benefits.

Setting up applied classroom-based community benefit projects can be time-consuming for instructors, risky to communities, questionable about impact, and difficult to elicit appropriate and meaningful community engagement. But when thirty courses across ten disciplines help direct 500 students to give over 40,000 hours of time and attention to a single communities’ self-identified project needs over a fixed time period, a buzz happens that changes things for all parties.

The Educational Partnership for Innovation in Communities (EPIC) framework is a model that matches communities and universities in an administratively streamlined way that helps create the environment for new thinking and community projects to move forward in real ways while giving students the applied, project-based learning they crave and need to be successful professionals.

This paper and presentation will cover: 1) the basics of the EPIC framework that has allowed it be adopted by thirty different universities in just the last five years; 2) how the EPIC buzz created through this large scale partnership program helps individual faculty, courses, and community projects; and 3) how and why planning academia can use an “EPIC Buzz” to be more catalytic on and off campus in helping society meet some of its most pressing environmental, economic, and social challenges.

References
PERCEPTIONS OF DEMOCRATIC PARTICIPATION FROM STUDENT ENGAGEMENT IN NYC COMMUNITY MEETINGS

Abstract ID: 142
Pre-Organized Session: Community planning as a tool for understanding democratic participation

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Since 2012, a typical assignment in my urban policy and planning courses is to attend a public meeting in and around New York City, observing and reflecting on the practice of public participation in urban policymaking, incorporating classroom readings and discussion into students’ analyses. Meetings include NY City Council hearings, NYC Community Board meetings, meetings of the NYC Planning Commission, NY Police Department Precinct Community Council meetings, among others. Readings include classics such as Arnstein’s “ladder of citizen participation (1969), theories of deliberative democracy (Fung, 2004), and cases built on current events such as the practice of participatory budgeting in New York City (Su, 2012, 2014) and the Black Lives Matter movement (Kang, 2015).

Most students enjoy the assignment, articulating that they are inclined to continue their civic engagement in the future, or that their impressions of government are more favorable after witnessing elected officials and bureaucrats listen to public input. Yet some students also become demoralized, articulating that public meetings are ineffective, boring, or exclusionary. After four years sending almost fifty students into the field, it is time for an empirical analysis of their perceptions of democratic engagement and an evaluation of how this experiential learning opportunity improves their understandings of and stated commitments to civic participation in urban planning and policymaking.

I use a content analysis of 40 student reports on public meetings in New York City from 2012 through 2016 to answer the following research questions: What are the key educational insights for students on civic engagement and public participation from their observation and analysis of public meetings in NYC? How do these insights inform their perspectives on and commitments to democracy? How effective is this exercise for inculcating informed perspectives on democracy and civic engagement in urban policy and planning students? What are the takeaways for urban policy and planning educators?

References

Key Words:
participation, democracy, engagement, pedagogy, community boards

TEACHING ENVIRONMENTAL PLANNING USING CASE STUDIES LINKED TO FIELD TRIPS
Abstract ID: 146
Individual Paper Submission

PAGE, G. William [University at Buffalo, The State University of New York] gpage@buffalo.edu, presenting author

CENTRAL THEME: teaching the process of solving diverse environmental problems.

APPROACH AND METHODOLOGY: detailed case studies linked with class field trips.
FINDINGS: This paper identifies deviations from the generic land use planning process adapted to resolve diverse environmental problems and to take advantage of opportunities to enhance and preserve environmental amenities. The paper documents the roles planners play in the collaborative efforts that produce plans to solve the specific environmental problems and suggests how academic planning curricula can be modified to enhance the skills professional planners need to enable them to play substantive roles in the collaborative efforts needed to solve environmental problems and enhance and preserve environmental amenities.

The environmental problems examined by the case studies vary widely in scale from international, national, regional, to local environmental problems. The case studies include projects that were successful, partially successful, long-term on-going projects, and failures. This course also investigates the role of professional urban planners in solving environmental problems. In the case studies investigated, the range of involvement of professional planners ranged from minimal to significant.

The case studies of environmental problems studied over more than a decade have been diverse between and within the following categories:
* Federal Superfund (CERCLA) cleanup of industrial site contamination
* Green infrastructure and environmental services for storm water runoff
* Habitat restoration
* Invasive species control
* Landscape management for specific species protection
* Recycling and solid waste management
* Remediating and putting derelict industrial properties back into productive use
* Riparian zone restoration
* Stream and river restoration
* Turning derelict urban land into community gardens
* Using waste products for energy production
* Wetlands restoration
The course is a graduate seminar that meets for 3 hours once a week in the fall semester. There are typically 10 case studies linked with field trips during the semester. At the first meeting the course is explained and carpooling is organized. The students meet at the field trip location at 8:00 after having read the assigned case study readings that include original project documents and work plans. There is a local professional with experience working on each case study project who acts as the field trip leader to tour the project site, explains some of the problems and the process, and answers student questions. The field trip ends at a time that allows time for students to drive back to campus and have lunch before their next class.

References


Key Words:
teaching, case studies, field trips, environmental problems, collaborative planning

INTERNATIONAL PLANNING EDUCATION: REFRESH YOUR SYLLABUS!
Abstract ID: 149
Roundtable

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DAS, Priyam [University of Hawaii] priyam@hawaii.edu
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A common challenge facing planning educators is to keep current in topic areas where they teach but do not have an active research agenda. For example, a professor may research housing, but teach her department’s graduate course on international planning, which is necessarily broader in scope. The annual meeting of the ACSP is an ideal venue for planning educators to meet with colleagues who teach similar courses and to share their recommendations for teaching pedagogical approaches within their subfields.

For this roundtable, we invited a group of planning scholars, each active in a different area of research or practice that is commonly taught in a core graduate course on international planning. These scholars specialize in the areas of housing, transportation, water & sanitation, natural hazards, food systems, and heritage/historic preservation planning. Sufficient time will also allow for a lively discussion with those that attend. The aim is to help participants and audience members to refresh their international planning
syllabi, improve their teaching of the 'global dimensions' of planning, and meet other planning educators with interests in the Global South.

The roundtable scholars will prepare three pieces of information ahead of the roundtable:

1. One suggestion for a ‘classic’ reading in their area with a short justification for why it should be included on a contemporary syllabus. A ‘classic’ reading is one of those key pieces that were provocative or even paradigm changing for their time, or pieces many people disagree with today, but which set the stage for later scholarship and debates;
2. One suggestion for a ‘cutting edge’ reading that represents the best new work in their field in the past year, and a justification for why it is fresh or exciting;
3. One assignment, in-class exercise, or other activity that they have used effectively to teach their specialization, with a short description of why it has proved effective in the classroom.

To keep the session on-time, each presenter will be given five minutes to succinctly describe their reading choices and associated pedagogical tools, ensuring sufficient time for audience engagement and discussion at the end of the session. The organizers will make the suggestions from the roundtable available to the broader planning community post-conference.

References

Key Words:
international planning, pedagogy, planning education

ENRICHING PLANNING INTERNSHIPS THROUGH CLASSROOM AND FIELD LINKAGES: LESSONS FROM THE SEED WAYNE FELLOWSHIP ON COMMUNITY FOOD SYSTEMS PLANNING
Abstract ID: 338
Individual Paper Submission

POTHUKUCHI, Kami [Wayne State University] k.pothukuchi@wayne.edu, presenting author

Planning internships help students apply in community and professional planning settings their training in the curriculum. They help students develop a professional identity, connect students to related networks, and gain experiential learning pertinent to community and organizational settings. However, for a variety of reasons, internships can hit or miss the achievement of these objectives. The link to training in planning may be tenuous, students may find themselves isolated, and the identification of
planning may be weak in the duties students are assigned.

The MUP program at Wayne State University offers two types of internship: one, UP 7800, which is a general planning internship available to all students; the other, UP7810, relates specifically to community food systems planning. The CFSP internship is linked to a course, UP5430, Cities and Food, which serves as a pre-requisite, and offers preparation in conceptual frameworks and experiential learning, and also introduction to community food leaders and their work. Through a review of requirements and formal feedback received from internship supervisors upon completion, and interviews with students and supervisors, these two categories of internships are compared for the extent to which each is effective in delivering the objectives designed for it. I expect that linking the internship to a specific course allows the maintenance of focus on the learning and professional objectives designed for the internship, but that project and organizational characteristics matter. Finally, I also expect that food-related planning projects are weak in helping build a planning identity given food systems’ continuing marginal status in urban and community planning.

References


Key Words:
Planning pedagogy

A PROPOSAL FOR USING A PROGRAM THEORY MODEL IN PLANNING EDUCATION PROGRAM EVALUATIONS.
Abstract ID: 346
Individual Paper Submission

GROOMS, Wes [University of Louisville] wes.grooms@louisville.edu, presenting author

Historically, planning theory, education, and practice transform in response to paradigm shifts in society. These transformations are evident in studies of planning practitioners and educators (cf. Greenlee, Edwards, and Anthony, 2015), and of planning curricula (cf. Klosterman, 2011), going back to at least the mid-1970s. The results of these studies – which all focus on various aspects of planning education – suggest that planning theories developed up through the 1990s have been well incorporated into the planning education ‘program.’ The scholarly productivity of graduate planning school faculty has also been studied using a 1995 National Research Council (NRC) doctoral program evaluation methodology (Stiftel, Rukmana, and Alam, 2004). Starting with Ozawa and Seltzer (1999), planning education has largely been deemed to be performing as intended by planning scholars – who might well be considered the administrators of the planning education program – because the results of the aforementioned evaluations suggest stakeholder expectations for the proper provision of the knowledge and skills deemed necessary for successful planning practice are being met.
Some planning theorists, however, assert that planners have progressive values that are thwarted in their planning practice. Greenlee et al. (2015) find evidence to support such assertions, noting that “most students enter graduate planning programs seeking to increase their capacity to serve as instruments of social change” (p. 172) even though most do not go on to do so. Further, planning ethics and accreditation standards, are, arguably, intended to inform the design and operation of the planning education program specifically so they may contribute to the reification of said student goals. Yet, inquiry regarding the provision of specific knowledge and skills intended to achieve more ‘just’ and equitable planning outcomes has been either nominal or ambiguous, and where present, suggests their value to surveyed respondents registers in the lowest 1/3 when among a comprehensive list of knowledge areas and skills.

Also absent from these studies is reference to an overarching program theory or logic, which McLaughlin and Jordan (2004) argue is “a useful advance organizer for designing evaluation and performance measurement, focusing on the important elements of the program and identifying what evaluation questions should be asked and why[,] and what measures of performance are key” (p. 7). McLaughlin and Jordan (2004) note the program theory model “also helps evaluators frame the evaluation reports so that findings from the evaluation and measurement can tell a performance ‘story,’ and results can be attributed to the program” (p. 7); further, they assert that “the process of developing a program theory model helps build shared understanding and expectations within program ‘staff’ and other program stakeholders. Understanding the program’s theory can assist in situating the program in the context within which it operates, and permits assessment of the program’s conceptualization or design; such assessments can be broken down into questions of program relevance and the appropriateness of the program theory/logic.

Use of a program theory model would also assist in the development of a regularly occurring, comprehensive, comparative evaluation of performance of the planning education program – the lack of which is of concern to some planning scholars for myriad reasons. One of these reasons is the increasing pressure brought to bear on planning faculty by institutional administrators and governments that they meet multiple objectives through their research and teaching activities, including societal relevance and impact. Stiftel et al.’s (2004) evaluation of planning faculty scholarship productivity was conducted to serve as a “small step” (p. 7) in contributing to “national comparative data on performance” (p. 7) among U.S. graduate planning schools—that is, a comprehensive evaluation of the planning education program.

Along with a brief review of the subject planning education studies, this paper presents the aggregated results of an analysis of the social justice and equity content from a sample of graduate planning accreditation self-study documents, and proffers a planning education program theory model for use in future planning education program evaluation.

References

DEVELOPING ACADEMIC CROSS-DISCIPLINARY PROGRAMS: OPPORTUNITIES FOR PLANNING

Abstract ID: 347
Roundtable

GOODSPEED, Robert [University of Michigan] rgoodspe@umich.edu, organizer
AFZALAN, Nader [University of Redlands] nader_afzalan@redlands.edu, moderator
COMBS, Tabitha [Lincoln University] tab.combs@gmail.com

Planning scholars and practitioners have long recognized the need for interdisciplinary education, research, and practices to understand and develop solutions to increasingly more complex social, economic and environmental problems (Mitrany and Stokols, 2005). The works of social scientists, engineers, and information scientists overlap more than before because of the growing interest in issues of sustainability, which require multi-scalar and multi-stakeholder interaction (Campbell, 1996). To respond to demand for this type of program, universities are creating new cross-disciplinary programs that engage students from multiple departments or programs across campuses. These new programs sound very appealing and attractive to the students, faculty and administration. However, their creation requires overcoming obstacles such as administrative challenges not faced by single discipline programs and the need to design curricula that lead to knowledge integration across disciplines and respond to rapid changes in emergent fields (Vincent et al. 2015).

This roundtable discussion session demonstrates how planning scholars are taking leadership roles in designing trans-disciplinary programs aimed at preparing the next generation of planning practitioners to work in a rapidly changing field and into other fields that demand integrative knowledge and skills. The speakers will share their experience developing new interdisciplinary programs, and engage the session participants in discussion around developing cross-disciplinary programs. Lynn Mandarano discusses her experience of developing a professional Master’s degree in Sustainable Built Environments at Temple University, Nader Afzalan shares his experience of developing a Geodesign Major at the University of Redlands, and Robert Goodspeed talks about his experience of developing a new Urban Informatics graduate certificate at the University of Michigan. The speakers have worked with multiple departments within their universities in all of these cases. In this interactive session, the speakers will first discuss their experiences for 30 minutes and then will open up the discussion to the session participants. The session will conclude by providing notes on the considerations for developing cross-disciplinary programs on university campuses.

References


Key Words:
interdisciplinary education, curriculum development

STRUCTURED VERSUS UNSTRUCTURED: INTRODUCING STUDENTS TO EXPERIENTIAL LEARNING IN A STUDIO SETTING
Abstract ID: 429
Individual Paper Submission

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Experiential learning has become a popular method in many disciplines, and has been a core course in the planning curriculum for many years. Despite the emphasis on professional skill development in planning education, a number of authors have discussed the challenges to teaching in a studio setting (e.g. Kotval 2003, Senbel 2012, Slade et al. 2015). The tensions between providing too much structure versus too little; real-world constraints versus a purely conceptual environment for learning; technical knowledge versus collaboration and consensus-building skills can test instructors’ abilities in course development. Can the conventional studio be modified to gradually introduce students to unstructured classroom time, collaboration, and consensus-building?

The conventional studio pedagogy, common to disciplines such as architecture, sits somewhat uneasily with what Senbel (2012) calls the “planning workshop”. He asserts that planning studios emphasize team process, working iteratively with a client, and team-based learning with collaboration, as opposed to architecture studios which emphasize strong conceptual design, working iteratively with the professor, and peer-based learning with observation and critique. As planning studios tend to take more collaborative approaches to problem solving, including facilitating discussions with community members, it is important that healthy group dynamics are fostered and evaluated (Kotval 2003). While there is no consensus on the ideal approach to teaching a planning studio, a clear project and client expectations need to be set up and “soft skills” need to be taught (and evaluated) as well as technical and theoretical knowledge.

At the Dalhousie University School of Planning, the structure of the fourth-year urban design studio is quite conventional: there are few structured classes involving lectures (e.g. Senbel 2012), and the students spend their entire time working as a group, submitting a mid-term and final report to the instructor and client. As a first-time instructor in this course, I altered the structure to introduce students gradually to the studio experience in two ways: 1) starting out with content delivery and adding in unstructured work time, and 2) slowly introducing group work so that students have time to build collaboration and consensus-building skills. The outcomes show that students produced a viable end product for a client and gained new skills that they felt they could apply in the workplace. Students developed a set of solutions that the client, as a non-profit organization, could implement over time through small-scale grants. An interactive course evaluation process showed that, compared to the conventional “unstructured” studio approach used in a parallel studio course at the same level, students in the structured studio developed stronger process-oriented skills such as group facilitation, collaboration, and consensus-building.
TEACHING OUTSIDE THE PLANNING CURRICULUM: AN ASSESSMENT OF MENTORING PRACTICES
Abstract ID: 609
Individual Paper Submission

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Mentoring is an essential element of launching and navigating a planning career, but mentoring practices are an ad hoc aspect of planning education and professional development. The paper uses three case studies - Cal Poly Pomona’s planning programs, the American Planning Association, and an informal professional mentoring activity. Mentoring practices are classified and compared, and then assessed in terms of best practice in the general professional mentoring literature. Those practices relate to career launch, delayed career launch, early career changes, and the gap between young planner idealism and the workplace. The framework for the analysis considers transactional versus transformational mentoring, the strength of the working alliance, and the level of social support. Mentoring encompasses both career and psychosocial functions, and because there is a “craft” aspect to planning practice and research, the paper also assesses “mentor-by-doing” activities. The study finds that practices vary widely, and that mentor and mentee may lack clarity about the nature of the relationship. The paper proposes an agenda for future research on planning mentoring, suggesting that this function be elevated in the planning profession and academy. It concludes for suggestions for mentoring program improvements in universities, professional organizations, and the profession. This research is relevant to the accreditation standards of the Association of Collegiate Schools of Planning, the programs of the American Planning Association, academic programs in planning, and professional planners.

References
Climate change is increasingly an issue that touches nearly all disciplines and professions. The challenge for planning education is finding a way to integrate climate change (science, outcomes, policy, etc.) cohesively into curriculum rather than treating it as a separate issue. The paper examines the outcomes and utility of integrating climate change into the undergraduate planning studios both for its value to student professional success and in meeting the diverse learning objectives of a planning studio such as collaboration, knowledge integration, public outreach, and effective, adaptive plan making (e.g. Vidyarthi et al., 2012).

The vast majority of planning programs today require studio-based learning (Edwards & Bates, 2011). Climate action planning is increasingly becoming part of professional planning practice (Boswell, Greve, & Seale, 2012). Cal Poly – San Luis Obispo has pursued three two-quarter (22 week), undergraduate planning studios that developed a climate action plan (CAP). These plans were produced in collaboration with and funded by two jurisdictions and a university campus. In all three cases, the resulting plan was adopted formally by the collaborating entity. Sixty-five students completed one of the three climate action planning studios as part of the culminating Community Planning Laboratory required of all undergraduate students. Student perception of the experience and the manner in which it has influenced their future careers is examined. A survey was sent to all students to identify current work status, perceived value of the CAP studio to their careers, and the extent to which climate planning is viewed as knowledge critical to the profession of planning. These outcomes are reviewed in companion with the course content that included background research, public outreach, and topics and considerations associated with all elements of a of a comprehensive or general plan.

This assessment effort was pursued with the aim of identifying the utility of a CAP as the focus of a studio and the key curricular elements to include in such an effort. It argues that CAP-focused studios contribute to the development students with critical skills and knowledge necessary for practice (e.g. Selzer & Ozawa, 2002; Edwards & Bates, 2011), but also points out potential missteps and key considerations in curriculum development.

References

Since the notion of green infrastructure has entered the vocabulary of the planning community, a rising number of research articles have being published on the subject, reports are being commissioned and guidance is produced by a variety of professional bodies (e.g., APA 2007, RTPI 2013), government entities and think tanks. Publications cover a broad set of issues. They range from seeking a common definition of what is green infrastructure, cost-benefit calculations of using green over grey infrastructure to exploring policy implications, and practical implementation and maintenance. Arguments that urban and regional planners are one of the professional groups – alongside landscape architects, architects and engineers – that play a key role in helping to develop, design and implement green infrastructure on the ground are gaining traction. For example, the RTPI’s briefing on green infrastructure notes that “the importance for planners to understand and apply a green infrastructure approach has never been greater” (RTPI 2013, 2). Indeed, green infrastructure and its material representation such as green roofs, green belts, parks, open spaces and so forth are increasingly integrated in statutory as well as informal planning instruments such as zoning plans, resiliency strategies at city level, strategic spatial plans, or land use plans. Green infrastructure has been labelled to be a life support system for communities, essential for their environmental and economic sustainability (Benedict and Mahon 2002). These developments, in turn, raise the question whether green infrastructure issues should be included in future planning education curricula more formally. Comprehensive texts on green infrastructure such as the Handbook on Green Infrastructure (Sinnett, et al 2015) make reference to the potential educational benefits of green infrastructure such as educating the public on nature, biodiversity, the need of providing skills for those caring for green infrastructure or to educate the public about values of green infrastructure. However, there is no mentioning of education for future professionals per se. Manley (in Sinnett, et al. 2015) is one of the few authors eluding to the need of educating professionals but her contribution focuses on designing and implementing inclusive environments first, while emphasizing that this also applies to parks and green public spaces. This paper explores first the emergence of the discourses on green infrastructure in respect to city and regional planning drawing on the literature of green infrastructure and environmental education (see also Russ and Krasny 2017). Second, it examines training and educational needs through key person interviews in industry and professional circles including their views whether there is a need to introduce teaching on aspects of green infrastructure in planning education curriculum. Third, currently provision of green infrastructure teaching at selected institutions is evaluated, concluding with some recommendations in respect to green infrastructure education.

References

Key Words:
pedagogy, planning education, sustainability, green infrastructure

GUIDANCE ON CONDUCTING A SYSTEMATIC LITERATURE REVIEW
Abstract ID: 799
Individual Paper Submission

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Literature review is an essential feature of academic research. Fundamentally, knowledge advancement must be built on prior existing work. To push the knowledge frontier, we must know where the frontier is. By reviewing relevant literature, we understand the breadth and depth of the existing body of work and identify gaps to explore. By summarizing, analyzing, and synthesizing a group of related literature, we can test a specific hypothesis and/or develop new theories. We can also evaluate the validity and quality of existing work against a criterion to reveal weaknesses, inconsistencies, and contradictions (Paré, Trudel, Jaana, & Kitsiou, 2015).

As scientific inquiries, literature reviews should be valid, reliable, and repeatable. In the planning field, we lack rigorous systematic reviews, partly because we rarely discuss the methodology for literature reviews and don’t provide sufficient guidance on how to conduct effective reviews.

The objective of this paper is to provide guidance on how to conduct a stand-alone, systematic literature review. Our paper demonstrates a systematic review of publications on the methodology of literature review. A total of 99 studies are included in this study. We first discussed the typology of literature reviews. The stand-alone literature review can be categorized by the purpose for the review, which needs to be determined before any work is done. Building from Paré et al. (2015) and Templier and Paré (2015), we group literature reviews into four categories based on the review’s purpose: describe, test, extend, and critique. We briefly described each review purpose and the related literature review types. Then we describe the procedures for conducting the review. Despite differences in procedures across various types of literature reviews, all the reviews can be conducted following eight common steps: 1) formulating the research problem; 2) developing and validating the review protocol; 3) searching the literature; 4) screening for inclusion; 5) assessing quality; 6) extracting data; 7) analyzing and synthesizing data; and 8) reporting the findings. It should be noted that the literature review process can be iterative in nature. While conducting the review, unforeseeable problems may arise that requires modifications to the research question and/or review protocol.
And lastly, we provide tips to planning scholars on how to improve the rigor in literature reviews.

References


Key Words:
Literature Review, Methodology, Synthesis, Typology

LEARNING BY DOING: A PEDAGOGICAL STRATEGY ON INFRASTRUCTURE DEVELOPMENT PLANNING

Abstract ID: 835
Individual Paper Submission

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This study provides a pedagogical case study in analyzing how a studio-type course that used a mixed-method approach to infrastructure development planning could be effective for a semester. An area of infrastructure development planning often lacks actual demonstration of application. Infrastructure development planning is not a core study in many planning departments, and of those that are offered, they lack the practical application of knowledge in a studio environment. Studios allow for the practical application of various research methods and deepens students’ understanding of infrastructure development planning via communicating among them and sharing their skills and thoughts in order to find best strategies toward infrastructure investment. After a broad search of course syllabi across planning schools, most infrastructure classes were found to be a lecture or seminar format, not an experiential application of studies. Experiential learning in planning curricula enhances students’ knowledge and abilities by applying concepts to real-world scenarios. This translates to the development of transferrable skills and better retention of knowledge. In an experiential learning environment, the learning is not simply transferred from the professor to the student; students are learning by doing and responsible for organizing their work and choosing analytical tools, which develops the skills needed to be an effective planner.

To address this gap, a studio course was designed and implemented to integrate three approaches: qualitative, quantitative, and spatial analysis approaches. This carefully designed mixed-method approach was applied to a border bridge infrastructure issue between Buffalo-Niagara and Hamilton-Niagara regions to reduce border congestion and bolster economies of both border regions. The three teams were organized according to the students’ background and inclination toward their analytic method. At the onset of the course, students showed significant understanding of either quantitative or qualitative research, depending on their academic specializations and background, but not of both
methods and their interconnections. Students also showed limited or no knowledge of planning activities related to infrastructure development. This gap in understanding was evident from early peer evaluations. As the studio and project progressed, students began to understand these interconnections and overall infrastructure planning. The collaboration between students with different backgrounds, specializations, and research method skills expanded their understanding of the importance of other approaches. In the peer-evaluation conducted at the end of the semester, unlike the one conducted in the middle, students provided favorable evaluations to the other teams. This seems to be due to the understanding of the value of different analytical approaches, how they are linked to the results of their teams. Moreover, they were synergistic when combined effectively. A mixed methods research approach enabled students with different backgrounds in planning studies to better understand the interconnections between different analytical approaches and how these methods could enhance their understanding of infrastructure planning issues. We will test the behavioral changes using a Graph Theory method.

The design and intent of this studio allowed students to develop the necessary skills to address a real-world infrastructure issue. The light-handed teaching approach gave students ample room to explore multiple approaches and theoretical applications, which enhanced their understanding of the strengths and weaknesses of these methods. Rather than developing recommendations “in a vacuum” based on theoretical concepts learned in the classroom, students were able to apply their knowledge to a real-world scenario. Students were given the freedom to design, and re-design, their applied methods and approaches to develop effective recommendations based on empirical knowledge.

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Key Words:
Learning by doing, Studio design, infrastructure development planning, Graph Theory
in the search for effective ways to educate planners on the need to redefine relationships between communities and their living environments, i.e. how they use natural resources or relate to other living human and non-human communities – educators have explored the realm of pedagogical innovations deriving from context-based working ecological questions.

In this regards, the concept Ecosystem Service came to the foreground leading the disciplinary conversation on how humans can take advantage of natural ecosystems while addressing the environmental crisis. Despite this effort however, the main values and principles sustaining this approach have maintained an utilitarian and human-centric perspective, favoring more monetary efficiency and economic growth while overlooking community values such as solidarity, social justice, and ecological sustainability.

This paper argues the need and proves the possibility for planning education to address environmental issues while framing the concept of ecosystem services within a broader value-centered framework. It explores the opportunity to address environmental technical issues as deeply interconnected with social and political dynamics, through a highly pragmatic and engaged approach. In particular, the paper shares some of the lessons learned by the two authors in their engaged teaching experience within a long-term community-university partnership in the Simeto River Valley (Sicily, Italy.). The partnership has developed a methodology of work drawn from two major disciplinary debates of ecological design and planning education (Pizziolo & Micarelli 2003) and ii) and action-research inspired service-learning (Greenwood & Levin 1998). Both debates are based on the dismissal of the idea that planning education is only about teaching future professionals to become the masters of “what needs to go into a plan”, but more about teaching them how to relate with others to figure that out.

In particular, this paper focuses on the methodology adopted by the annual summer school workshop named “CoPED” (Community Planning and Environmental Design) led by the Simeto partnership since 2012. The focus is on how these two non-utilitarian and value-based approaches have shaped the methodology of the CoPED Summer School within an engaged learning framework. The school has been a catalyst for community values and principles that have, over the course of the years, engaged planning students from all over the world in the selection and implementation of planning methods and techniques aimed at co-fabricating (Stengers 1999) knowledge and projects for political, social, cultural, physical change.

References

Key Words:
Action Research, Engaged Learning, Sicily

A RESILIENT INFRASTRUCTURE DESIGN CURRICULUM: ADDRESSING INTEGRATION CHALLENGES ACROSS PLANNING AND DESIGN PROGRAMS
The Office of Infrastructure Protection (IP) within the U.S. Department of Homeland Security leads the national effort to protect critical infrastructure from all hazards by managing risk and enhancing resilience through collaboration between the private sector and multiple federal, international, state, local, and tribal partners (The Homeland Security Act of 2002). Resilience is defined as “the ability to prepare for, withstand, and adapt to, and rapidly recover from changing conditions and acute disruptions” (Presidential Policy Directive 21). After Hurricane Sandy, IP established the Infrastructure Development and Recovery Program (IDR) to work with private and public partners in order to build resilience measures into infrastructure investment strategies, plans, policies, designs, and recovery procedures. As noted in the Chronicle of Higher Education (Carlson, 2013), resilience is more than an ecological and social concept, it relates to operational and physical systems that can suffer from rolling and compounding disruptions. Although resilience thinking has permeated the fields of planning, architecture, and landscape architecture theory and studios (Cutter et al., 2008; Long, 2012), a review of academic programs shows that infrastructure system resilience is largely missing from the growing number of programs in environmental sustainability, disaster response, urban design, and social resilience. The purpose of this presentation is to provide an overview of a new cross-disciplinary resilient design course developed with support from George Mason University’s Critical Infrastructure Higher Education Initiative (GMU) and to discuss how its modules and lessons can best be adapted to and used across planning and design disciplines. IDR first co-facilitated a White House level forum that resulted in a 2016 “pledge” by 100 university and academic institutions to the “Educators Commitment on Resilient Design” and reviewed the critical infrastructure curriculum previously developed through an IP contract with GMU. Some 26 critical infrastructure classes and components had been previously developed for DHS and adopted by approximately 40 academic business, engineering, and public safety programs, but not specifically for planners, architects, landscape architects, engineers, public administrators The “pledge” list of diverse disciplines served as the basis for GMU to gather a “roundtable” to review and modify infrastructure security and resilience curriculum for appropriate principles and methods for assessing risk and enhancing infrastructure resilience in the context of guiding development patterns and the changing nature of urban technologies and social and ecological systems. After review with the “roundtable”, GMU completed the lesson plans, presentations, and materials for a September 2017 delivery to DHS. The course is equivalent to a three-credit offering and that can be separated into one-credit modules or clusters of lessons to be inserted into existing planning or design theory, methods, and studio courses. Principles of infrastructure resilience are included such as redundancy in systems design and understanding and cross-sector interdependences, vulnerabilities and cascading consequences -- as when there is a failure in cyber or communication systems, water, transportation, and other systems are affected. The third module includes two case studies to illustrate diverse human, technological, and natural hazards facing “smart cities” and to apply principles to rural to urban transportation or utility corridors (Flynn, 2012; O’Rourke, 2007). Planning schools and programs are inherently interdisciplinary. Therefore, in the interest of developing the next generation of resilience professionals, DHS invites discussion on the following questions: a) which content adds the most value to planning programs; b) what obstacles should be addressed in making the curriculum available within accredited programs, b) how might the modules be attractive to non-planning students
of other disciplines, adaptable to non-planning students, and c) through which share sites should course materials be shared for faculty use in theory, methods, or studio courses? For more information, contact IDR@hq.dhs.gov.

References

Key Words:
Courseware, Infrastructure, Resilience, Multidisciplinary, Curriculum development
Track 10 - Planning History

PRE-ORGANIZED SESSION: CITIES IN EVOLUTION: THE LEGACY AND CONTEMPORARY IMPACT OF THE WORK OF SIR PATRICK GEDDES
Proposal ID 22: Abstracts 195, 198, 199, 884

YOUNG, Robert [University of Texas at Austin] ryoung@utexas.edu, organizer
SANDOVAL, Gerardo [University of Oregon] gsando@uoregon.edu, proposed discussant

Patrick Geddes (1854-1932) has had a long, diverse influence on the field of planning, historic preservation, urban ecology, economic development and sociology. As Noah Hysler-Rubin (2009) notes, interest in Geddes has shifted emphasis over history, responding to changing challenges and issues of a particular era. Geddes’ legacy is now amplified by contemporary drivers including the rise in urbanization, environmental transformations and climate change, and the advent of revolutions in planning culture. This pre-organized session will offer new interpretations of and insights into Geddes’s work in landscape and urban planning in the current Anthropocene Era. The session is timed to commemorate the centennial of Geddes' most famous book, Cities in Evolution (1915). While Geddes is largely identified as the founder of modern city and regional planning he is not widely read and is largely absent from urban planning and landscape architecture syllabi. Despite this deficiency, there is growing interest in Geddes’s relevance to contemporary urban and environmental issues, including, for example, regional planning and sustainable development.

Objectives:
- Highlight the foundational themes of Geddes’s work on urban planning in a balanced, critical, and rigorous manner.
- Re-position the contemporary relevance and importance of Geddes’ contributions for urban and regional planning researchers, practitioners, and educators.

PRE-ORGANIZED SESSION: NEW HISTORIES OF HISTORIC PRESERVATION
Proposal ID 30: Abstracts 295, 297, 298, 334

AMMON, Francesca [University of Pennsylvania] fammon@design.upenn.edu, organizer
LARSEN, Kristin [University of Florida] klarsen@ufl.edu, proposed discussant

This panel examines the history of historic preservation in the United States, from the 1930s establishment of the first historic districts through attempts to revitalize legacy cities in the 1970s and ‘80s. The individual speakers evaluate multiple scales of preservation policy implementation, from the neighborhood to the city and the state. They search for origins for the rise of the preservation field. And they consider the relationships between building demolition and preservation activity. The case study cities to be discussed include New Orleans, Charleston, Philadelphia, Cleveland, and multiple municipalities in Massachusetts, North Carolina, and Virginia. Collectively, the panelists excavate both the means and meanings of past historic preservation practice, while also situating this work within the broader planning field.

Objectives:
To trace the origins and practices of historic preservation, including its relationship to planning more broadly
To examine the various scales--state, city, neighborhood--of preservation policy implementation
To provide a historical lens on contemporary debates about demolition versus preservation

PRESERVATION PLANNING, HISTORY, AND PEOPLE: LESSONS FROM BUFFALO’S SHORELINE APARTMENTS
Abstract ID: 108
Individual Paper Submission

KRISHNA, Ashima [University at Buffalo, The State University of New York] ashimakr@buffalo.edu, presenting author
RESOR, Joy [University at Buffalo, The State University of New York] joyresor@buffalo.edu, co-author
TRAYNOR, Kerry [University at Buffalo, The State University of New York] klta@buffalo.edu, co-author

The preservation of modern architecture has been a fractious and contested process for several decades. Examples from around the world illustrate the often negative perception of modern architectural form. Public housing, in particular, has been the most notable product of the post-war construction and urban renewal efforts across the United States that coincided with the popularity of modern architecture in the middle of the twentieth century. There are many cases from around the country that exemplify the failure of modernist public housing: Pruitt-Igoe in St. Louis, Cabrini Green in Chicago, Skyline Park in Denver, and so on. While modern architecture is not wholly to blame in the failure of public housing, it has certainly been complicit. The repetitive (and often cost-effective) high-rise designs have attracted a social stigma that is not wholly unfair. The form is often utilitarian and stark, or often ends up that way due to budget and policy constraints. Concrete has commonly been the material of choice, which has had its own structural and weathering problems over time. Despite these kinds of complications, however, preservationists have often argued against any changes to, or demolition of these kinds of sites because in most cases the building or groups of buildings are associated with a well-known modern architect, or are emblematic of particularly novel or ground-breaking use of form and/or material. But should that association override history, and public sentiment, particularly when the building/site has failed its primary function?

The preservation planning movement, when it began as a grassroots initiative, had an intricate and interdependent relationship between historic preservation planning, history, and people. Somewhere along the way, however, all three have lost their connection and inter-dependence. The most common rationale for preserving modern architecture in recent years has often been association with the architect/designer, or architectural material, form, and features. In many cases, the public perception and experience of using the modernist building can be at odds to its (perceived) architectural grandeur or its master architect. In such cases, preservationists have to look beyond the architect and his/her work. This paper uses an example from Buffalo, NY to argue that historic preservation planning, urban history and context, and people need to start working together again for the preservation process to be truly successful. The paper this question by examining Shoreline apartments in downtown Buffalo, designed by well-known modernist architect Paul Rudolph. The apartment complex, located a stone’s throw from city hall, was constructed between 1970 and 1974—a product of the urban renewal ‘slum clearance’ carried out by New York State Urban Development Corporation that decimated entire traditional single-family neighborhoods. The low and moderate income housing project comprising 822 units was
designed in close proximity to city hall to encourage Buffalonians to come back to city living. Soon after construction, however, material failure, social failure, and functional failure led to the project not being as popular with middle-income residents as was originally planned. Less than a decade after its construction, the low-income apartment complex was facing problems of maintenance, coping with Buffalo’s harsh winter climate, and rising crime. Decades later, the same problems continue. In 2014, the owner of the apartment complex, a development company, submitted plans to the city to tear down some of the buildings in the complex and replace them with the desired townhouse-style apartments. Preservationists in the city, however, banded together to nominate the site as a local landmark to halt any demolition. This paper will analyze the landmarking process that included perspectives from preservationists, historians, and residents. At the end of the public meeting, it was clear that the preservationists were completely ignoring the residents’ perspective in favor of the architectural associations of the site. The paper will examine the various lessons learnt from the landmarking process of Shoreline apartments, and discuss what these kinds of interactions mean for the field of historic preservation planning and its future.

References


Key Words:
historic preservation planning, modern architecture, public housing, urban renewal, buffalo

FEDERAL MONEY FOR LOCAL PROJECTS: THE HISTORY AND FUTURE OF THE CAPITAL INVESTMENT PROGRAM FOR URBAN TRANSIT INFRASTRUCTURE

FEDERAL MONEY FOR LOCAL PROJECTS: THE HISTORY AND FUTURE OF THE CAPITAL INVESTMENT PROGRAM FOR URBAN TRANSIT INFRASTRUCTURE

Abstract ID: 124
Individual Paper Submission

VOULGARIS, Carole [UCLA] caroleturley@ucla.edu, presenting author

Over the past fifty years, the federal government has played an important role in funding urban transit infrastructure in the United States (Schrag 2008; Elkind 2014). This role was controversial in its earliest years (Gomez-Ibanez 1985), although federal programs funding transit infrastructure have since become well established (Duff et al. 2010). Today, debates about the role of the federal government in funding capital transit projects are experiencing some resurgence, as the White House’s current budget proposal calls for the discontinuation of all federal programs that fund urban transit infrastructure (Davis 2017). One of the programs that are threatened by this proposal is Federal Transit Administration’s (FTA’s) Capital Investment Program.

Since the mid-20th century, the Capital Investment Program has been the federal government’s primary grant program for capital investment in fixed-guideway public transit projects, a category that includes urban rail, commuter rail, and bus rapid transit projects. This paper describes the history and
development of the Capital Investment Program based on contemporary published accounts and interviews with thirteen transit professionals who observed the evolution of the program firsthand. I find that, over the history of the Capital Investment Program, there have been substantial changes in the process by which projects are evaluated for funding, the criteria used to evaluate potential projects, and the level and type of project oversight and technical assistance the federal government provides to local project sponsors. These changes have reflected a tension between competing perspectives on the purpose of urban transit infrastructure and the role of the federal government in achieving those purposes. There has been a tension between improving the opportunities for all project sponsors to qualify funding and merit-based competition that would award funds only to a few high-performing cities. Likewise, there has been a tension between rigor and simplicity or transparency in project evaluation, and between limiting and expanding the federal role funding and overseeing transit project development and construction. Finally, there has been a tension among competing (if not necessarily conflicting) priorities such as attracting new transit riders, serving existing riders, and using transit infrastructure to shape urban form and urban economies more broadly.

Overall, I find that the Capital Investment Program has been successful establishing consistent best practices in performance-oriented transit planning. However, the continued positive influence of the New Starts program on transit planning practice is threatened by uncertainty about the future availability of federal funding for urban transit infrastructure.

References


Key Words:
transit planning, planning history, transportation finance

CIVICS AND TECHNICS-PATRICK GEDDES AND LIVING CITY-REGIONS

Abstract ID: 195
Pre-Organized Session: Cities in Evolution: The legacy and contemporary impact of the work of Sir Patrick Geddes

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Patrick Geddes is a recognized founder of modern urban and regional planning (Royal Town Planning Institute 2012; University of Dundee 2007). Despite this accolade, a review of US planning programs reflects Geddes's work largely absent from planning pedagogy (Tajchman n.d.). Recently interest in
Geddes has revived in several fields (Scott and Bromley 2013; Welter 2002). However, many researchers, particularly in planning, still criticize his ideas as lacking a coherent theoretical framework or as obsolete in addressing the power relations of contemporary issues facing cities and social movements (Hysler-Rubin 2011). In this paper, I seek to augment recent work on Geddes as well as explore criticisms of his approach. I read published and archival manuscripts dealing with Geddes's approach to planning. I argue Geddes did frame, through his theory of Civics and Technics, a consistent planning typology valuable to guide contemporary environmental planning and social movements. Drawing on examples from the green infrastructure and Occupy movements, I provide examples of how Geddes’s typology can provide greater clarity to such efforts. I conclude by calling for wider reintroduction of Geddes's ideas into planning education and research.

References
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Key Words:
Patrick Geddes, Technics, Civics, Occupy, Green Infrastructure

JAQUELINE TYRWHITT EDITS AND INTERPRETS PATRICK GEDDES FOR POST WORLD WAR TWO PLANNING

Abstract ID: 198
Pre-Organized Session: Cities in Evolution: The legacy and contemporary impact of the work of Sir Patrick Geddes

SHOSHKES, Ellen [Portland State University] eshoshkes@mac.com, presenting author

Beginning in Britain during the Second World War and continuing internationally through the 1970s Jaqueline Tyrwhitt (1905-83)—a British planner, editor and educator—played a key role not only in stimulating interest in Patrick Geddes’ planning ideas for post World War Two reconstruction, but also in formulating the Geddessian branch of the planning arm of the postwar modern movement. The range of Tyrwhitt’s contributions must be placed in the context of her efforts to reactivate transnational exchanges of planning ideas and practices that had been interrupted by the war. Tyrwhitt’s work at various educational institutions in Britain and North America, as a member of the inner circle of CIAM (Congrès Internationaux d'Architecture Moderne), as a consultant to the United Nations, and in collaboration with Greek planner Constantinos Doxiadis (1913-75) in the Ekistics movement, positioned her to insert her synthesis of Geddessian bioregionalism and modernist social-aesthetic ideals firmly within the emergent global discourse on sustainable urbanism.

References
AN INTEGRAL LENS ON PATRICK GEDDES

Abstract ID: 199

Pre-Organized Session: Cities in Evolution: The legacy and contemporary impact of the work of Sir Patrick Geddes

EISENMAN, Theodore [University of Massachusetts Amherst] teisenman@umass.edu, presenting author
MURRAY, Tom [University of Massachusetts, Amherst] tmurray@cs.umass.edu, co-author

Patrick Geddes is a significant figure in the landscape and urban planning canon. In addition to situating cities within a regional context and advancing a socioecological understanding of urbanization, he viewed cities as the principal artifact of, and theater wherein, human culture evolves. This is crystallized in the proposition that, “...the city, in its being and becoming, is, as it were, the very incarnation of the evolutionary process” (Branford and Geddes 1917, 155). Yet, this expansive view of cities may be one of the more challenging aspects of Geddes’ legacy to assimilate. Working during a late 19th and early 20th century period when the limitations of modernity were becoming increasingly apparent, much of Geddes’ aspirational thinking can be seen as an effort to create what he described as a “larger modernism,” wherein rational, scientific logics in the material world are complemented by metaphysical principles in the immaterial realm (Welter 2002). In this regard, Geddes can be counted amongst those whom we describe as integrative holistic thinkers, people whose worldview draws them toward meaning-making narratives and frameworks that include the many dimensions of the human condition. Today, a new generation of holistic approaches called “metatheories” and “integral theory” in particular (Bhaskar et al. 2016), provides an orienting lens through which to review, assess, and potentially extend the work of Geddes in the 21st century. Towards that goal, this paper presentation will first provide an introductory primer to some of Geddes’ noteworthy “thinking machines” as well as integral theory (Esbjörn-Hargens 2009). We then assess correspondence between the two, focusing on Interdisciplinary Holism; Evolution, Development and Complex Systems; Human Agency and Ethics; and Spirituality. A closing discussion addresses prospects for future research, and suggests that the holistic, evolutionary, and generative orientation of our principal subjects may have particular relevance in an anthropogenic biosphere (Ellis 2015), characterized in part by significant environmental challenges and the concentration of humans in cities.

References

Throughout history, photographs have functioned as critical tools in the implementation of planning ideas and the representation of planning practice. In their documentary form, these images have shaped the stories we tell about our urban spaces, helped justify planning action, and preserved an invaluable visual record of the social and built world. Despite being a vital component of planning knowledge, urban documentary photographs have thus far received limited scholarly attention (Campanella, 2001; Foulkes, 2011; Hales, 2005; Yablon, 2009). Historical texts reveal planners deploying photographs as evidence toward interventions from tenement reform to zoning (New York (N.Y.). Commission on Building Districts and Restrictions, 1916; New York (State). Legislature. Assembly. Tenement House Committee, 1895). Yet documentary photographs have rarely functioned so simply. Rather than offering objective proof, photographs have supplied subjective evidence through their production, selection, and appropriation (Sontag, 1977). Close historical analysis of the medium’s diverse applications to specific projects begins to illuminate the complex ways that photographs have shaped both public and professional understandings of what cities are, have been, and should be.

The urban renewal practices of the postwar decades relied particularly prominently on photographs. Historians who have begun to explore the photographic record of this period have documented the role of images in substantiating slum clearance (Aelbrecht, 2015; Christenson, 2017; Chronopoulos, 2014; Tagg, 1988; Zipp, 2010, pp. 73–113). Left unexamined, however, is the fuller range of applications of photographs to urban renewal practice. A broader visual archive bolsters the underappreciated influence of images in shaping planning knowledge; exposes their contested, rather than objective, nature; and expands our understanding of urban renewal history to more fully encompass approaches that relied on rehabilitation and restoration, as well as clearance.

This paper offers a case study analysis of Philadelphia’s Society Hill neighborhood, where planners famously combined clearance with historic preservation (Birch & Roby, 1984; Ryberg, 2013). It asks what preservation-based urban renewal meant on the ground and how photographs shaped and reflected that work. Examining the historical archive of plans, municipal correspondence, public hearing
testimony, and diverse photographic collections from this project shows the centrality of photographs to planning history and practice. Taking photographs seriously as sources of planning knowledge demonstrates their contested role in rehabilitating buildings and/or marking them for removal. It expands the simplistic “before-and-after” binary of stereotypical planning visual practice to reveal at least four key functions of photographs on this particular site: “before images” visualized blight to sanction demolition, “historical images” provided the basis for restoration that followed, “process images” reveal the messy work of postwar preservation, and “after-images” deceptively erase the destructive nature of that process. Through the aggregation and analysis of multiple postwar Society Hill photographic archives, I expose the typically silent ways that photographs have served to picture urban renewal policy, while also illuminating the intertwined relationship between postwar historic preservation and urban renewal practice.

References


Key Words:
Historic preservation, Urban renewal, Photographs, Philadelphia, PA, Society Hill

Abstract ID: 297
Pre-Organized Session: New Histories of Historic Preservation

RYBERG-WEBSTER, Stephanie [Cleveland State University] s.ryberg@csuohio.edu, presenting author

From the late 1960s through the 1970s, racial unrest ripped through Cleveland neighborhoods, white flight escalated rates of population decline, vacancy rates skyrocketed, manufacturing plants closed leaving hulking industrial ruins, and a spiraling fiscal crisis loomed large. Amid this dire landscape of decline, a number of local leaders and grassroots activists launched concerted efforts to save the city’s built environment as a tangible reminder of Cleveland’s heritage and as a basis for future revitalization. This paper documents and analyzes these efforts, using Cleveland as a prototypical U.S. legacy city, where past and present demolition pressure threatens large swaths of built heritage. The city has a rich and complex history ranging from industrial and technological innovations that built America to immigrant enclaves to African American communities that sought opportunity in waves of early 20th century migration. Cleveland’s historic built environment is the tangible manifestation of this complex heritage. The paper focuses on a set of preservation initiatives that originated in the 1970s and continue to the present, asking: Who were the actors involved in Cleveland’s emerging 1970s-era preservation sector and what were their motivations? How did these actors define and interpret the city’s heritage
through historic preservation? And, how did these actors shape preservation narratives, including the role that heritage could and should play in shaping the city’s future? Using archival research on the Cleveland Landmarks Commission (est. 1971), Cleveland Restoration Society (est. 1972), and landmarks commissions in the inner-ring suburbs of Cleveland Heights (est. 1973) and Shaker Heights (est. 1975). The findings show that 1970s-era preservation efforts in Cleveland demonstrated both synergies and tensions with broader city planning, economic development, and/or community development initiatives. The actors involved crafted narratives about heritage and preservation that emphasized industrial might and early 20th century immigration, promoted economic benefits, and capitalized on past demolitions to spur support for their burgeoning movement. The paper uses a historical analysis to inform contemporary debates about demolition and preservation and offers insight into the past, present and future role of preservation in the shaping America’s post-industrial legacy cities.

References

Key Words:
Historic preservation, Legacy cities, Urban revitalization, Cleveland, Ohio

DEMOlITION, PRESERVAtion, AND PLANNING: HISTORIES OF URBAN RENEWAL AND HISTORIC PRESERVATION IN MASSACHUSETTS CITIES, 1960-80
Abstract ID: 298
Pre-Organized Session: New Histories of Historic Preservation

MOGA, Steven [Smith College] smoga@smith.edu, presenting author

Historic preservation re-emerged as a social movement and a set of institutionalized practices in the second half of the twentieth century in the United States. Preservationists reshaped the field of urban planning and the form of cities, presenting an alternative to the widespread demolition unleashed by federal funding for urban renewal and highway building. During the 1960s and 1970s, advocates formed new organizations at the city level, state legislatures established frameworks and guidelines for city and state government regulation, and the federal government enacted major new historic preservation laws. Planning historians have recently turned to the history of this period and this investigation aims to contribute to this rapidly developing area of scholarship. This paper is organized around the contention that local city experiences influenced state-level action, and vice versa, during this dynamic and formative period. It examines urban histories of demolition, preservation, and planning in Massachusetts’ largest cities from 1960 to 1980.

Researching this question with an eye towards the state level is key for three reasons: first, local actors shared political experiences and developed ideas through communication across city boundaries; second, state authorizing legislation played, and continues to play, a major role in defining the limited powers of
local historic preservation ordinances and historic commissions; and third, the evolving role of the state office of historic preservation and the policies, programs, and procedures that would connect local practice with new federal policies is critical. Robert E. Stipe, for example, referred to states as “the backbone of historic preservation.” Massachusetts represents a useful case study because of its prominence in national debates during this period, high level of historic awareness and existing set of older preservation-related organization such as The Trustees of Reservation and The Society for the Preservation of New England Antiquities, and its geographic characteristics, specifically a constellation of separate, older industrial cities in relative proximity within a small state.

One historiographical debate involves the extent to which preservationists engaged at the city scale and whether or not a limited vision of preservation aided and abetted rather than fought against urban renewal (see, for example, Ryberg-Webster 2012). The invention, designation, and implementation of historic district regulation is central to this story. The Massachusetts legislature authorized the creation of historic districts with General Law 40C in 1960, prior to the National Historic Preservation Act of 1966. However, the institutional framework for implementation of historic district regulation and the conditions necessary to support preservation planning as an approach to city design and development would require several decades. The Boston Landmarks Commission, for example, was established in 1975. Lowell National Historical Park was established in 1978.

This paper examines the development of governmental infrastructure to support historic preservation planning that occurred concurrently with highway fights, demolition battles, and anti-urban renewal activism. It looks at the establishment of key actors and organizations in the cities of Boston, Cambridge, Lowell, New Bedford, Springfield, and Worcester. Methods and sources include a historiographic review of local histories and scholarly literature on the topic, as well as an examination of city plans, newspaper articles, interviews, and government documents.

References

Key Words:
historic districts, historic preservation, planning history, urban renewal, urban revitalization

EXPANDING THE NARRATIVE OF HISTORIC PRESERVATION: A CRITICAL ANALYSIS OF THE FIRST HISTORIC DISTRICTS
Abstract ID: 334
Pre-Organized Session: New Histories of Historic Preservation

LARKIN, Cleary [University of Florida] clarkin@ufl.edu, presenting author
The narrative of historic preservation has largely focused on crises, such as demolitions of historic buildings, most significantly in regards to mid-century urban renewal projects. The critical historic preservation texts, authored by Hosmer, Murtagh, Stipe, and Fitch, reinforce this narrative by focusing on the protection of a physical resource— the building. This paper aims to broaden the narrative by placing the creation of the earliest historic districts into a larger historical framework, revealing that early preservation efforts were intrinsically connected with city planning practices and may have been motivated by more than building demolitions. Using archival research as a basis for critical analysis, this larger historical framework is organized into four research themes: demographic change in the neighborhoods in the period before designation, concurrent exclusionary and racial zoning practices, the hiring of notable city planning professionals for creation of historic zoning and comprehensive plans, and federal funding for neighborhood surveys and restoration projects during the New Deal and later preservation action during urban renewal.

The primary case studies are the first local historic districts, Charleston's "Old and Historic District" (est. 1931) and the "Vieux Carré" in New Orleans (est. 1937). These districts were innovative for historic preservation, as they established the concept of local district survey and protection before and in parallel with the 1935 Historic Sites Act, which made New Deal funding and survey assistance available to the cities for preservation purposes. Hence, these two districts were truly local initiatives. While often used as examples of grassroots advocacy for neighborhood preservation, these cities also incorporated professional consulting, hiring northern planning experts to create historic zoning ordinances, surveys and comprehensive plans for the creation of their historic preservation policies, programs, and regulations. These planning professionals include Harland Bartholomew (New Orleans Comprehensive Plan, 1926 & 1948), Morris Knowles, a consulting engineer and planner on President Herbert Hoover's Advisory Committee on City Planning and Zoning (Charleston's historic district mapping, 1931), and Frederick Law Olmsted, Jr. (Charleston Comprehensive Plan, 1940). This paper addresses the role of the planning professional in the conversion of a grassroots movement to an innovative, legal mechanism for neighborhood preservation.

While the historic preservation narrative teaches that Charleston and New Orleans serve as precedents for local historic zoning ordinances and 1960s federal historic preservation law, expanding the narrative to include the socio-cultural contexts of their designation illustrates a pre-urban renewal connection between historic preservation and urban planning. Existing research on concurrent exclusionary and racial zoning practices largely focuses on the South, during the first wave of the Great Migration and early-twentieth century anti-immigration policy. Those demographic changes provide a context for the socio-cultural change occurring in Charleston and New Orleans during the time of their designations, as well as a context for creation of the next four historic districts, all in the South, in the 1940s: Alexandria, Virginia (1946), Wilmington, North Carolina (1946), Williamsburg, Virginia (1947), and Winston-Salem, North Carolina (1948). A brief assessment of additional actions to create historic districts, commissions and surveys from the 1940s through the early 1960s will reveal common themes beyond demolition, providing greater depth to the meaning and origins of historic districts before passage of the 1966 National Historic Preservation Act. This paper will conclude by refocusing on the designation context of the first two districts, concluding with a reflection on a new narrative for the early preservation movement that more closely ties planning tools and local motivations to designation decisions.

References
Key Words:
historic district zoning, New Orleans Vieux Carré, Charleston Old and Historic District, demographic change, historic preservation

THE INTERSTATE HIGHWAY SYSTEM AND THE CIVIL RIGHTS MOVEMENT: THE CASE OF PEACOCK PLACE, MONTGOMERY, ALABAMA
Abstract ID: 372
Individual Paper Submission

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This research seeks to understand the history of the development of interstate highways 85 and 65 during the civil rights movement in Montgomery. It focuses on a small neighborhood in Montgomery – Peacock Place – which was the center of the Civil Rights movement in Alabama.

Central Theme and Background:
The Peacock Place Neighborhood is located at the crossroads of I-85 and I-65, and is rich in civil rights history. It was the location of the start of the Montgomery bus boycott, Martin Luther King, Jr. got his start at public life in the neighborhood, Rosa Parks lived nearby, and the Selma to Montgomery March went through area.

In 1956, while the bus boycott was taking place, President Eisenhower signed legislation to create the Interstate Highway System. Two important interstate highways - I-86 and I-65 – were to be located in Montgomery. As was the case in many other cities, state highway directors decided to locate the interstate highways through established African-American communities. A proposal to place the highways on nearby vacant land was rejected, and instead the State of Alabama chose to build the highways directly through neighborhoods where prominent civil rights leaders lived.

Many African-American families that lost their homes, churches, and neighborhoods through the eminent domain actions were paid very little compensation, and had no choice but to relocate to public housing. One of the most significantly affected neighborhoods was the Peacock Place Neighborhood. Peacock Place was a close-knit, vibrant, and thriving neighborhood before the construction of I-85 and I-65. It was home to the African American middle class in Montgomery, walking distance to downtown, and contained a small and successful business district. Two churches (which remain) were at the heart of
the community – Mt. Zion A.M.E., where Martin Luther King, Jr. was elected to head the Montgomery Improvement Association, and Holt Street Baptist Church, the site of the rally to begin the bus boycott. The two churches now stand vacant on opposite sides of I-85.

Approach and Methodology:
This research uses historical and archival data collection to understand the complex and deep history behind the development of the interstate highways and the civil rights movement in Montgomery, and in particular, the Peacock Place Neighborhood.

This research provides insights into the historical development of Alabama, the South, and the interstate highway system, as well as provides an important historical perspective on the civil rights movement from the perspective of urban planning.

Findings:
The story of the development of the interstate highway system in the U.S. is well known. What is different about this research is its connection to the hub of the Civil Rights movement, and the fact that it focuses on one small neighborhood – tracing the impact of the Interstate Highways on the community from prior to their construction to the present day.

This research finds that there is significant, on-going disruption to the neighborhood because of the presence of the interstate highways that continues to today. Also, the construction of the interstate highways through the neighborhood was a deliberate attempt to disrupt the civil rights movement in Montgomery.

Relevance to Planning Scholarship, Practice, and Education:
This research is relevant to planning scholarship, practice, and education. The construction of the interstate highway system was a major defining event in planning history, and its impacts are still felt in cities today. Likewise, the civil rights movement was also defining to the planning profession, with lasting impacts today. Insights onto how those two connect, and how they impact planning today in the south and in Alabama are important to planning history, practice, scholarship, and education in the U.S. and internationally.

References

Key Words:
Interstate Highway System, Civil Rights, Alabama, Montgomery, Alabama, Planning History

TRENDS IN MOBILE WORK IN THE UNITED STATES, 1850 TO 2015
Abstract ID: 410
Not all work is conducted from a single stationary workplace. Mobile workers are of growing interest to research and practice for several reasons. Firstly information technology firms in categories such as e-hail taxis, smartphone app delivery services and errand outsourcing appear to be creating new mobile work employment opportunities. Secondly, more jobs are becoming partly mobile through the capabilities of information and communication technology (ICT) to allow some work to be done from any location at any time (Perry et al. 2001). Thirdly some forms of mobile employment may disappear in the coming decades, as they are susceptible to being replaced by computerized autonomous vehicles (Frey and Osborne 2013). This research looks to America’s past to provide context for this emerging present, and answers three questions: How much of the labor force from 1850 to 2015 was engaged in mobile work? How did the composition of this mobile work change over time? And what socioeconomic position has mobile work occupied in the US economy?

Much research on "mobile work" focuses on recent capabilities of ICT to allow it for some jobs, covering topics such as new challenges to work-life balance (Sherry and Salvador 2002), and the relationship of these mobile workers with place and space (Erickson and Jarrahi 2016). Cohen (2010) makes a useful distinction between this type of mobile work which she categorizes as "working while mobile", and two other categories of mobile work: "mobility as work" that engages in the movement of people and goods, and "mobility for work" that necessitates moving from location to location for work. This typology allows one to see that mobile work is neither wholly a new phenomenon nor dependent on ICTs. It is these latter two categories of mobile work with which this research is concerned.

To answer my research questions, I analyze three variables using 1850 to 2015 United States Decennial Census and American Community Survey occupation data from the Integrated Public Use Microdata Series USA project at the University of Minnesota. The first variable is a detailed categorization of occupations that has been standardized across most Census years. This commonality allows for comparisons of the percentage of each occupation as a part of the total labor force across time periods. The second is an occupation text field--available from 1850 to 1940--that records a short qualitative assessment of a person’s occupation before it was squeezed into an official category. The third variable is an Occupational Income Score, which records a score for each 1950 occupation category based on the median incomes of its individual workers from the 1950 census. I augment the analysis of these variables with archival research to provide detailed description allowing an understanding of terms and trends from the perspective of the time periods under study.

Findings show that all categories of mobile work grew as a percentage of the US labor force and then declined, either gradually as in the cases of trucking and mail delivery, or sharply as in the case of traveling sales. Yet three forms of mobile work--peddling and door-to-door sales, rail and bus operators, and taxi drivers and chauffeurs--saw a second rise in labor market share after their first decline. I consider these findings through a lens of automobility and technological change, as well as exploring possible connections to recent trends towards sustainable transport and shared mobility.

References


Key Words:
Mobile work, Transportation history, Information technology, Autonomous vehicles

GEDDES RESURRECTED: THE LEGACY OF SIR PATRICK GEDDES IN CONTEMPORARY URBAN PLANNING IN TEL AVIV
Abstract ID: 489
Individual Paper Submission

MUALAM, Nir [Technion-Israel Institute of Technology] nirmualam@hotmail.com, presenting author

The paper examines Sir Geddes' impact on contemporary city planning in Tel Aviv. In particular, whether and in what way previous work by Geddes has influenced 21st century planners in Tel Aviv. The paper reviews those issues by looking at one of the most ambitious plans the city of Tel Aviv has generated in recent years - the 2015 "Northwestern Plan".

In the winter of 2015, the new plan was enacted. The plan aims to create a new residential quarter on one of the last remaining sand dunes. This represents an attempt to create a mixed-use extension of the 1925 Geddes Plan for Tel Aviv by establishing a new district filled with expansive boulevards, parks, and public spaces. While the municipal authorities regarded the recently enacted plan as a successful adaptation of Geddes' urban vision, antagonists perceived it as a publicity stunt, designed to brand the new district. The article explores these arguments, analyzes the social, economic and morphological principles embedded in the new plan, and compares them to those employed by Geddes 90 years ago. The analysis reveals that the original plan compiled by Geddes still serves as a relevant commodity for city planners, and as an inspirational source. 21st century planners involved in enacting the new plan turned to Geddes for inspiration however it remains questionable whether his ideology, civic principles, and conceptual approach to the city were fully realized in the new plan.

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Key Words:
Geddes, Tel Aviv

WHERE DID THINGS GO WRONG? IDEAS, DISCOURSE, INTERESTS, AND THE INSTITUTIONALIZATION OF CITY PLANNING IN CHICAGO
Abstract ID: 578
Individual Paper Submission

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Urban planning in the United States was born of and maintains grand aspirations – comprehensive plans that consider everyone from the bottom to the top, new arrangements that ensure the city works today and into the future, and solutions that address spatial and social problems that resulted from lack of planning in the past. Successes on the ground in urban planning however are often unable to meet planning’s utopian expectations and the gap between urban planning as an academic discipline and urban planning as a professional practice has been growing for decades.

This research will take a new approach to understanding the roots of urban planning’s shortcomings, utilizing historical methods and within a framework of new institutionalist theory. Specifically, this paper will examine why and how ideas and discourse mattered in the institutionalization of urban planning, using Chicago in the early 1900s as a case study example. By tracing the process of institutionalizing urban planning through the ideas of and discourse among internal agents within the Chicago Plan Commission as well as between the Chicago Plan Commission and lawmakers, business owners, the public, and others, I identify key ideational and discursive themes and their role in the institutionalization of city planning in Chicago.

The results of this research will contribute to the evolving body of new institutionalist theory, specifically parsing out whether arguments on the importance of ideas and discourse warrants a fourth new institutionalism – that of discursive or constructivist institutionalism. I argue that discursive institutionalism and the focus on the substance of ideas and interactive dynamics of discourse offer important insight into agents’ planning motivations. Through this lens, we can see that ideas and discourse play a role in reframing one’s own perception of their self-interests, which can have both negative and positive consequences for planning aimed at achieving a broad public benefit.

More broadly, I argue that while discursive institutionalism brings important factors into consideration, it is perhaps unwise to abandon other institutional theories that examine phenomena such as rational choice and path dependence. In addition to its contributions to new institutionalist theory, this research will contribute to scholarship on urban planning history by applying theories of new institutionalism, offering new perspectives on the historical roots of urban planning’s persistent identity crises.

References

Key Words:
Discursive Institutionalism, Chicago, New Institutionalism, Planning History

PLANNING IN THE ENERGY-WATER NEXUS USING PLACE-WORK-FOLK AND ENERGY BALANCE THEORIES OF PATRICK GEDDES
Abstract ID: 884
Pre-Organized Session: Cities in Evolution: The legacy and contemporary impact of the work of Sir Patrick Geddes

TAJCHMAN, Kristina [The University of Texas] kristina.tajchman@gmail.com, presenting author

The use of energy to transport, treat, pump, convey, cool, and heat water and the parallel use of water to extract, refine, and use energy is a relationship known as the energy-water nexus. Not only is this relationship growing in importance as population growth and increasing living standards strain both resources, but it also becomes more problematic as energy production moves towards more water intensive practices and water requires increasing more energy to use. Despite a growing awareness of this connection a lack of understanding exists across stakeholders in both fields and a significant need exists for better cross-coordination and planning.

Over a century ago urban planner, Sir Patrick Geddes, provided ideas about environmental and civic planning that if employed may improve the mutual constraints between energy and water. Specifically, Geddes’ development of 1) the integrated concept of “place-work-folk” described below, and 2) his suggestion for ranking and promoting societal activities based on their dual importance to society and impact on nature, provide a balanced approach to the energy-water nexus. Representative of his holistic thinking, both ideas recognize the mutual dependence between people and their environment as a relationship necessary for life enhancement and survival of both. This analysis employs a historical review of Geddes’ theories with logical argumentation to illustrate the modern applicability of his planning concepts to just one area of sustainable development with the intent that their potential utility to other domains will become more apparent.

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• Dr. Robert Young, Assistant Professor, University of Texas ryoung@utexas.edu
• Dr. Katherine Lieberknecht, Assistant Professor, University of Texas, klieberknecht@utexas.edu
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Key Words:
This paper analyzes the debates among state, regional and civic sector planners that culminated in the approval of Portland’s Urban Growth Boundary by the Oregon Land Conservation and Development Commission (LCDC) at the end of 1979. The context for these debates was the system of statewide planning goals that took effect at the beginning of 1975. The critical final phase of the process during which the boundary proposed by the recently established Metropolitan Service District, the first – and still the only – directly elected regional government in the United States – was reviewed by state planners in the context of vehement criticism of the proposed line by the civic sector organization, 1000 Friends of Oregon.

The quote above was scrawled on the document produced by the planner leading the LCDC review process to determine whether or not the growth boundary proposed by Portland regional planners complied with Oregon’s statewide Urbanization goal. His comment expressed a combination of feelings: frustration, amazement, and professional exhilaration. It had taken five years to reach the state review stage, and civic sector planners continued to challenge the proposal even though a relatively small amount of resource lands appeared to remain at issue. The technical aspects of boundary drawing were extremely controversial and the political dynamics of adopting the proposed line at the regional level and approving it at the state level were very intense, in part because both technical and political aspects were transparent. However, he and his state colleagues were playing key roles in a land-use planning process that was unique in the United States at the time, one that was attempting to address environmental, economic, and social problems associated with a sprawling pattern of land development that were manifest across the country, in the context of a set of state and regional laws and public sector organizations that could effectively address them and maintain the viability of the region’s working landscape, the balance and connection between urban and rural ways of life, and the culture associated with that landscape that characterized the Portland region.

Three issues are central to this paper: dealing with what were called “market imperfections,” basically, speculation in the land market and the fact that most housing producers were very small scale; dealing with competition between local governments within the region to attract commercial and, especially, industrial development; and dealing with relationships between state, regional and local governments in the context of implementing the new state and regional laws. The issues that roiled the boundary planning process then remain challenges today.

Based largely on the existence of the boundary, planning historian Robert Freestone, in “Greenbelts in City and Regional Planning” (2002), suggested that Portland might be the leading example in the world of an ecological city. There’s substantial literature about regional planning in Portland generally, and about the urban growth boundary specifically. Some recent works include: Christine Rosan, Governing
the Fragmented Metropolis, University of Pennsylvania Press, 2016; Jill Sterrett, et al., eds. Planning the

The paper is based on primary sources, including archived documents, newspaper stories, and interviews
with public, private, and civic sector participants. There isn’t anything in the literature, though, that
analyzes the intersections of politics and planning during the critical period of regional adoption and
state approval of the growth boundary, which was a singular moment in the history of land-use planning
in the United States.

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Key Words:
Urban Growth Boundaries, Regional Planning History, Portland, Oregon

CONTESTED GROUND: THE BLACK PANTHER PARTY IN NEIGHBORHOODS ACROSS
AMERICA
Abstract ID: 1101
Individual Paper Submission

WARNKEN, Charles G. [University of Oklahoma] cwarnken@ou.edu, presenting author

In the years 1966-1970 approximately 40 local chapters of the national Black Panther Party (BPP) were
established in cities across the country. This paper examines changes in the individual neighborhoods in
which these local offices were established. The current literature on the BPP is marked by historical
analysis of the national BPP and its some of its primary, community-based programs. In addition, a few
case studies of local BPP groups and their community legacies have been developed. This paper extends
and broadens this local perspective and provides an in-depth analysis of the areas and neighborhoods
that housed BPP National Chapter Offices with an in-depth focus on neighborhoods in Denver, Kansas
City, Omaha and Des Moines. Demographic and socio-economic changes, as well as changes to the built
environment are detailed through the use of census data, archival work, photo documentation and other
primary sources. With the units of analysis being neighborhoods, a unique opportunity to provide a 50-
year retrospective of change in these areas emerges. Collectively, these neighborhoods provide a robust
lens which work to illustrate changes in urban America over the past 50 years and more succinctly what
has happened in many African-American neighborhoods during this time period.

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HAS THE CHICAGO PROGRESSIVE MOVEMENT INCHED CLOSER TOWARD DEVOLEUTION? PROGRESSIVE PLANNING AND ITS CURRENT STATUS IN CHICAGO.

Abstract ID: 1210
Individual Paper Submission

BETANCUR, John [University of Illinois at Chicago] betancur@uic.edu, presenting author
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In 1982, a grassroots movement paved the way to the election of Harold Washington, the first non-White mayor of Chicago in 1983, and the implementation of a progressive planning agenda. By 1989, after his sudden death, the coalition broke apart over multiple issues thus failing to translate their collaborative efforts into a sustained progressive urban planning agenda (Betancur and Gills, 2000). What follows is the inability of this minority coalition to recapture the movement against the democratic “Machine” established by Mayor Richard J. Daley and keenly utilized by his son, Mayor Richard M. Daley, who became the longest serving mayor in Chicago. His use of tactics to fight and disarm coalition building by doling out contracts and financial incentives in minority based constituent wards was key in controlling City Council and squashing grassroots movements until he retired in 2011. His successor Rahm Emanuel, inherited the Machine legacy but his reelection campaign in 2014 became a battle ground for survival against the Latino mayoral candidate, Jesus “Chuy” Garcia, a member of the grassroots coalition who carried the legacy of the progressive coalition.

With approximately three months between announcing his candidacy and the primary election, which forces within the progressive coalition, led this time by a Latino elected official, lead to the first mayoral runoff in Chicago history? Moreover, what does this experience have to tell about the progressive movement in the city? To respond this question, we examine primary and secondary sources, newspaper articles, campaign reports, demographic and historical data, and archival records to have a better understanding of the power dynamics both internal and external to this movement. We are using purposive and snowball sampling to identify key stakeholders (e.g., campaign staff and volunteers, elected officials, and city, state, and county employees involved in the coalition) to maximize a variety of interviews in examining how the progressive movement has been defined, what and who defines it, and how it is defined through the networks developed. By using an exploratory historical methodology of Chicago’s progressive movement, we aim to develop a critical narrative not only on the nature and dynamics of progressive planning in Chicago but, of the trajectory of progressive planning and its current status in Chicago, with references to other cities in the USA. This discussion is particularly timely for two main reasons: (1) as cities throughout the world are pushed into agendas of competitiveness, the possibilities of progressive planning to address the challenges of polarization associated with this agenda become particularly timely and urgent; (2) While updating the gap in the progressive planning literature between the 1980s and today, the paper seeks to explore the feasibility of agendas that make cities competitive by addressing this gap.

References

Key Words:
Planning History, Urban Political Movements, Progressive Planning, Chicago

ELLEN SWALLOW RICHARDS AND THE "SCIENCE OF RIGHT LIVING": HISTORICAL FOUNDATIONS FOR TRANSDISCIPLINARY ACTION RESEARCH IN URBAN ECOLOGY AND ENVIRONMENTAL JUSTICE FROM THE 19TH CENTURY

Abstract ID: 1272
Individual Paper Submission

WALSH, Elizabeth [University at Buffalo, The State University of New York] elizabeth.walsh@gmail.com, presenting author

Ellen Swallow Richards (1842- 1911) was a pioneering sanitary engineer, social reformer, and educator whose transdisciplinary action research addressed the coupled social and ecological crises of the rapidly growing industrial cities of her time. At a time when dominant narratives focused on subjugating nature, she recognized humans as part of ecological systems. She believed that if women were empowered through education in science and technology, they could develop a more responsible approach to economic growth. She established the field of Oekologie, or the "science of right living" to support communities in managing co-evolutionary social and ecological processes in dynamically changing, complex, home environments, from the scale of the household, neighborhood, city, and beyond. Richards is ostensibly the first accomplished female environmental planner, urban ecologist, and environmental justice advocate, yet her important contributions are typically overlooked in planning scholarship. Beyond the general tendency of planning history to omit the contributions of women and other “invisible” individuals and communities (Sandercock, 1998), it is likely that Richards has been often overlooked by individual fields because of the transdisciplinary nature of her work. At the time she developed her action-oriented, integrated approach to solving the complex problems of urban environments, academia was moving toward an emphasis on specialization and epistemic knowledge separated from context. Since she did not fit into any one discipline, few disciplines claimed her contributions as their own.

Indeed, the contributions of her action oriented research spanned across disciplines and beyond academia, including: establishment of the first water quality and pure food laws in Massachusetts; advancements in workplace safety and indoor air quality through research, design, and policy, access to nutritional, affordable meals for working families through the New England Kitchen for Working Families and school lunch programs; sanitary reforms advanced through the municipal housekeeping movement; expanded access to science education for women and public schools; establishment of the Woods Hole Institute (and guaranteed access for women scientists to its laboratory); and establishment
of the Women’s Laboratory for the Study of Food, Air, and Water at the Massachusetts Institute of Technology. At a time when planners are actively working to develop integrated, transdisciplinary models for transdisciplinary action research to support social and ecological resilience, Richard’s approach to research, action, and education is needed today more than ever.

This paper revisits the history of home ecology and the ideas and practices developed by Ellen Swallow Richards in order to offer insight into the challenges we face today in designing healthy communities in the face of wicked problems and disruptive change. Through her successes, we can see how key elements of sustainability science, environmental justice, social learning, and regenerative development can be integrated into collaborative action inquiry and design to advance environmental justice. Through the adversity she confronted, the limitations she experienced, and the demise of the paradigm she created, we can anticipate potential pitfalls in future efforts to take an integrated, collaborative approach to improving the social and ecological health of our home environments from the scale of the house to the planet. As we reflect on her experiences at the turn of the 19th century and our own experiences of disruptive change in the 21st century, we can reimagine our own theories, practices and possibilities for action inquiry and design to advance healthy and just development of our multi-scalar home environments.

References

Key Words:
urban ecology, environmental justice, transdisciplinary research, women in history, social ecological technological systems

THE PHYLLIS WHEATLEY CLUB OF BUFFALO, NEW YORK: AFRICAN AMERICAN WOMEN COMMUNITY BUILDING IN THE PROGRESSIVE ERA
Abstract ID: 1299
Individual Paper Submission

HALL, Enjoli [University at Buffalo] enjoliha@buffalo.edu, presenting author

One of the most significant stories in American urban history is the transformation of African Americans from a population rooted in the rural South to one overwhelmingly located in the cities of the North and West. Unfortunately, much of the writing about the relationship between African American communities and urban planning has focused on African American communities as passive victims of private actions and public policies; re-arranged in space by whites, rather than builders of place. Indeed, African Americans documented their situation, built indigenous institutions, and undertook initiatives designed to improve community life. For decades, these planning efforts were undocumented in the
annals of planning history. However, planning historians have made significant progress in the area of diversifying planning history, specifically with respect to the contributions of women and people of color (Sandercock; Thomas and Ritzdorf).

In recent decades, planning historians have recognized the work of African American women within the Black Women’s Club Movement and mutual aid societies as vital contributions to planning practice. This scholarship frames the work of Black women club movement leaders and white female reformers as predecessors to the social welfare state, while highlighting racial conflicts between the two groups and the unique contributions of African American women dedicated to moral and economic progress under the banner of a racial uplift ideology in the late nineteenth to early twentieth centuries (Scott; Dubrow and Sies). This paper builds upon that scholarship by adding the work of the Phyllis Wheatley Club, an African American women’s club active during the Progressive Era in Buffalo, New York. Formed in 1899, the Phyllis Wheatley Club instituted a variety of community social programs to address issues of housing and food insecurity, sanitation and health. In an age when women had no right to vote and African Americans had few rights at all, the Club was a testament to how community development was shaped, constrained, and resisted by African American women’s experience and thought. Through an in-depth case study of the organization using published histories, newspapers and periodicals, and autobiographies, this paper aims to understand physical and social forces, as well as interracial and intrarracial tensions, in the construction of African American women’s activism against urban inequality. The paper foregrounds the contributions of this Black women’s club to planning practice and scholarship. Second, the paper sheds light on the racial justice, people-based, and class-informed approach to planning that this Black women’s club employed. Finally, this paper complicates popular assumptions about similar Progressive Era movements and racial uplift groups.

Contrary to the twentieth century focus of much planning history, the significant contributions of African Americans to the material fabric and culture life of Buffalo, NY and other U.S. cannot be adequately represented by concentrating on post-1900 people, places, and events. The community work of the Phyllis Wheatley Club was forged by women who were active in abolitionist movements against slavery, lynching, Jim Crow and other forms of racial terror. An examination of the Club’s activities illustrates African American women’s organized response to the harsh urban inequalities that also inspired settlement house movements and public health campaigns, as well as their racist exclusion from participation in those concurrent movements.

Finally, while some African American women in Buffalo and cities across the country made a place for themselves in the white- and male-dominated institutional and social life of African American communities through the formation of women’s clubs, the women that comprised the leadership and ranks of these clubs were overwhelmingly middle class and well educated. In contrast, the principle beneficiaries of club programs and activities were lower-class women with little formal education. As a result, activities tended to emphasize morality over inequality and social service delivery over place-based transformations. The case study helps to trouble spatial, temporal, conceptual, and communal bounds in the planning history and to suggest more complex ways of how community members imagined both community and city.

References


Key Words: planning history, diversity, African American, women's clubs, community development

COMPARATIVE HISTORIC PRESERVATION IN THE MEXICO-UNITED STATES BORDER REGION: THE CASE OF CIUDAD JUÁREZ AND EL PASO
Abstract ID: 1354
Individual Paper Submission

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Historic Preservation in the Paso del Norte Region poses intricate challenges for an area that used to be a unit and that is currently separated in what now is, on one side, Ciudad Juárez, Chihuahua and, on the other side, El Paso, Texas. Within this geopolitical context, what is the urban history that needs to be preserved across borders? What is the urban planning that needs to be in place to preserve the shared history and heritage of this border region? This paper delves into two case studies in order to explore, compare, and evaluate the way historic preservation practices take place in both sister cities as well as how Mexican heritage is constructed on each side of the border. The first case study is Colonia Bellavista in Ciudad Juárez, which is considered the first urban settlement in the city. The second case study encompasses Chihuahuita and Segundo Barrio in El Paso, Texas. These neighborhoods face the Rio Bravo or Rio Grande, the river that naturally runs through the Mexico-United States borderline. Among the main challenges that communities in these neighborhoods have historically encountered are disinvestment, crime, discrimination of low income populations, lack of appreciation of vernacular architecture, and pressures over their precious land, as the areas in question are located in their respective downtowns. Lately, renovation and gentrification processes, and the return of capital investment into downtowns have led to demolition, eminent domain, and urban transformation. In 2010, Colonia Bellavista witnessed extensive demolition on the famous Mariscal street, the site of night clubs and bars that transborder communities used to visit. Meanwhile, Chihuahuita and Segundo Barrio are historical Mexican neighborhoods currently in danger of being displaced due to the scheduled construction of a arena. As these neighborhoods are closely intertwined in terms of history and population, this paper proposes a comparative historic preservation perspective that takes into account shared history and planning. This paper also proposes to think regionally and across borders when dealing with historic preservation in the Mexico-US borderlands. The history and the heritage of these neighborhoods contributes to the understanding of border historic districts, in times when a soon-to-be-built border wall will touch and face both neighborhoods, ignoring the shared urban history they represent.

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Key Words:
Historic preservation, Mexico-United States Heritage, Ciudad Juárez- El Paso, Colonia Bellavista, Segundo Barrio y Chihuahuita
PRE-ORGANIZED SESSION: HUMAN RIGHTS AND THE CITY
Proposal ID 1: Abstract IDs 44, 45, 46

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Land-use planning issues such as squatter settlements, greenfield development, and the siting of places of worship and residential care facilities in Canada, the US, Europe, and elsewhere have been contested on the grounds of human rights. Some examples of human rights violations are: a Toronto zoning by-law that defined a group home through its residents’ personal characteristics and required a minimum separation distance between group homes; an Abbotsford’s by-law (in Canada) that prohibited the homeless to sleep in public parks; a Delta's by-law (in Canada) that allowed only families to reside in secondary suites; demolition of informal settlements of Roma families and their evictions in many European cities; and denial of construction of mosques in several cities in Michigan, New Jersey and Tennessee. A legal challenge to a by-law provision could make the by-law legally void---as it did in a few Canadian municipalities like Abbotsford and Delta. In this session, presenters will share examples of documented and potentially new human rights violations at the municipal level and use them as a foundation to debate the idea of right to the city.

Objectives:
- to learn about human rights and how they apply to municipal planning
- to understand planners’ constitutional and quasi-constitutional obligations
- to find out how to analyze bylaws against human rights requirements

PRE-ORGANIZED SESSION: FREE SPEECH, SENSE OF PLACE, COMMUNICATION, ECONOMIC DEVELOPMENT: SIGNAGE IN THE CONTEMPORARY CITY
Proposal ID 28: Abstracts 322, 324, 325, 1375

AUFFREY, Christopher [University of Cincinnati] chris.auffrey@uc.edu, organizer
LOWERY, Bryce [The Ohio State University] bryce.c.lowery@ou.edu, proposed discussant

Signage serve a critical role in human settlements for free speech, public and private communication, wayfinding, economic development and creating a sense of place. Virtually every US city has sign regulations of some type, yet many are based on little more than whims and opinions, and seemingly unaware of the benefits of informed planning approaches. As a consequence, a number of ACSP schools are adding signage topics to their curriculum, and there is a growing body of signage-related planning research published in journals such as the International Journal of Signage and Wayfinding. A new organization, the Academic Advisory Council for Signage Research and Education (AACSRE) is composed of faculty from ACSP schools and elsewhere, dedicated to providing independent leadership for the development of new knowledge and educational experiences in order to advance the science, technology, art/advertising, and regulation of on-premise signage. This session will present emerging
planning research on the evolving legal issues of sign regulation, and the need for more informed understanding of context and place in the design and regulation of on-premise signage.

Objectives:
- Attendees will learn about the current issues in planning-related signage research, and their implications for the quality of life for urban residents.
- Attendees will learn about the current methods and technical tools being used in planning-related signage research.
- Attendees will learn about the current methods and technical tools being used in planning-related signage research.

PRE-ORGANIZED SESSION: SERIOUS GAMES FOR COLLABORATIVE PLANNING AND STAKEHOLDER ENGAGEMENT
Proposal ID 61: Abstracts 717, 944, 945, 946

SCHENK, Todd [Virginia Tech] tschenk@vt.edu, organizer
POPLIN, Alenka [Iowa State University] apoplin@mail.iastate.edu, proposed co-discussant
RUMORE, Danya [University of Utah] danya.rumore@law.utah.edu, proposed co-discussant

Papers in this session will examine the various ways in which we are using serious games to engage communities. Issues to be considered include: If and how serious games are really meeting our objectives; best practices in game design; the barriers to and opportunities associated with their use; the tradeoffs across various approaches to serious game design, including the use of game engines and other technologies; and the situations in which games may be more or less appropriate. Separate 'roundtable discussion' and informal brown bag demo sessions will complement these paper presentations, providing venues for more informal reflection and interaction. These sessions will bring together practitioners and academics using various styles of serious games in a variety of contexts.

Objectives:
- Survey the breadth and depth of serious games in planning
- Enumerate opportunities and challenges associated with using serious games
- Collectively advance best practices in using serious games

FRACKING AND ITS IMPLICATIONS FOR MUNICIPAL GOVERNANCE AND PUBLIC FINANCE
Abstract ID: 35
Individual Paper Submission

ZWICK, Austin [University of Toronto] austin.lewis.zwick@gmail.com, presenting author

The technological innovation of hydraulic fracturing drilling, commonly known as ‘fracking’, has revolutionized global energy markets overnight, but at the same time it has been accompanied by a lack of understanding of its local implications (Kay, 2011). The challenge for pre-existing communities, given that scholars (Jacquet, 2006; Christopherson and Rightor, 2015; Jacobsen and Parker, 2014) have found that natural resource extraction occurs in boom-bust cycles dependent upon volatile international markets, is what municipal governance and public finance challenges do local governments face? This is a particularly acute issue as resource extraction communities struggle with inadequate social and health
services to deal with overarching community crises of depression, family stress, violence toward women, and addiction issues (Shandro et al., 2011).

This paper (1) reviews the national and regional economic planning literature around boom-bust cycles, (2) conducts a policy review of overlapping governmental responsibilities on each scale, (3) discusses the expenditure risks and revenue streams to federal, state, and municipal governments, (4) outlines the common regulatory pathways and timelines that fracking has become regulated under, and (5) offers policy recommendations for planning purposes to local governments. The findings of this research show that the introduction of this industry is fraught with an imbalance of risks and revenues for municipal governments, while being ripe for intergovernmental disputes based on differing incentives on each governmental scale. The key issue is whether, and to what extent, do municipal governments have the governance and financial control mechanisms to effectively manage what is happening in their backyards.

References


Key Words:
public finance, governance, zoning, natural resources, boom-bust cycles

HUMAN RIGHTS AND MUNICIPAL PLANNING IN CITIES AND RURAL COUNTIES IN CANADA
Abstract ID: 44
Pre-Organized Session: Human Rights and the City

AGRAWAL, Sandeep [University of Alberta] sagrawal@ualberta.ca, presenting author

Municipal city plans and zoning by-laws in urban centres and rural areas across Canada do not always adhere to human rights legislation and the Canadian Charter of Rights and Freedoms (the Charter). Applying the human rights legislation to government action, including challenges to municipalities, is becoming a growing trend in Canada. Inconsistency with human rights legislation is a serious constitutional and legal violation and, above all, a moral issue. Little scholarly literature exists on the intersection of human rights and planning to help us better understand both the factors involved and how to ameliorate such occurrences.
In the US, Canada, Europe, and elsewhere, land-use planning issues have been contested on human rights grounds. Notable issues include squatters’ rights, approaches to greenfield development, property rights, the creation of “single-family” zones, and the siting of places of worship, emergency shelters, and residential care facilities. Unfortunately, the scholarly literature on planning and rights is dominated by a discussion of property rights (such as Alterman, 2010; Needham, 2006; Davy, 2012; Webster and Lai, 2003), but mostly does not take up the human rights aspect. Alexander (2002), however, does propose a rights-based approach to planning and plan evaluation, arguing that some planning rights are derived from constitutional or quasi-constitutional rights, but others are linked to a plan’s stated purpose or arise from the public interest. Fenster’s (1999) illustrates how men tend to dominate the use of urban spaces, which has potential human rights implications for other citizens.

Scholarly literature on planning and human rights specifically in Canada is also scarce, although there are some scattered related works over the last decade or so. A chapter in Makuch, Craik and Leisk’s (2004) book on planning and municipal law considers the Charter and land use regulation, but it does not address human rights legislation. A municipal law and human rights lawyer Leisk (2012) discusses the discriminatory nature of zoning from human rights and Charter perspectives. Others look at how neutral zoning instruments may discriminate against people with disability, limiting their access to housing (Finkler & Grant, 2011), or write about specific cases, such as the legal challenge to group homes in Toronto (Finkler, 2012). In the Zone (Ontario Human Rights Commission, 2012), promotes the need to view land use planning and appeals system, access to housing, separation distances, and zoning restrictions through a human rights lens. Finally, my own 2014 article considers Toronto’s zoning provisions related to group homes and develops a methodology to review a municipal by-law to determine whether it has infringed Charter and human rights legislation.

This research project systematically analyzes municipal documents, such as municipal plans and zoning by-laws, of four major cities and five rural municipalities across Alberta, Canada to evaluate their soundness in relation to the Alberta Human Rights Act and the Charter. A second, related project goes beyond Alberta and focuses on three large Canadian cities—Vancouver, Toronto and Montreal. The findings of both projects argue that policy-making at the municipal level must consider how planning affects persons protected by legislation and adjust accordingly to address potential discriminatory effects.

References


Key Words:
human rights, Canada, municipal planning, zoning, Canadian Charter of Rights and Freedoms
THE CONSTITUTIONAL RIGHT TO HOUSING: A GLOBAL SURVEY OF THE WORDING OF CONSTITUTIONAL DOCUMENTS

Abstract ID: 45
Pre-O rganized Session: Human Rights and the City

ALTERMAN, Rachelle [Technion - Israel Institute of Technology] alterman@technion.ac.il, presenting author
OREN, Michelle [Technion - Israel Institute of Technology] michelle.oren@gmail.com, co-author

The concept of "housing rights" is often conjured up by housing advocates, by planners, and by international agencies such as the UN or the World Bank. But what does this concept mean? The highest level of legal rights would presumably be constitutionally anchored. The research unveils, for the first time, how the entire set of the world's national constitutions treats housing rights. Countries around the world exhibit a variety of laws and public policies related to housing. At the same time there is a dearth of systematic comparative research on housing laws and policies, especially at the constitutional level.

A broad and systematic knowledge base on existing practices of constitutional housing rights is needed in order to develop instruments for the evaluation of practices and existing legislation. In fact increasing knowledge on the existing provisions of the right to housing and on constitutional legislation could serve as a tool to promote further enactment of policy in the area of housing and greater social justice.

The paper will discuss whether there are any identifiable patterns over time in the increase or decrease of the proportion of constitutions with housing rights. Do nations that have adopted constitutional housing rights have some factors in common, compared with nations that have chosen not to adopt them?

The research data is based on a survey and content analysis of all 205 national constitutions available in English (including 188 UN member states). Several hypothesized factors are proposed for statistical analysis: Changes over time, geo-political events, socio-economic differences, and affiliation with different legal-cultural traditions. Most of the findings are counterintuitive, showing no statistically significant correlations. Thus, popular assumptions about likely correlations are shown to be (likely) wrong. There may be many intervening or confounding variables, and current thin layer of knowledge falls far short from providing explanations. The authors hope to raise other researchers’ appetite for more research and theory building.

References

Key Words:
housing rights, housing policy, constitutional rights

THE LOCAL: INFRASTRUCTURE AND HUMAN RIGHTS
In today’s political climate, the guardianship of human rights often devolves into the hands of local governments. Yet many cities and counties, and the planners and engineers who serve in them, have little practical notion of how traditional local planning and engineering processes can bear upon human rights. This talk explores the ways in which municipal planning and engineering design processes intersect, both positively and negatively, with human rights.

The recent rise of sanctuary cities is but one example of local jurisdictions embracing human rights as core value. Other aspects of city life, like equality and the rights of the disabled, long championed at national levels, are also increasingly important at the local level. Yet, many cities that have embraced human rights as a singularly important element of city life do so with only the vaguest sense of how the details will eventually play out in the planning and engineering processes.

In this talk, I will synthesize how major infrastructure decisions are made in urban landscapes, generally outlining the planning and engineering processes associated with them. I’ll explore how patterns of policy deliberation intersect with engineering implementation, with the framework of human rights as a backdrop. I’ll use several case studies to show how cities adopt, defend and ultimately depart from human rights as central principle of life in the city with the hope that a more robust and considered approach might yet evolve.

References

Key Words:
human rights, cities, infrastructure

AN EVALUATION FRAMEWORK FOR URBAN SCENARIO PLANNING
Abstract ID: 269
Individual Paper Submission

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Urban scenario planning refers to the adoption of a family of methods by professionals to create plans which describe a set of plausible futures in order to better consider future uncertainty and identify robust strategies. In recent years, scenario planning has grown in popularity as cities face uncertainties associated with climate change, technological development, and demographic shifts (Chakraborty and McMillan, 2015; Bartholomew, 2007). However, the evaluation of these methods has lagged behind their adoption. Improved evaluation of scenario planning would clarify its benefits, as well as help practitioners understand how to tailor scenario planning methods to particular contexts. This paper presents a novel evaluation framework for urban scenario planning, and presents the empirical results from six cases where the framework has been applied which will be completed in Summer 2017. Since
scenario planning projects vary significantly in their structure, tools, and outcomes, the case selection is guided by the typology developed by Chakraborty and McMillan (2015).

Evaluation research in urban planning has typically examined the characteristics of plans, as well as whether plan’s contents are implemented (e.g., Brody and Highfield, 2005). However this approach is inadequate for an evaluation of scenario planning for two reasons. First, scenario plans often contain strategies, goals, or contingent actions which are not simply implemented like policies or proposals contained in other types of plans. Second, scenario planning achieves impacts not only through the resulting plan, but also potentially through more widespread learning by project participants, which may result in actions and decisions beyond those described in project plans.

Therefore, his project looks to the management literature on scenario planning for guidance for evaluating this type of outcome. Chermack (2003) argues that the performance of scenario planning can be measured at multiple levels: individual, process, and organization. At each level, Chermack proposes different evaluation measures: economic, psychological, and system. Zapata (2013) adopted a portion of this framework for her qualitative evaluation of the Valley Futures Project in California, which examined individual and organizational outcomes, since in planning the economic returns to the sponsoring organizations are not a primary goal. The proposed framework expands on Zapata's work to incorporate additional factors. The paper will propose evaluation instruments—primarily survey questions and interview protocols—and will present the empirical findings from the cases where they have been piloted. These are four planning projects funded as part of the Austin Sustainable Places Project, and two projects which utilized exploratory scenario planning methods, the Sahuarito General Plan and the City of Denver Denveright.

References


Key Words:
scenario planning, plan evaluation, implementation

DOES ANYONE SEE THE SIGNS?
Abstract ID: 322
Pre-O rganized Session: Free Speech, Sense of Place, Communication, Economic Development: Signage in the Contemporary City

AUFFREY, Christopher [University of Cincinnati] chris.auffrey@uc.edu, presenting author
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This study sought to answer questions about the extent to which on-premise signs (OPS) along US roadways attract the attention of passing motorists, based on a sample of OPS and roadway contexts captured in photo images from along the 3,073 mile length of highway US 50. 3M’s Visual Analysis Software (VAS) was used to predict the probability that the selected OPS would be viewed by passing motorists. Results show that the average probability of an OPS being viewed was about 57%. These results are consistent with early research of motorist detection of on-premise signs in real-world contexts. The findings suggest that a substantial proportion of the on-premise signs along roadways in the US are not being viewed by motorists, and both the businesses and their communities are foregoing the benefits that more effective signage would provide. This study also sought to determine whether the OPS of national and regional businesses are better able to attract the attention of passing motorists compared to the OPS of locally-based businesses. Finally, VAS was found to provide quick and inexpensive objective analysis of OPS in real-world contexts. Future research is needed to develop advanced protocols for the use of VAS in analyzing OPS in complex environmental contexts.

References

Key Words:
On-premise signs, Probability of viewing, Visual Attention Software

LEGAL CONSIDERATIONS IN SIGN CODE DEVELOPMENT
Abstract ID: 324
Pre-Organized Session: Free Speech, Sense of Place, Communication, Economic Development: Signage in the Contemporary City

WEINSTEIN, Alan [Cleveland State University] a.weinstein@csuohio.edu, presenting author

Because sign codes implicate both expression that is protected under the First Amendment of the U.S. Constitution and property rights protected under the Fifth Amendment, legal considerations are critical in developing sign regulations. Further, state statutory and constitutional law may also need to be considered in developing sign regulations. This paper explored those considerations.

While issues concerning the property rights aspect of sign regulation have remained relatively constant for some time, that is decidedly not true as regards considerations involving rights of expression guaranteed by the First Amendment. In particular, the U.S. Supreme Court’s 2015 decision in Reed v. Town of Gilbert, AZ, has dramatically altered how courts analyze sign codes to determine their constitutional validity. This paper will identify and analyze how Reed has altered court review of sign codes and provide suggestions for how sign codes should be developed to ensure compliance with Reed
while also achieving their purpose of furthering a community's goals, including aesthetics, traffic safety, way finding and economic development.

References

Key Words:
Sign Regulation, First Amendment, Zoning, Wayfinding

LETTER FORMS AS COMMUNICATIVE URBAN ARTIFACTS FOR SOCIAL NARRATIVES
Abstract ID: 325
Pre-Organized Session: Free Speech, Sense of Place, Communication, Economic Development: Signage in the Contemporary City

RAHMAN, Muhammad [University of Cincinnati] rahmanmd@mail.uc.edu, presenting author
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Words, type and letters as signs and artifacts have an immense promise to revitalize, categorize and resonate meaning in the urban environment. The art and conception of letterform can be traced back to ancient times where the duality in art form and communication co-existed in the Egyptian hieroglyphs (Jean, 1992). As a pragmatic tool of communication, designers today use environmental typography in urban spaces—by employing scale, wit, and materiality—to brand expressions, to evoke meaning, spectacle and even resistance. Type in itself is an art form, providing immense pleasure to the everyday observer, reader, and spectator. We experience the throbbing presence of an array of readable messages in the urban environment, be they on street signs, audacious billboards, on-premise signs on businesses, branding on buildings, temporary signs, and a host of others. Signs can be found sprinkled across the urban landscape, to make us notice, to warn us, and to help us navigate. But signs could also be used to convey important social and cultural messages that deal with awareness, interaction, and values. In this paper, we question how typographic expression in urban scale can be revitalized to express and translate social messages as a communicative tool in society. We ask, how can we deliver urban communication regarding social issues in Cincinnati using urban letterforms as social artifacts? Using urban typography—through its legibility, form, character, and scale—we propose a powerful graphic vocabulary to articulate complex social issues and social narratives of the community in a city.

Researching the social history of Cincinnati, we find that the city has a prolonged history of social issues including racial segregation, poor public health, high child mortality, unemployment and numerous other societal problems (Maloney and Auffrey, 2013). Cincinnati is divided into several diverse communities, where the social characteristics and needs of these communities vary drastically, and often draw stark boundaries between neighborhoods. Yet, there are some common spaces, such as the century old park system or the newly implemented street car route, that the city residents collectively identify with. We use these common spaces, in this case the streetcar transit stops, as the places of urban communication for the various community messages. Using demographic information from census, local health data, and other sources, we show how the letterforms and types in such collective public spaces have the potential to create a dialogue between people of different neighborhoods and
In the second phase of the research, we plan to engage with the residents of individual neighborhoods and conduct workshops to generate and collect social narratives. The process is intended to make residents think critically about their issues and ownership. We expect that individual and community voices would interfere, even criticize and most importantly, evoke realization and reinterpretation of the image of Cincinnati—which might also educate and promulgate values to mitigate the segregation and social issues in the city.

This project has several implications for planning. With environmental communication, as ‘social capital’ (Cue, 2014), urban typography can play an important role in fostering urban regeneration, can play a vital role in signifying educational value (Huerta, 2011), and as direct and interactive modes of social communication. Apart from traditional mediums, urban typography has been popularly used as a hybrid tool to influence the visual narrative, and as a vehicle for impact of social voice in the urban milieu (Heller and Ilic, 2013). To address and comprehend difference between neighborhoods, urban typography can communicate a neighborhood’s societal aptitude and trigger an urban discourse.

References

Key Words:
urban communication, community messages, social narratives, letterforms, public art

INNOVATION IN PARTICIPATORY PLANNING: POLITICOVOICE AS AN EMERGING TOOL FOR RESEARCHERS AND PRACTITIONERS
Abstract ID: 409
Roundtable

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Photovoice is an established community-based participatory research method that has great potential as an innovative approach to engage and empower community members in planning research and practice. It engages community members as experts and invites them to photograph their environment and use those images to tell the story of an important aspect of their everyday life (Wang 1997). There are three general goals: 1) to record personal reflections about the strengths, concerns, and priorities about one’s community; 2) to promote knowledge and critical group dialog about important community issues through group discussion of the photos; and 3) to reach policy makers and inform policy (Wang 1997).
A recent literature review by Powers and Freeman (2016) on the use of Photovoice in social and environmental justice research highlights its benefits such as increased trust, inclusion of marginalized groups and meaningful decision-making. While reported usage of Photovoice is growing in public health, community development, and environmental management (Berbes-Blazquez 2012; Nykiforuk, et al, 2011; Beebeejaun, et al, 2014), it has received little attention in mainstream planning journals. Yet, at least seven abstracts for the ACSP 2016 conference reference Photovoice signaling its emergence as a qualitative research and engagement method amongst a small group of scholars within the planning academe.

This roundtable brings together planning academics currently using the method to discuss their experiences. This will include a discussion of the projects in which they are using the method, how they set up research designs with communities, lessons learned about the practical challenges using the method, as well as experiences writing for planning research audiences. The roundtable will discuss the opportunities the method provides to planning academics as well as begin a conversation on best practices for publishing.

As the planning discipline continually searches for ways to engage communities through innovative participatory methods, Photovoice holds potential as a new tool to engage and empower everyday users of urban environments in research design, data collection, data analysis, and policy development. As such, the round table seeks to elevate exposure to the method and begin the process of establishing it in the cannon of participatory planning methods.

References


Key Words: Public Participation Processes, Civic Engagement, PhotoVoice, Environmental Justice, Planning Methods

INCORPORATING PUBLIC HEALTH INTO LOCAL CLIMATE ADAPTATION PLANNING: FACE-TO-FACE ROLE-PLAY SIMULATIONS AND ONLINE GAMES IN CAMBRIDGE, MA

Abstract ID: 717
Pre-Organized Session: Serious games for collaborative planning and stakeholder engagement

KIM, Ella [Massachusetts Institute of Technology] ella@mit.edu, presenting author
As cities are increasingly experiencing climate change impacts, many are starting to include climate considerations in their master plan updates (Bierbaum et al., 2013; IPCC, 2014). Climate change adaptation research to date has mostly focused on how cities can protect their physical assets from potential hazards and disasters (Hughes, 2015). The experiences of early adapter cities show that local governments face significant barriers to formulating and implementing climate adaptation plans. These include competing policy priorities, limited authority over infrastructure and social service systems, and the lack of clear roles and responsibilities for climate adaptation at the national, state, and local levels (Aylett, 2014; Carmin, Nadkarni, & Rhie, 2012; Moser & Ekstrom, 2010). In the face of these obstacles, cities are unlikely to successfully implement climate adaptation policies without widespread public support. Therefore, cities must find ways to enhance the salience and the legitimacy of their climate adaptation policies in the public eye (Hughes, 2015; Susskind & Kim, 2015).

Engaging the public in climate change adaptation planning is both a theoretical and practical challenge for cities (Hughes, 2015; Susskind et al., 2015) while we have typically framed climate change as a set of environmental concerns, alternate frames that highlight other implications resulting from climate change on public health, national security, and economic development have been shown to be more effective at engaging multiple publics than the more traditional environmental frames (Maibach, Nisbet, Baldwin, Akerlof, & Diao, 2010; Myers, Nisbet, Maibach, & Leiserowitz, 2012; Nisbet, 2009). More importantly, even publics that are dismissive of climate change find information presented on the public health implications of climate change to be salient and legitimate (Cash et al., 2002; Folke, Hahn, Olsson, & Norberg, 2005; Leiserowitz, Maibach, Roser-Renouf, Feinberg, & Howe, 2013; Maibach et al., 2010).

The public health framing of climate change emphasizes the potential of climate change to increase the occurrence of health problems that are already perceived as important, such as infectious diseases, asthma, allergies, and heat stroke (USGCRP, 2016). The public health frame also heightens the geographic proximity of impacts, by substituting conceptions of remote regions and abstract populations with one’s own neighbors and places. In the process, the public health frame makes climate change easier to understand, while increasing its salience and legitimacy (Cash et al., 2002; Frumkin, Hess, Luber, Malilay, & McGeehin, 2008; Maibach et al., 2010; Nisbet, 2009).

Face-to-face role-play simulations (RPS) and online games are also potentially powerful tools for public education and engagement (Rumore, Schenk, & Susskind, 2016; Wu & Lee, 2015). While fields such as cognitive psychology, communications, and public opinion offer prescriptive advice on enhancing public understanding of climate change, concrete applications of this advice in local climate adaptation contexts are hard to find. There are serious games aimed at increasing awareness of climate change, but games that engage participants in learning about the health impacts of climate change are also rare. Furthermore, how these two tools cities can use to engage the public in climate adaptation planning: face-to-face role-play simulations (RPS) and online games to enhance the salience and legitimacy of climate adaptation policies is unclear. This project will analyze the effects of face-to-face role-play simulations and online games - both with an emphasis on the health impacts of climate change - on cognition, affect, and behavior in local climate adaptation planning.

References

Fostering community capacity to adapt to wildfire is critical to addressing the national wildfire crisis. However, fire suppression still remains the overwhelming focus of research, resource commitment and management action (Fischer et al. 2016). This paper will explore how efforts to transform our management regime from agency-led fire suppression to community fire adaptation regime is caught within a paradox of two system traps, and consider how an innovative planning approach can help resolve this paradox. The first of these traps is the rigidity trap, which inhibits adaptive capacity by maintaining high levels of human and physical resources, high internal connectivity, and high resistance to external disturbance (Carpenter and Brock 2008). Rigidity traps are commonly created by durable, self-reinforcing, and inflexible bureaucracies that become resistant to the types of innovation and learning that would otherwise enable them to adapt in response to crisis. The Fire Learning Network (FLN) is a collaborative initiative that offered the potential to spring this rigidity trap by developing a new approach to fire restoration by initiating common planning processes among a nationwide network of fire managers (Butler and Goldstein, 2010). FLN created the potential for a new wildfire management regime to emerge by introducing flexibility, innovative ideas, and enthusiasm to pursue change.

However, this opportunity for change remains largely unfulfilled, since communities have made modest headway in developing fire-adaptive capacity despite many programmatic efforts to provide assistance, such as Community Wildfire Protection Plans, Firewise, and ‘Ready, Set, Go’ (Abrams et al 2015). I suggest that these programs have been largely unsuccessful because they do not support community capacity building across socially and ecologically diverse settings. Addressing their needs requires addressing the second kind of system trap, called a poverty trap. Poverty traps operate very differently from rigidity traps, inhibiting adaptive capacity by maintaining low levels of human and physical resource, low internal connectivity between individuals and communities, and high susceptibility to shock and stress (Carpenter and Brock 2008). Poverty traps occur when there are constraints on a system such as lack of resources or powerful vested interests that limit capacities to act and advance on new possibilities and ideas. This underscores the paradox inhibiting system change in wildfire management: efforts to apply the institutional strengths of fire agencies to enhance community capacity may actually sustain the weakness of a community-based adapted wildfire regime. This is an unintentional and powerful reinforcing feedback loop.
Over the past four years I have been studying the Fire Adapted Community Learning Network (FAC Net), which is focused on enhancing adaptive capacity within communities with high wildfire risk. I will explore how FAC Net is subtly different than the FLN, focusing specifically on how FAC Net addresses the three aspects of a poverty trap through communicative planning within and between participating communities as well as across organizational scale, creating new kinds of partnerships between communities and national fire agencies. In discussion, I will apply Canguilhem’s (1978) distinction between the way individuals and collectives experience normal and pathological health to describe how springing a poverty trap at the community scale is fundamentally different than springing a rigidity trap at the national scale. As with the concept of health, community fire adaptation is irreducibly qualitative – not statistical or even probabilistic, but associated with intentionality, the ability of a community to creatively and flexibly adapt to changing circumstances, within diverse, variable and changing social and ecological settings. I will conclude by reflecting on how the FLN and FAC Net work in tandem to solve the paradox of two system traps and enhance capacity for transformation by reducing institutional resistance to change and supporting emergence of a new community-based wildfire management regime.

References


Key Words:
Networks, Adaptive Capacity, Communicative Planning, Resilience, Wildfire

APPROACHING NEGOTIATIONS IN URBAN REDEVELOPMENT: A MULTIPLE CASE ANALYSIS OF COMMUNITY-STAKEHOLDER INVOLVEMENT IN BONUS ZONING AGREEMENTS IN TORONTO, CANADA

Abstract ID: 869
Individual Paper Submission

BIGGAR, Jeff [University of Toronto] jeff.biggar@utoronto.ca, presenting author

This paper explores the process of public-private deal making in planning negotiation at the neighbourhood scale. Cities increasingly approve development projects that exceed zoning permissions, conditional on developers providing affordable housing and community facilities, among other public benefits. The related practice of ‘density bonusing’ is on the rise in Toronto, where planners and councillors negotiate community amenities in return for providing developers with additional height and/or density. The concept of negotiation has received extensive attention in the planning literature, however, negotiations in multi-actor urban redevelopment projects are less understood (Baarveld et. Al,
More specifically, little research has investigated how incentive-based mechanisms (i.e. ‘density bonusing and ‘planning gain’) are negotiated between actors, such as developers and local politicians (Fox-Rogers & Murphy, 2015).

This paper addresses how planning standards aimed at negotiating ‘community benefit agreements’ may differ from what transpires in practice. To explore these associations, the paper draws on two case studies from Toronto: a downtown district home to multiple entertainment venues and a high number of residential condominium projects; and, an arts and culture district developed out of a series of urban regeneration projects in an area west of the downtown. Twenty-four qualitative interviews with government (city councillors, planners, city staff) and non-governmental actors (developers, residents, citizens’ groups, BIAs) were conducted. In examining the cases, the paper demonstrates that local stakeholders mediate between informal and formal channels of the planning process to influence deal making in negotiations. Both case studies demonstrate how select actors leverage negotiations to ensure their aspirations and values are acted upon. Local groups self-generate plans that made rhetorical appeals to broader planning paradigms (i.e., smart growth), while using their wherewithal to build bargaining power in the planning process.

The findings demonstrate that negotiations impact the planning process based on the competency and attitude of city councillors, developer type and interest, level of flexibility, and the planning savviness of outside groups. Ultimately, Toronto’s development control model of discretionary decision-making is a central explanatory factor regarding variability in process and outcome. Considering the research, the paper improves understanding of how density bonusing, and related incentive-based planning instruments, function between regulatory procedures and the broader realm of urban governance. The perceived reality of project-specific negotiations is that they are carried out by professional planners and unfold uniformly under the regulatory parameters of the planning process. In practice, however, negotiations are much more informal and ad-hoc, negate a formal public process, involve a wider range of actors, and take place in different settings (i.e., over the phone or lunch). The variability of negotiations raises questions for planners when strategizing how to create the most public value from private urban redevelopment.

References

Key Words:
- negotiations
- density bonusing
- zoning
- urban governance
- community benefits
Role-play simulation (RPS) exercises and other varieties of serious games have been promoted as means to engage multiple stakeholders and help them to collaboratively work through complex planning challenges, like how they might integrate climate adaptation into the planning and management of their infrastructure systems. An RPS exercise was used as part of the Harboring Uncertainty project to rapidly yet vividly introduce new issues, bring stakeholders together, and provide opportunities for experimentation and dialogue in three cities - Rotterdam, Singapore, and Boston. One goal of this project was to assess the use of RPS exercises as a relatively novel approach to action research. Harboring Uncertainty participants were given a shared hypothetical challenge, assigned roles other than those they fill in the real world to facilitate perspective-taking and provided both shared general and role-specific confidential instructions to frame the issues and outline their interests and perspectives. The challenge presented in the exercise is a proposed highway project in the final approval stages that has been complicated by the release of new information on the potential impacts of climate change. Rather than ignoring these new threats because of the associated uncertainties and absence of clear guidelines in the regulations and norms traditionally followed, the transportation agency in the fictitious case has decided to assemble various stakeholders to collaboratively consider how they might respond. These include local and national policy-makers and technical experts from various agencies, and non-governmental actors from the environmental and port industry communities. Parties are challenged to consider potential climate threats and possible responses, including issues of uncertainty and responsibility while protecting their various interests.

This paper presents the findings from the Harboring Uncertainty project, which suggest that RPS exercises can provide valuable insights and learning opportunities. Participation led to statistically significant increases in participants’ recognition of climate risks, recognition of uncertainty as a factor, and confidence in their ability to manage risks and uncertainties. Participation also increased the importance participants place on engaging with others, heightened awareness of their interdependencies, and enhanced recognition of the need to account for various interests and priorities in decision-making. Participants reported enhanced appreciation for the importance of good process design and effective engagement in deliberations. From a research perspective, the paths the various groups that played the exercise followed, which were video recorded and coded for analysis, and outcomes they reached yielded various insights. Furthermore, the exercise served as a valuable inflection point that informed the debrief conversations and individual interviews that followed. This paper examines these findings and provides guidance on how researchers, consultants, community officials and others might employ RPS exercises, and other types of serious games, in their planning processes and research. It is also honest about some of the shortcomings and challenges that require attention when exercises are being used.

References

THE SERIOUS POTENTIAL OF FUN GAMES

Abstract ID: 945
Pre-Orgnized Session: Serious games for collaborative planning and stakeholder engagement

BARCHERS, Camille [Georgia Institute of Technology] camille.tigerlilly@gmail.com, presenting author

This paper examines the relationship between game playing and social learning in public participation activities and whether and to what extent participants demonstrate enhanced collaborative decision making (collective intelligence) as a result of engaging with one another via an online game. This research demonstrates how online gaming can create opportunities for social learning—highlighting the potential of Internet Communication Technology (ICT) to advance public engagement activities. The purpose of this research is to demonstrate how planners might practically and intentionally design small group activities to enhance public participation exercises, develop the abilities of participants to contribute at a higher level, and take advantage of ICT to advance collaborative planning theory in practice. Literature from collaborative planning theory, organizational behavior, and game theory is used to explain the importance of social learning, identify the potential for games to be used as a team building intervention, determine how interventions can be deployed in practice, and demonstrate the ability of games to change team behaviors in measurable ways that have been successfully used to predict team performance.

By using an experimental research design to test public participation methods, this research provides new perspectives on public participation and civic engagement. The impacts of this research are important not only for planners, but for all institutions that rely on collaborative decision making and need to understand group processes. This work advances the collaborative planning literature by defining specific and applied methods that planners can use to achieve important intermediary goals such as social learning, but also because it demonstrates the basis for claims that social learning is a significant variable that leads to other beneficial outcomes, previously only theoretically hypothesized. Participants were organized into 40 groups of teams and either received the treatment (online game playing) or the control (no game playing) and were then asked to collaborate on making decisions regarding a planning challenge. We measured whether or not they experienced social learning, and the extent to which they achieved consensus and demonstrated a high level on collective intelligence during deliberations.

References

Key Words: engagement, social learning, games, deliberation, ICT

USABILITY OF THE ENERGY GAME E-FOOTPRINTS: EMPIRICAL RESULTS

Abstract ID: 946
Pre-Organized Session: Serious games for collaborative planning and stakeholder engagement

POPLIN, Alenka [Iowa State University] apoplin@mail.iastate.edu, presenting author

Introduction
Games may be used in different stages of urban planning processes; in the phases of involving the citizens into planning activities and exploring the current situation in the neighborhood and/or a city. Recently, several online games for urban planning have been developed and they aim at supporting and enhancing urban processes. These newly developed online game-based tools and mechanisms can be used for the presentation of urban plans, 2D and 3D visualization (Gordon and Manosevitch 2010), civic engagement and public participation (Poplin 2012, 2014), or for spatial collective reflection about the planning proposals (Devisch et al. 2016).

The main goal of this paper is to present the newly developed online energy game e-footprints and the results of the user interface evaluation executed with over 100 international university students. The serious game e-footprints concentrates on reflecting and learning about energy consumption and savings in a built environment. It takes the player into an interactive simulated home environment where the player can regulate the conditions of this environment; set up the room temperature, open/close the window, turn on/off the air conditioner. Random events and wisdom puzzles make the game playful and challenging. Random events are randomly generated and represent real-world situations, such as a heat wave, a cold snap, or a significant energy bill increase. Figure 1 shows the situation of an extreme heat random event. Wisdom puzzles are learning tools and mechanisms which help the player to explore topics related to energy and learn novel ways of saving energy in their home environments.

Research questions and research methodology
We are interested in the usability of the developed online serious game e-footprints, its aesthetics and visualization. Can the users easily understand how to use the game, what is the meaning of different
items of the games’ user interface, what can they accomplish playing the game online? Do they aesthetically like the graphics and visualizations?

In order to explore these questions, we conducted an online survey. We involved 110 international students into the experiment in which we showed four pictures of the user interface and asked them a set of questions related to the visualization, aesthetics and usability of the developed game prototype.

Key Findings
The evaluations of the usability were very positive; most of the students seemed quite confident that they would know how to use the energy game e-footprints. The user interface seem to be interactive and user friendly. The main critique was related to the visualization and aesthetics of the presented images. The students suggested an implementation of a 3D visualization, a possibility for a 360 degrees view, a more interactive room with drag&drop options for objects, a more realistic visualization of the room, and some changes in the arrangements of the furniture and other objects in the room. We realized that we need to hire a professional designer to substantially improve the graphics of the images. User interface as presented in Figure 1 is already the result of some of these revisions. We conclude the paper with a summary of the key findings useful for other engaging online serious urban planning games.

References

Key Words:
online game, energy, civic engagement, usability

ZONING FOR CLIMATE CHANGE: LEARNING FROM LEADER SUBURBS
Abstract ID: 989
Individual Paper Submission

DEWEY, Dorothy [West Chester University] divesdewey@wcupa.edu, presenting author

A growing number of local communities in the United States are stepping in and playing important roles in multi-level efforts to address climate change. With regulatory pressure coming off at the federal level, the responsibility for combating climate change will shift to the state and municipal levels where local planners will have to become a lot more adept at reducing greenhouse gas emissions. While there has been growing attention to the role of cities in responding to climate change, there has been relatively little attention to the role of suburbs. A broader research agenda of climate change and suburbs is, however, beginning to emerge. This research contributes to this agenda by examining and assessing the role of zoning in addressing local climate goals. The majority of the U.S. population resides in the suburbs and a high degree of land use control is vested in local suburban municipalities. Many of the potential measures to mitigate and adapt, including land use regulations, building codes, and protecting
and maintaining critical infrastructure, are in the purview of local suburban governments. Using four Pennsylvania counties in suburban Philadelphia as the study area, this research investigates 12 local suburban municipalities and their efforts to use zoning regulations to achieve climate goals. Four climate principles are identified and nearly 25 associated regulatory tools that could be incorporated into a zoning ordinance to achieve climate goals. The 12 municipalities were selected because of their demonstrated a commitment to climate planning. The preliminary review of the zoning indicated some consistency but also wide variation in how zoning ordinances were used to address climate goals. While all the communities studied are considered suburban, individually they represent variation in patterns of settlement. A key premise of this research is that effective climate planning and regulatory strategies will vary by the location and characteristics of the suburb. A suburban typology, unique to the region studied, was developed to differentiate among categories of suburbs. All the suburbs selected had taken some regulatory steps towards climate mitigation and/or adaptation, but the emphasis and form of selected measures varied among the different kinds of suburbs. With the range of options at multiple scales that suburbs can employ, suburban differentiation is important to determine which zoning approaches will be the most effective and feasible and suitable to local conditions. In the absence of top-down mandates requiring suburbs to mitigate their emissions, it's important to identify other ways to foster local action. This review of local suburban zoning ordinances across different types of suburbs can identify and inform suburban planners to locally-appropriate ways in which zoning can be used to achieve climate goals.

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Key Words:
climate planning, zoning, suburb, land use regulation, sustainable development

BOTTOM-UP RURAL PLANNING PROCESS RESEARCH
Abstract ID: 1139
Individual Paper Submission

ZHANG, XinXin [College of Architecture and Urban Planning, Tongji University]
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In China, rural planning is always mainly dominated by local government which is called Top-Down planning. On the other hand, more and more plannings are promoted by civilian power that is called Bottom-Up planning. Top/UP means the governmental power and Down/Bottom represents the ordinary people or organizations. But in recent years, the situation has changed a little as more and more people,
who have different backgrounds and purposes, join in the rural planning process. These people are either living in the rural area or willing to live in rural in the future etc. Because of the multiple participation, rural planning process in China is much more complex than the conventional urban planning process that has been used in China for a long time. Meanwhile, Chinese rural area itself has more intricacy problems than the city area, such as the land property and the collective assets etc. Therefore the purpose of this research is to explore and discover the proper methods and process for the Bottom-Up Rural Planning compare to the government-leading planning.

In this research, in order to study different types and degrees of Bottom-Up Rural Planning Process and planning methods, three rural planning happened in different places have been chosen and focused on. These three Bottom-Up Rural Planning have different beginning reasons, different investigate and survey methods, and even the constitute members who finally participant into the plannings are far more different.

The first one is in Guizhou Province, southwest of China. The planning area is at the foot of a famous mountain which is a religious and tourist resort. Because of the tourism development, this area is facing the problems of protecting nature resource and agricultural transformation. The local people and the local government both do not know what to do and how to do. So the planning is beginning with the widely investigation from the bottom people who live there for generations and discuss with them together to solve the problems.

The second Bottom-Up Rural Planning happens in Zhejiang Province, east coast of China where it is much more rich and better-developed than the place where first planning happened. Their problem is not the agricultural transformation, for they have finished the transformation from the agriculture to the planting many years ago. But along with the downturn of Chinese real estate, their planting incomes begin to have a dim view. In the planning process, during the Bottom-Up survey and discussion, the social capital come out and become the main driven force for the planning.

Then at the third Bottom-Up Rural Planning, which happened in Fujian Province, the social capital eventually dominated the planning. The social capital of the rural area have the strong wish to donate to their homeland as their parents and relatives are still living in the village and they want to go back home when they are old. So they established a group to support the rural planning persistently.

In conclusion, three Bottom-Up Rural Planning Process reflect there develop process of Chinese society. In different process, different planning methods need to be used. And during the Bottom-Up rural planning process, more realistic problems about rural area emerge from the under-earth and also more solving paths and strength come out.

References

Key Words:
Bottom-Up, Rural Planning Process
Planning in the face of impending natural hazards, either sudden (e.g. earthquakes) or incremental (e.g. climate change impacts on flooding, sea level rise, etc.) is challenging given uncertainties and competing demands. Social and national resilience in the face of such events depends on effective preparedness, and on strong, caring and connected communities. Engagement processes can advance the creation of both and, as such, they are important tools for achieving resilience. Recent literature, both academic and professional, has stressed the importance of community and stakeholder involvement before, during and after disaster. Goldstein (2012) looks at the challenge of creating safe space in which people can learn together and reinvent their communities, even in complex circumstances. He concluded that when people in crisis feel connected and collaborate, they can better deal with threats and disruptions to social practices and relationships. Collaborative planning processes help to strengthen social relationships, which the disaster preparedness field is recognizing as increasingly important. The push is to involve the community in disaster management, to actively include citizens in government work and decision-making, as well as to move regulatory agencies to operate in networks (FEMA 2011; 2013). This is sometimes referred to in the literature as a “whole community” or “whole-of-society” approach to disaster management. According to FEMA’s guide entitled “A Whole Community Approach to Emergency Management: Principles, Themes and Pathways for Action” the principles of this approach include understanding and meeting the needs of the community, engaging and empowering all sectors of the community, and strengthening what works well in the community on a daily basis. These principles are echoed in other professional and academic literature on disaster preparedness and management. The FEMA Local Mitigation Planning Handbook (2013) describes the outreach strategy for disaster planning as having three tiers: the planning team, stakeholders and the public.

The push to involve the community in disaster management reflects the broader phenomena of new governance, which seeks to actively include citizens in government work and decision-making (Kim, 2013; Masterson, 2014), as well the move for regulatory agencies to operate in networks. The question has largely moved from: if communities should be engaged, to: how to effectively engage the public and the numerous stakeholders in the disaster management process.

The question of how to engage people before a disaster happens – particularly when the threat is not perceived as ‘ripe’ in the eyes of the non-scientific community – is challenging. This research combines what we know from collaborative planning processes and disaster management planning to build resilience. It has three foci:

1) explore the elements of resilience (using Cutter et al’s Disaster Resilience of Place (DROP) framework and index) that should be incorporated into ongoing collaborative planning processes - harnessing people’s self-interest as it is reflected in the planning process in which they are already involved;
2) identify key elements that make collaboration effective - weaving in negotiation concepts/techniques - such as understanding each party's interests and motivations, dealing with expertise and local knowledge, playing with temporal differences in priorities (Lax and Sebenius).

3) perform a decision- and temporally-sensitive stakeholder analysis - who (of the three tiers: the planning team, stakeholders and the larger community) should be involved in which set of decisions at what points in time.

References


Key Words:
Disaster planning, collaborative planning, resilience, social capital, joint decision processes

REGULATORY PREPAREDNESS OF AMERICA’S CITIES FOR WATERSHED BASED STORMWATER MANAGEMENT

Abstract ID: 1256
Individual Paper Submission

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The United States Environmental Protection Agency (USEPA) recognizes Combined Sewer Overflows (CSOs) as priority water pollution concern for more than 850 municipalities in the U.S. which have combined sewer systems (USEPA 2016). CSOs are overflows of wastewater from combined sewer systems[1] (CSS) during heavy precipitation events, such as heavy rainfall or snowmelt, when the capacity of the sewer system or a sewage treatment plant is exceeded. Since it can be assumed that increases in volumes of storm water,[2] rather than increases in sewage, accounts for incidences of CSOs during periods of heavy precipitation; storm water management is crucial to solving the CSO problem.

The USEPA’s Combined Sewer Overflow Control Policy of 1994, stipulations for Long Term Control Plans at local levels, the Total Maximum Daily Load (TMDL) program etc. provide a regulatory framework for stormwater management in the U.S. In spite of such an established regulatory framework at the Federal and State levels, considerable variation exists in the degree of regulatory compliance at local levels. The USEPA recognizes that "ideally" stormwater should be controlled on a unit to watershed basis, and stated that "watershed planning concepts and controls" should "ultimately [be incorporated] into waste water discharge permits (includes stormwater in urban areas served by CSSs)." Such a watershed based approach to urban stormwater conveyance and management can negate...
efforts of downstream communities who comply with storm water regulations if non-compliant communities exist upstream.

Hence effective implementation of urban stormwater management policy warrants an exploration of the incentives and disincentives, motivations and impediments that the regulatory framework presents for watershed based stormwater management.

Content analysis and case study methods are employed to understand opportunities and challenges for watershed based stormwater management within the existing regulatory framework. Content analysis is conducted to examine stormwater regulations that apply to CSSs and Municipal Separate Stormwater Sewer Systems (MS4s) in the U.S. Key regulations at the national level- the National Pollutant Discharge Elimination System (NPDES) Program for MS4s, the CSO Control Policy and the Total Maximum Daily Load (TMDL) program are explored in this section. The variations in regulatory authority at the state level and the implications of Home Rule on enforcement of storm water regulations are also examined in this section. Local laws that can improve efficacy of USEPA’s storm water management policy are also reviewed. Stormwater management programs in Berry Brook and Oyster River watersheds of New Hampshire exemplify local collaborative efforts to achieve watershed based stormwater management while operating within the existing stormwater regulatory framework. Discussions and recommendations for stronger regulatory enforcement and collaborative law making at the watershed level are presented from an analysis of the regulatory framework, reinforced by the findings from the case studies.

[1] A combined sewer system (CSS) collects rainwater runoff, domestic sewage, and industrial wastewater into the same pipe and transports all the wastewater it collects to a sewage treatment plant for treatment, then discharges to a water body.


References

Key Words:
- watershed based stormwater management, stormwater regulations, collaborative law making, regulatory compliance

OLD FOES, NEW BATTLEFIELDS: URBAN REINVESTMENT IN THE NORTH COUNTRY
Abstract ID: 1259
Poster
GRAY, Stephanie [Plattsburgh State University of New York] sgray008@plattsburgh.edu, presenting author
The debate over urban development remains divided into two competing camps. One side, personified by Robert Moses, champions large-scale development projects to induce economic investment. The other, personified by Jane Jacobs, argues that growth emerges organically from smaller-scale, flexible investments. No single approach best fits every case because ultimately contextual circumstances dictate patterns of development. Unfortunately, understanding the nuances in each case represents a significant cognitive burden on individuals tasked with developing plans for urban places. It is much easier, therefore, to retreat into familiar territory to rekindle the debate once more. Associating these disagreements to simple value and/or interest-based differences largely misses the point. Instead, research should focus on the cognitive strategies people use to inform the practical planning judgments underlying development decisions. In this poster, we study the cognitive changes among stakeholders working to consider the tradeoffs between large-scale, irreversible developments and small-scale, flexible improvements to the downtown of a small city in Upstate New York.

The Durkee Street Parking Lot is a two-and-a-half acre parcel in the center of downtown Plattsburgh. The parcel is owned by the City government, it contains parking for approximately 350 vehicles, and is the location for a weekly farmers’ market. Furthermore, the City of Plattsburgh was awarded ten million dollars by the State of New York to sponsor catalytic reinvestments. These features have generated substantial interest in the Durkee Street site among developers and urban boosters. Unsurprisingly, it quickly became the locus of intense disagreements between local stakeholders and decision-makers, and in many ways, the Durkee Street site became an avatar for long-standing debates about the City’s approach to urban development. An oversimplified analysis of the case would describe two sides vying for and against a large-scale, mixed residential/retail development at the site.

Irrespective of their individual positions, this poster set out to study how stakeholders made judgments about the size and durability of proposals for developing the Durkee Street site. We interviewed members of the City’s local planning committee at the outset and conclusion of a compressed planning process which began in September 2016. The semi-structured interviews were adapted from psychological tests used to assess individual cognition and decision-making styles. We used survey results to characterize the practical judgments of committee members and track their change throughout the process. Relying on video recordings of planning meetings, we also used participatory interaction analysis to observe how planning activities coincided with their interview results. Thus, we also characterized how the committee responded to public engagement meetings.

The variety of interests represented by different stakeholders provided fertile ground for opposition. It also provided ample opportunity for the group to identify common goals reflective of a broader public interest. Our results highlight how committee members and other stakeholders engaged in collective information processing to evaluate different development proposals for Durkee Street. We note that many committee members were far more adept at reasoning about the complex relationships at the heart of development projects than a simple analysis of competing interests would have shown. Many weighed the benefits and risks of various proposals honestly and deliberately despite the heavier cognitive lifting required. Our findings suggest that community reinvestment efforts need not resign themselves to pitched battles between old foes. Rather, communities should cultivate existing intellectual capital at its disposal in new, creative ways.
How do community engagement processes impact practical planning judgments? Most plans for public places are not, explicitly, democratic. They are drafted by professional consultants who have little to no personal connection with their client’s community. Local planning committees are convened to advise them. They review plan drafts adding the contextual insights the hired-guns lack. Their recommendations nominally represent the public’s interests, which are uncovered using a variety of engagement strategies, yet how does this information flow through democratic channels to impact plan-making?

Planning scholars have applied social learning theories to show how public participation leads to better plans. Planning requires learning; therefore, a completed plan implies that learning, to greater or lesser extents, has occurred. This literature shows how differences in process design, the structure of individual planning meetings, and data visualization tools contribute to learning. However, much of this research never questions the basic human judgments which drive the discursive give-and-take between competing interests as plans are made. In this paper, we use a combination of methodological approaches to explore human judgment in a plan-making process in Plattsburgh, New York, USA.

Plattsburgh’s downtown core has suffered from years of neglect and disinvestment, despite boosters and stakeholders working to save it. Development has languished while commercial creep to the west has pulled patrons and residents farther from downtown. A ten million dollar investment by the State of New York has reignited efforts to revitalize downtown Plattsburgh; however, as a condition for funding, the City was required to present the State a list of prioritized projects in early 2017. Therefore, the City initiated a compressed planning process in September 2016 to review previous plans and projects. The process was facilitated by a team of professional planning consultants. A local planning committee, comprised of business leaders and local elected officials, was convened to advise them. The committee

References

Key Words:
Community Revitalization, Planning Process, Community Engagement, Planning Judgment, Economic Development

SOCIAL LEARNING IN PLANNING CONTEXTS: HOW COMMUNITY ENGAGEMENT WORKS AS A TOOL FOR DISCOVERY FOR EXPERT PLANNING COMMITTEES
Abstract ID: 1282
Individual Paper Submission

MILZ, Daniel [Plattsburgh State University of New York] dcmilz@gmail.com, presenting author
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and consultants used a series of community engagement workshops and other public events to solicit feedback from residents and other stakeholders.

To evaluate planning judgment and to show how it changed in this case, we interviewed committee members and consultants at the outset and conclusion of the process. The interviews were designed to capture differences in the ways that committee members thought about planning problems and to assess their decision-making styles (e.g., rational versus incremental). Moreover, we recorded all public meetings, including committee meetings and public workshops. Interview responses showed only minor individual and group-level changes. The committee, in other words, remained fairly committed to their judgments about what was best for Downtown Plattsburgh. Qualitative analysis of video data showed how those judgments were used in crafting the final plan, and while the community was eager to contribute to the plan, the plasticity of the committee’s judgments meant that their considerations had limited impact.

References


Key Words:
Social Learning, Planning Process, Community Engagement, Participatory Planning, Practical Judgment

BEYOND CONSULTATION

Abstract ID: 1375
Pre-O rganized Session: Free Speech, Sense of Place, Communication, Economic Development: Signage in the Contemporary City

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STRAUSS, Eric [Michigan State University] Strausse@msu.edu, co-author

The regulatory process is one that mandates due process guarantees. This typically translates into a minimum of requirements for public consultation. It has become commonplace for city planners to more fully engage the public when amending or creating new plans or codes. The degree to which citizens are invited to participate is a function, at least in part, of the political climate. More progressive communities seek to engage a broader cross section of community residents because they know that plan implementation is ultimately a function of citizen buy in.

In some areas, local governments are less likely to as fully engage the public. One of these areas is with respect to the development of regulations pertaining to signage. This area of land use is especially
sensitive for a number of reasons. First and foremost, signs, commercial and otherwise, are afforded First Amendment protections by the U.S. Constitution. In addition, signage is a very real economic development issue as businesses, national and local, compete for consumers in the local marketplace. And, then there are aesthetic issues which can be controversial due to the associated subjectivity. The avoidance of community engagement can result in codes that are not enforced or modified as sign technologies change, leaving communities with landscapes that are unsuccessful and difficult to navigate.

The purpose of this study is to analyze the sign code development and revision process. Researchers interviewed a cross section of city planners across the U.S. to better understand: 1. The timeliness of sign code revisions; 2. The reasons for undertaking or not such revisions; 3. Where relevant, the composition of those invited to participate and 4. The outcomes of such processes. This research fills a gap in the planning literature related to both planning process and zoning regulations related to signage. The study seeks to fill a void in this specialized area of planning regulations. The authors seek to offer best practices for planners seeking to lead sign code revision efforts.

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Key Words:
Participation, Signs, Zoning

RECLAIMING DELIBERATION AND CONVERSATION IN PLANNING FROM THE INJECTION OF TECHNOLOGICAL INFORMATION INTO COMMUNICATION SPACE
Abstract ID: 1402
Poster

YABES, Ruth [Arizona State University] ruth.yabes@asu.edu, presenting author

Central Theme and Questions
Communication and conversational skills are declining due to the interjection of technological information and gadgets into communication space according to Sherry Turkle, a sociologist, clinical psychologist and professor at MIT. How do electronic devices and processes impact the communication skills of individuals, families, friends, at the workplace, in school and during communicative, deliberative and participatory processes in planning? What are the direct and indirect implications for social and professional conversations and communication in community settings and planning processes?

Employing technology and social media in participatory planning processes is useful when considering how a technological tool can assist achieving participation objectives. Polling through keypads, participatory GIS processes, and websites that document and store proceedings of meetings, are a few ways technology supports participation and planning processes.

Turkle (2015) illustrates, however, how smartphones and other types of technology have interrupted and cut down the time for face-to-face conversation and social connections with others. Thus, adults, young
adults and kids are unable to communicate comfortably and instead experience awkwardness. However, if adults and children do not engage themselves, their family and friends, in the workplace, school or other settings, what about their ability to listen and engage in authentic communication? What happens to communication and planning processes when people with different viewpoints refuse to or are poorly prepared to engage in dialogue, communicative action, deliberation and specific participation techniques that bring people together to be involved and/or collaborate with others.

The objectives of this research are to:
1. Examine and assess the role and impact technological tools and information have on public participation during planning processes.
2. Assess if and how communication skills are declining due to technological tools and how re-examining and practicing conversation skills might strengthen participatory planning processes.
3. Identify participation techniques that use authentic communication, deliberation, dialogue and conversation to provide genuine opportunities for face-to-face communication.
4. Identify and explain how to move forward to re-introduce conversations and reconsider how to implement and manage appropriately technological tools in planning processes.

Methodology
I will review literature about communicative action, deliberative democracy, and dialogue in relation to technology and participation. I will collect case study information from personal experiences of planners to illustrate the strengths and weaknesses of conversational and communication skills in planning. At the conference I will have an interactive poster, asking attendees to submit their own experiences about the interaction and results between technological information and communication in planning processes.

Results and Relevance to Planning Practice
Results will show how personal and community technological information affects communication and participation in planning processes. Suggestions will identify how and when technological information and tools can support rather than overtake or replace communication and conversation in participatory process. The research will look at the ways, benefits, and drawbacks of “reclaiming” conversation in planning processes.

References

Key Words:
Communication, Technology, Participation, Planning Process
Track 12 - Planning Theory

PRE-ORGANIZED SESSION: PLANNING A PROGRESSIVE CITY: ACTORS, INSTITUTIONS, AND THE DURABILITY OF TRANSFORMATIVE PRACTICES
Proposal ID 33: Abstracts 303, 304, 305, 306

RESTREPO-MIETH, Andrea [Cornell University] ar866@cornell.edu, organizer, proposed discussant

The emphasis of progressive cities on more equitable planning outcomes, the politization of existing problems, and increased exercise of citizenship has the potential to challenge dominant planning approaches and to positively transform how cities are planned, managed and lived. This panel explores different conceptualizations and materializations of progressive planning, the genesis of the practices, the avenues through which different actors become involved, the institutional environments they must navigate, and the factors that make these transformative practices durable. The papers probe the importance of diverse coalitions in urban equity movements pushing for racial equity and economic justice in U.S. cities; the evolution of progressive planning in Surabaya, Indonesia and the limitations created by a statist institutional arrangement; the opportunities to address inequality by changes over time to the spatial logic of Bogota, Colombia, and its limitations; and the strategic actions of state and non-state actors attempting to give continuity to inchoate progressive practices in Medellin, Colombia

Objectives:
- To draw theoretical and practical implications from the genesis and continuity (or demise) of progressive planning practices
- To investigate the role of different societal actors in the pursuit of progressive cities
- To analyze the interplay between structure and agency and its implications for the emergence of progressive planning practices in different regions

PRE-ORGANIZED SESSION: MANAGING INFORMALITY I: URBAN LABOR
Proposal ID 41: Abstracts 498, 499, 500, 857

TUCKER, Jennifer [University of New Mexico] jennifertucker@unm.edu, organizer
DEVLIN, Ryan [John Jay University, CUNY] rdevlin@jjay.cuny.edu, proposed discussant

This panel considers the management of informality in urban work. When laws fail to structure space as intended, planning often diagnoses a technical problem: inadequate policy design, poor enforcement, or a lack of state capacity. However, recent planning scholarship rethinks the relationships between the state, law and space. While most of this critical informality research emerges from studies about informal settlements (Roy 2009, Yiftachel 2009, Caldeira 2016), emerging scholarship studies urban work. In Latin America, street vendors are managed through the priviationation of public space (Crossa 2009) and intense negotiability over the use of urban space (Tucker 2017). In US cities too, contradictory regulations structure conflict over the public-ness of sidewalks (Loukaitou-Sideris and Ehrenfeucht 2009) and the ways street vendors are organized and governed in public space (Devlin 2011). Examining an understudied dynamic in planning, our mixed-methods and ethnographic papers argue that gaps between policy as written, enforced and experienced must be understood as zones of power relations, conflicts, and negotiations.
Objectives:
- Present new research diverse strategies for managing informality in labor markets
- Understand the gaps between policy as written, forced and experienced as zones of power relations, conflicts, and negotiations

PRE-ORGANIZED SESSION: PLANNING'S OUTSIDE: BEING NORMATIVE IN THE FACE OF EGREGIOUS STATE ACTION
Proposal ID 52: Abstracts 940, 941, 942, 943

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At the height of the Dakota Access Pipeline protest, activists streamed to Standing Rock camps in support of indigenous rights. Yet the dissipation of broader outrage – even as protest camps were dismantled and the pipeline proceeded – exposed the difficulty of envisioning structural change in response to egregious state action. Planning relies on normative approaches and being “inside.” Core precepts such as state regulation, formalizing, and definitions of “public good” dominate planning discourse. Even radical planning depends on a constitutive distinction that defines “outside” action. But increasingly globalized urbanization and planet-wide ecological crises challenge any idea of spatial outsides. State squelching of DAPL protests and proposed border walls and Muslim bans seek to determine who is acceptably inside. This set of papers probes the relationships between inside and outside in spatial, political, social, environmental terms. They take on topics including urban sustainability, climate change, race and culture, and decolonization, and interrogate blind spots in theories, methods, processes, and histories of planning.

Objectives:
- Learn about ways for planners to think and act in the context of authoritarian states.
- Explore relationships between fields of planning such as environmental change and sustainability, municipal governance, and state politics.
- Theorize alternative concepts and methodologies for planning scholarship and practice.

PRE-ORGANIZED SESSION: CONTESTING "COMMUNITY DEVELOPMENT": POLITICS, DISCOURSE, AND VALUE
Proposal ID 57: Abstracts 663, 666, 667, 680, 929

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This session explores the discursive content of concepts that undergird various approaches to community development. Through theoretical engagement with specific cases, the participants trace the way assumptions shape the relation between communities and prevailing planning practices. The papers presented in this session trace the origins and consequences of contested conceptualizations such as "equity", "distress", "ownership", "uniqueness". They consider how planning knowledge is constructed, mobilized, and challenged throughout the planning process, and they explore dilemmas resulting from differences in its production, representation, and perception.

Objectives:
To explore the theoretical underpinning of prevailing community development practice and its alternatives

STRATEGIC FRAMING IN PLANNING: AN EMPIRICAL INVESTIGATION OF HOW PLANNERS DISCUSS DENSITY

Abstract ID: 42
Individual Paper Submission

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Over three decades ago, Donald Schön (1983) contrasted a model of professional practice advocating the repeated application of established techniques with the reality of a more ‘artful practice’ that evolved from case to case. With the latter, the emphasis is not on planners’ and their constituents coming to a mutually agreeable way of interpreting a problem, but on planners discussing problems and solutions in terms that are meaningful and compelling within constituents’ frames for understanding. Specifically, planners can employ rhetorical frames to weave a compelling justification for change. Rhetorical frames emerge when planners strategically cite certain benefits of a policy or intervention that they believe will resonate with the communities they engage: these frames may or may not mirror their own personal frames for pursuing their proposal.

While multiple planning scholars have provided case studies and experimental research on frame conflicts and framing effects within planning, the value of such an approach appears absent from planning education. There could be a lack of attention to framing because there is not an understanding of the frequency of the approach advocated by Schön and others, or the reasons why planners might pursue it. To develop this understanding, this paper asks two questions: Do planners typically frame issues according to their personal beliefs, or are they more selective in their choice of frame for a given issue? Second: what demographic or political factors present in local communities might influence planners’ choice of frame?

This paper evaluates American planners’ use of rhetorical frames in discussions of increasing allowed residential density in new development. Increasing allowed residential density is a sensitive and challenging issue that planners often confront due to planning goals or individual developers’ requests. Technical knowledge of sprawl’s negative impacts and the benefits of compact development may well convince planners of the necessity of denser development. However, we suspect that in practice, where value conflicts abound, planners have to communicate with audiences who find such technical knowledge less compelling, and that planners thus must be more selective in the way they talk about density. Our evaluation centers on a survey that we constructed and sent to planning directors across the United States between May and July, 2016 (n=197; 40.1% response rate), which asked about the ways in which planners discussed proposals to increase allowed density, as would be achieved by a change to the zoning map.

Our findings underscore the frequency with which planners take to an ‘artful practice.’ We find that planners are enthusiastic about increasing allowed densities, as evidenced by the numerous benefits they associate with this action. Planning departments are, however, more measured in their discussion of density’s benefits than we might think, given this enthusiasm: we find that departments consistently express the benefits of increasing density less often than our respondents personally perceived those benefits to exist. Through regression analysis, we find that while planners’ beliefs were always
significantly, positively correlated with departments stating benefits in each area we inquired about, other factors evidently discourage departments from discussing specific benefits. Political conservatism appears to have an especially dampening effect on planners’ willingness to discuss densification in a number of ways. This suggests that the strategic framing of this divisive issue is ubiquitous: planners know their audiences, and understand that their audiences want to hear about density in such a way that will resonate with them, and not hear about density in a way that will alienate them. Therefore, we conclude that a more ‘artful practice’ is endemic in planning.

References


Key Words:
Planning Theory, Framing, Community Engagement

INSTITUTIONS IN URBAN SPACE: LAND, INFRASTRUCTURE, AND GOVERNANCE IN THE PRODUCTION OF URBAN PROPERTY
Abstract ID: 101
Individual Paper Submission

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This paper follows on and extends the argument in my paper, ‘Taking Path Dependence Seriously,’ that made the case for the engagement of planning historians with Historical Institutionalist (HI) theory (Sorensen 2015). This is a contribution to the larger institutional turn in planning theory that focuses on the role of institutions as the patterned norms and standard operating practices that structure social interactions in society and economy (Salet 2002; Healey 2005). Unfortunately, most institutional theory ignores space and cities entirely, focusing on aspatial national and international policies and institutions. As urban institutions are profoundly spatial and inescapably bound to issues of property, this paper develops an institutional approach to the study of urban space and property, suggesting that municipal governance, infrastructure, and property institutions should be a central focus of comparative research. An HI approach provides valuable insights through its focus on institutional origins, evolutions, power dynamics, timing, and sequencing in comparative perspective. Municipal powers to own property, build and maintain infrastructure, borrow capital, raise taxes, provide services, and regulate private capital investment in property make urban property possible, and are fundamental to contemporary urbanization. Crucially, municipal property, infrastructure, and governance institutions regulate the investment of capital in urban property and structure the nature and distribution of property and its long-run meanings and value. The conceptual framework developed here promises to advance our capacity for comparative and historical analysis of the institutions that structure both urban property and urban spatial planning. The focus is on the co-evolutionary and path dependent relationships between land, infrastructure, and governance institutions, and on the fact that existing spatial patterns of urban property generate powerful positive feedback effects that are politically consequential. When examined in this way, urban institutions and urban spaces demonstrate enduringly different approaches between jurisdictions, and constitute distinct urban property regimes, providing a valuable contribution to comparative research, even of very different urban systems.
 SHOULD PLANNERS LEAD?
Abstract ID: 123
Individual Paper Submission

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Since the emergence of the profession in the late 1900’s city planners around the world have grappled with the question: how can seemingly neutral technicians/advisors, usually public servants, also lead? (Brooks, 2002) In 2015, the major professional organization for planning in the United States, the American Planning Association (APA), issued the “Planning Office of the Future Task Force Report” (Horwedel et al., 2015) recommending, among other things, that planning offices should “think big” and lead. City planners negotiate tough terrain as “advisors/leaders”. Schön asked of professionals (1983, p. 42), “Do you stay on the high ground where you can exercise technical rigor but have little social impact? Or do you descend to the swampy lowlands where you can make a difference but you must muddle through?” and perhaps even lead?

Can planners balance leadership with their obligations as facilitators, collaborators, communicators, and advisors? To answer this question, this study starts with major theories of leadership, old and new, such as, authentic leadership, transformational leadership, positive organizational behavior, cognitive leadership, transactional leadership, complexity leadership, shared leadership, leader-member exchange, and followership and leadership (Avolio, Walumbwa, & Weber, 2009; Bryman, Collinson, Grint, Jackson, & Uhl-Bien, 2011). Plus, major theories of planning: rational, incremental, strategic, advocacy, communicative, equity, radical, collaborative, and agonism (Brooks, 2002; Innes & Booher, 2010; Innes & Gruber, 2005; Whittemore, 2014). Using directed content analysis (Hsieh & Shannon, 2005), I look at codes of ethics from professional planning associations from around the world (Argentina, Australia, Canada, Hong Kong, Iceland, Ireland, Italy, The Netherlands, New Zealand, Poland, South Africa, U.K., and the U.S.) searching for evidence of any of the major theories of leadership intersecting with any of the theories of planning or any mention of leadership being part of the expectations for professional planners.

Codes of ethics clarify, for organization members and the public, “the norms that ought to govern professional behavior” (Frankel, 1989, p. 109). Whenever a professional organization adopts a code of ethics it is a time of self-reflection and a chance to debate what members “ought” to do and be like (Davis, 2003; Frankel, 1989; Freckelton, 1996). Code functions include: guidance for members when unforeseen circumstances arise, enhanced public trust, deterrents to unethical behavior, and accountability. Codes of ethics outline what professionals, in this case city planners, should do and be like.

References

Key Words:
path dependence, property, Institutions, international comparison, infrastructure
In the United Kingdom, the Royal Town Planning Institute’s code of ethics says that planners are to be “fearless” which has connotations of planners/leaders being shaped by leadership creating “crucibles” or defining events (Bennis & Thomas, 2002). The South African Planning Institute’s code emphasizes the “humanistic spirit” which relates to spirituality and leadership (Johnson, 2012). The American Institute of Certified Planners’ code in the United States speaks of planners “balancing interests” and facilitating “open and continuous debate” which relate to shared leadership (Avolio et al., 2009). Comparing one profession across cultures will help disentangle which leadership characteristics are due to the profession and what perhaps might be due to different contexts (Kaufman & Esuin, 2000). It can also help us answer the question, can planners be leaders?

References

Key Words:
leadership, ethics, professions, planning theory, roles of planners

READING THE CITY THROUGH CINEMATIC REPRESENTATION OF THE URBAN EXPERIENCE: SEMIOTIC ANALYSIS OF CHICAGO IN THE BLUE BROTHERS AND THE UNTOUCHABLES
Abstract ID: 178
Poster

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Since the end of the nineteenth century, the fortunes of cinema and the city have been inextricably linked on a number of levels so that many believe that motion pictures were an expression of the urban life in the twentieth century. Along with the invention of cinema, the development of new social space, and in particular, urban space in the late nineteenth century, offered new forms of activity and objects for perception which made cities immediate subject as well as the location for many films. People nowadays get much of their information and their conceptions of life, through media other than traditional sources of instruction. Given the fact that most of human knowledge and experiences about the world are attributed to visual perception, the power of the film to make and/or change the urban images in people’s mind is considerable. Film itself developed as an urban art, frequently articulating its narratives against the backdrop of the cities and metropolitan regions. Films provide exceptional visual experiences that can enable us to study the ways in which people and places interact as stories unfold. Although it has become an accepted argument that the city is constructed as much by images and
representations as by the built environment, urban studies have not paid the warranted attention to the cinematic form.

This study illustrates how the city and urban phenomena may be read through films and, in this regard, I focus on Chicago due to its significance urbanization trends over the past 50 or so years. Since film critics are generally agreed that the gangster film and its generic affiliates such as the film noir and the film policier occupy a special place in the representation of the city, I have selected The Blue Brothers (1980) and The Untouchables (1987) as the source of evidence. The cinematic features of these two films reproduce the motion of Chicago and facilitate our presence in the flow of the city. In terms of methodology, attempt to describe and interpret the cinematic representation have included a wide variety of perspectives, ranging from the aesthetic, anthropologic, linguistic, and psychologic, to more recent feminist, Marxist, and psychoanalytic approaches. Semiotics has, in particular, become a particularly well-developed branch of film studies over the past decades, making major contributions to our understanding of the constitution of the film image or sign, and the meaning. It is worth mentioning that the cinematic place is not limited to the world represented on the screen, but the “meanings” constructed through the experience of the film. I, therefore, apply semiotics to my study in order to reveal the meanings. In fact, moving images function as signifiers for the signified narrative. To create a conceptual/ methodological framework for analysis as the minor goal of my research, I use syntagmatic and paradigmatic concepts as the structural relations of signs which provide the context for targeted analysis of the film. Also, intertextual relations of the texts (films), based on urban experiences and theories, enables a comparative study on the cinematic representation of Chicago in the two films. My study shows how cinema can help complete urban planners’ understanding of “representation of space” and “urban experience” by showing “representational urban space”. I believe that reading films can move us toward a new way of thinking about the process of urban planning, and to answer how its outcomes are represented in a spatialized aesthetic form.

References

Key Words:
City, Film, Semiotics, Cinematic representation, Chicago

PLANNING FOR (AND WITH) A SENSE-OF-TIME: THEORETICAL AND PRACTICAL CONSIDERATIONS
Abstract ID: 257
Individual Paper Submission

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Urban planning, as a theoretical and applied collective endeavor, has a strong spatial orientation. Planning professionals study and seek to influence the meanings of space and place; the structures, forces and relations that shape socio-spatial outcomes; and the spatial distribution of goods and bads in their domains of interest. Planning is also by nature future-oriented, learning about the past to inform the future, projecting possibilities, anticipating change and devising plans to guide development over varying temporal horizons. Yet, perhaps paradoxically, planning theory and practice have not given much attention to Time.

We don’t fully understand (or research or teach) what Time is made of, how it is constructed or interpreted, how its meanings are shaped, or how it is marked in space. For instance, while we understand the contrast between place and placelessness, there is no term to express deficiencies in our sense-of-time (timelessness is a positive attribute of continuity). Although it is as vital as sleep for our wellbeing, we know comparatively little about how to generate or support a sense-of-time.

In this paper, we explore perspectives on Time from across the social sciences and philosophy, as a means of advancing planning and urban design, thought three topics: (1) the nature of time, the locus and location of humans in time, and their implications for planning theory; (2) how thinking about time might challenge and improve planning practice, and (3) how we mark time in urban space.

Our starting point is Heidegger’s Being in Time, and the postulates that being is time, that human existence is not only rooted in, but derives its very essence from being both in space and time. While dasein is about being-there, we also dwell and act in a past-dependent and future-oriented present. From such existential perspectives on Time, we draw the deep-seated human need for a sense-of-time, but also raise profound questions about how the lived experience of Time interacts with other times, from natural rhythms and life cycles to the vast durations of geological time and back to the social construction and imposition of clock-time.

Modern urban planning, with its faith in progress and the capacity to control development over time, is a product of particular regimes of power/knowledge that produce distinctive temporalities through which change is experienced, tracked, measured, shaped, bought and sold etc. Such regimes produce practices through which futures are anticipated, made knowable and governable in distinctive ways and with concrete effects in the reshaping of our built and natural environments.

Yet contemporary societies may have outgrown such regimes, with the intensified acceleration of social and economic life, space-time compression and the emergence of real-time transactions and interactions. Simultaneously, the extension of human actions and their effects on the future of the planet render many of our temporal horizons too short-term, with potentially catastrophic consequences.

What does all of this mean for planning practice, for plan-makers and city dwellers? Can cultivating a sense-of-time enable us to shape new ways of caring for the future of places? Can we shape new regimes to govern contemporary times differently? In response to such questions, we will argue that the production and reproduction of temporal imaginaries matter; the stories we tell about the past, the possibilities that inhere in the present, and the desirable and undesirable futures can transform our perspectives about possible and necessary actions. We follow Bergson and, later, Connolly (2011, p. 72): Time is neither empty nor homogenous. Instead, we might seek to “[dwell] in a fecund moment of duration” opening up possibilities by learning to see how “multiple layers of the past resonate with things unfolding in the current situation.” This might offer a path to purposively (re)shape planning’s sense-of-time, towards a planning-in-time, and to strengthen the sense-of-time in urban places/dwellers, by building collective capacities to “read”, evaluate, appreciate and value time in space.

References
The need to re-frame how scholars and practitioners approach city planning in the global South gains urgency when we examine the impacts of rapid and on-going urbanization in Latin America, as well as the challenges from accelerated urbanization in Asia and Africa. A resurgent interest in the progressive city in the global North the global South (e.g. Douglass, 2016) calls for greater attention to its conceptualization and further research on its potential to improve the quality of life and interrupt dynamics linked to the urban reproduction of inequalities. Many cities in the Global South face challenges related to socio-spatial inequality and marginalization which state and non-state actors attempt to address by piloting policies, practices, and programs that have the potential to solve or at least mitigate such challenges. Progressive planning - defined by the author as a practice within the confines of existing law, and initiated by any group of agents in a society, which aims to create and manage urban spaces in ways that improve the material wellbeing and exercise of substantive citizenship of low-income individuals - holds enormous potential as an approach to reconceptualize how planning is carried out. However, even if an intervention is deemed successful, its replication or continuity is not guaranteed and we can easily see a reversion to the old practices that failed to address new and persisting socio-spatial problems.

Using Medellin, Colombia as a case study, this article addresses a question of interest to urban planners and policy analysts alike: how do state, market, and civil society agents attempt to institutionalize progressive planning practices and why are they more or less effective in their pursuits? In-depth semi-structured interviews, focus group discussions, direct observation, and archival analysis were employed to understand how community-based actors, civil society collectives, bureaucrats, politicians, and business elites in Medellin interpret the experiences and environments they are involved in, and how this understanding influences their behavior. A framework is developed based on empirical findings of actions pursued by a wide range of actors active in the planning and policy-making areas of housing, mobility, public space, and networked water provision. These areas were chosen due to their importance in generating exclusion and compounding disadvantages when not properly addressed. The framework highlights the role of four elements – relations, practices, concepts, and space - in explaining the degree of institutionalization of progressive planning practices in the context of Medellin’s efforts to improve its human development index and reduce socio-spatial inequality. This work contributes to ongoing efforts to theorize the progressive city as well as to advance our understanding of agency, particularly by
the poor, and how this agency is inserted into institutions that frame urban systems (Pieterse, 2008). In addition, this article furthers the development of urban institutional theory; an area both planning and urban politics scholars have expressed needs additional development (Davis & Trounstine, 2012; Healey, 2007; Kim, 2011).

References

Key Words:
progressive planning, institutions, community-based organizations, socio-spatial inequality, agency

BEYOND RAINBOW COALITIONS: URBAN EQUITY MOMENTS SINCE THE 1970S
Abstract ID: 304
Pre-Organized Session: Planning a progressive city: actors, institutions, and the durability of transformative practices

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Scholars have long noted the importance of coalitions and social movements in the push for equitable development policies (Piven and Cloward 1977; Luce 2004). Social movements operate from outside the state, but play crucial roles in supporting progressive leaders as they seek to overcome opposition from organized business interests (Doussard, 2015). The expanding contemporary influence of these movements on urban policy stems from little-noted changes to their composition, means and goals. In particular, today’s urban social movements show growing racial and economic diversity, prioritize racial and economic justice issues they were long counseled to downplay, and make policy demands – a $15 minimum wage; earned sick-time; universal pre-kindergarten education – that challenge long-standing notions about work, the economy and social mobility.

These changes go unnoted in substantial part due to the lack of historical work on the evolution of urban social movements. Accordingly, this paper identifies and documents three waves of urban equity movements in US cities since the onset of deindustrialization in the late 1970s. First, we identify the community-based and neighborhood development movement of the 1970s and early 1980s, exemplified by the progressive administrations of Washington (Chicago) and Goldschmidt (Portland, OR), which emerged in response to growth-machine-led downtown development and the inability of the federal War on Poverty to ameliorate entrenched racial economic inequality. Second were the living wage and community benefits movements of the 1990s, which responded to municipal privatization and declining wages for workers through the development of community-labor coalitions, and responded to racial
disparities through the development of environmental justice claims. Noting the expanding themes, issues and membership of these earlier movements, we then shift attention to contemporary urban equity movements. These “economic and racial justice” (ERJ) coalitions explicitly join policies for addressing economic inequality with those for racial inclusion and equity. Each successive wave of urban equity movement has brought new actors into the fold, making coalitions more diverse and resilient over time. While ERJ coalitions offer potential as a counterweight to the “growth machine” in urban governance, their power remains highly uneven across urban regions.

References

Key Words:
Equity planning, Social movements, Progressive Cities, Social Justice, Economic Justice

PROGRESSIVE ENOUGH? THE EVOLUTION OF PLANNING IN SURABAYA
Abstract ID: 305
Pre-Organized Session: Planning a progressive city: actors, institutions, and the durability of transformative practices

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This paper discusses the evolution of plausibly progressive planning moves, and their outcomes in Surabaya, Indonesia. The New Urban Agenda (NUA) and the Sustainable Development Goals (SDGs) represent a global consensus to focus development attention on cities and espouse aspirational goals of progressive urban planning (McGranahan et al. 2016). Representative of larger epistemological shifts, such as the several post-isms, progressive planning is the embodiment of diverse concepts—inter alia inclusivity, equity, social justice, spatial justice, participation, sustainability, and now resilience. These both broaden its theoretical ambit and complicate its practical remit. But how capable are extant planning institutions and institutional arrangements of processing theoretical advances (Rydin 2007) and accordingly reforming practice? The stimuli for much progressive theorizing have been emerging planning challenges in the developed world’s cities (Watson 2016). In the complex contexts of the global South, where even fundamental planning and development objectives—infrastructure and services—remain unmet, contemporary planning research and practice are, largely, preoccupied with formalizing informality (Roy 2009) and resolving decentralization. Additionally, pursuing progressive objectives in the urban global South is saddled with weak or entrenched institutions, peculiar institutional arrangements, and idiosyncratic planning cultures and attitudes. Indonesia’s swift transformation from a centralized developmental state to a decentralized neoliberal one exemplifies such inherent challenges, for instance, in realizing inclusive and equitable shelter planning. The poverty alleviation Surabaya attained through innovative and extensive slum upgrading in an authoritarian era was more inclusive than its proclaimed progressive planning efforts after decentralization and democratization (Das 2017). The paper argues, from a progressive planning perspective, that Surabaya’s potential for transformative positive change is yet suppressed—by a statist institutional arrangement that sustains an exclusionary framework for planning and governance, and undervalues constructive synergies with civil society organizations and marginalized groups. It also underscores the responsibility
of academic programs to produce urban professionals versed in the tenets and trials of progressive planning to suitably address urban Indonesia’s growing equity concerns. Qualitative evidence—interviews, surveys, and observations—from years of field research in Surabaya and elsewhere, focused on the effectiveness and empowerment dimensions of participatory planning for urban shelter, basic services, and microfinance, plus insights from recent comparisons of progressive planning innovations in developing countries (e.g. Das 2016; Sotomayor & Daniere 2017) support these critical inferences. In conclusion, akin to Grindle’s (2004) call for manageable and contextual “good-enough governance” objectives, it considers how incremental advances can be “progressive enough”.

References


Key Words:
progressive planning, exclusion, institutional arrangements, developmental state, participatory planning

PLANNING A PROGRESSIVE CITY: WHERE DID BOGOTÁ GO WRONG?

Abstract ID: 306
Pre-Organized Session: Planning a progressive city: actors, institutions, and the durability of transformative practices

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In the 1990s and 2000s, the city of Bogotá, Colombia, took a deliberatively progressive turn. New actors emerged in a unique window of opportunity created by the decentralization of state power to cities. The office of the mayor transformed significantly as candidates running as independents were elected into office. Accompanying these changes was the formation of new local government departments to bolster the rights of the public regarding the public realm.

During these years, Bogotá’s independent, elected mayors dealt with significant dysfunction in civil society as well as an incredibly inequitable distribution of public resources throughout the built fabric of the city. These mayors—Mockus and Peñalosa—responded by creating opportunities for shared experience and redistributing collective goods, such as public space and access to bicycle paths and bus rapid transit, to the city at large. Changes to the spatial logic of the city supported equity; and opportunities arose to address important social justice issues such as climate change and the provision of infrastructure throughout the city. However, in the years since, four mayoral administrations have come and gone with limited impact on planning and design in the city.
The waning of the city’s progressive approach reminds us that the right to the city is a continually negotiated course (Harvey 1981; Harvey 2012). This paper details the city’s process – showing where progressive ideals have broken down and fallen short. In reality, the redistribution of collective goods was modeled well, but citizen participation in city projects was limited. Efforts to address inequality were uneven and there was a lack of a culture of planning that would serve to ingrain practices into government and provide longer-term vision and accountability. This paper provides a critical perspective on the traditional producers of space in Bogotá—power brokers, experts, and citizens, and suggests a new interpretation of urban planning and design for the city, along with new roles for these actors.

This paper helps us, as planners, to understand the need to re-examine progressive planning practice on a regular basis to make it and us accountable. It also serves to ask how and why progressivism has failed in Bogotá and to re-interpret the Bogotá experience moving forward, opening planning theory further to southern urbanisms. Finally, it helps professors and practitioners know how to teach and practice urban design, domestically and internationally, in a politically engaged, socially focused manner.

References


Key Words:
Bogotá, collective goods, planning theory, spatial logic, urban design

INFRASTRUCTURE POLITICS AND TACTICAL “STRANGE BEDFELLOW” COALITIONS IN THE UNITED STATES

Abstract ID: 317
Individual Paper Submission

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Against a backdrop of hyper-political polarization worldwide, this research examines recent tactical coalitions of “strange bedfellow” conservative and progressive allies who advocate for policy change about infrastructure in the United States. Some might view these as unholy alliances where participants make deals with the devil or lend one’s enemies undue legitimacy. However, when alliances emerge, public officials and the citizenry are challenged to not dismiss an enemy outright when divergent activists agree on matters of substance and process. Coalition actors in this research range from everyday citizens to high-profile public figures elected officials. I aim to theorize tactical coalition formation with the goal of increasing understanding of strategic interactions and narrative alignment. I empirically ground the analysis in cases that span four core sectors of infrastructure related to sustainability and resiliency -- transportation, energy, water -- and criminal justice and mass incarceration due to unsustainable fiscal costs and deleterious social impacts. I further examine issue
alignment with activists on the political right on these topics areas as this demonstrates possibilities for an expanding coalition base.

The research draws from scholarship on social movements, and participatory planning and deliberative practices in tandem with the political theory of agonism in which actors come to consider their opponents as adversaries worthy of engagement (agonists), rather than implacable enemies or the Other (antagonists) (e.g., Bystydzienski and Schacht, 2001; Inch, 2014; Mouffe, 2013). Scholarship on conservative views about planning provides political context (e.g., Trapenberg Frick 2016). The research questions addressed are: How do tactical coalitions emerge and to what extent do they evolve over time? What is the range of coalition formations and what agonistic and deliberative practices are employed? What traditional and digitally-based strategies do coalition actors use to facilitate mobilization and market their cause? Research methods include semi-structured interviews with coalition participants and planning proponents, and detailed analysis of related policy documents and social media/internet communications.

I find that coalition participants foster an agonistic ethos of respect across difference (Connolly, 1995) on matters of process and substantive areas while they interface online and on location. This ethos is articulated through deliberative practices revealed in coalition narratives and repertoires of strategic interaction, and the coalitions have influence in policy outcomes and processes. The research and perspective offered is critical because of mounting political polarization and public skepticism about government and its ability to provide infrastructure effectively and efficiently. While challenging, policymakers and the citizenry should seek to better understand how one’s enemies could evolve to adversaries or coalition colleagues even if in limited ways.

References

Key Words:
Tactical Coalitions, Agonism, Participatory Planning, Conservative Views

BLURRING THE BOUNDARIES OF ‘PRIVATE’ AND ‘PUBLIC’ INTERESTS: EXPLORING THE MEANING AND GOVERNANCE IMPLICATIONS OF INDIGENOUS-LED PROPERTY DEVELOPMENT
Abstract ID: 337
Individual Paper Submission

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In recent years, planning theorists have started to acknowledge their profession’s role in Indigenous dispossession (see: Porter 2010), with greater attention now being paid to the possibilities for planning with Indigenous political self-determination (Porter & Barry 2016). Yet, as Hibbard and Adkins (2013) note, less attention has been paid to issues of Indigenous economic self-determination, this in spite of the growing prevalence of Indigenous-led urban property development in many former British settler-states (Ruske 2014). This paper seeks to address this gap, drawing on ongoing research on urban treaty settlement lands and the associated opportunities for Indigenous property development in Manitoba, Canada, and Canterbury, New Zealand.

In both places, Indigenous peoples are using various land claim and treaty settlement processes to acquire land within the urban environment. These lands are often intended for large Master-planned residential communities, within Indigenous communities increasingly establishing a corporate body that takes on the role of an urban property developer. Although significant differences in the treaty settlement processes and land tenure systems have meant that Indigenous peoples in Canterbury and Manitoba have quite different relationships with the local planning authority, both find themselves having to negotiate various forms of municipal development control in much the same way as any other developer. However, unlike conventional property developers, these Indigenous economic development trusts and land-holding corporations are owned by an Indigenous government body, with deep ancestral connections to the area and an overriding cultural responsibility to steward those lands for future generations. As such, they often have a very explicit responsibility to ensure that all forms of property development contribute to the economic and cultural well-being of the entire Indigenous nation and are in keeping with customary governance principles, often with very clear mechanisms for Indigenous community members to engage in the development process. In these ways, Indigenous economic development trusts and land-holding corporations challenge the political economy of urban property development, with planners no longer acting as the sole protector of the ‘public interest’.

This blurring of the boundaries ‘the planner’ and ‘the planned’ and between ‘public’ and ‘private interests’ is certainly not new. Planning theorists have offered considerable comment on multiple and often overlapping forms of planning engagement and authority. For example, advocacy and empowerment planning call attention to the ways that planning occurs outside of, and often in opposition to, state-based planning agencies. However, Indigenous peoples’ experiences of urban property development push these conversations about who has the authority, legitimacy, and knowledge to plan in the public interest even further, drawing attention to the unique role of economic development trusts. They also help expose a fundamental challenge with the current approach to treaty settlement in urban areas, in that lands that were intended to support cultural, political and economic redress are now entwined with planning systems that have failed to address these unique and emerging forms of Indigenous urban governance.

References
HOW PLANNING THEORY IDEAS SHAPE SUBURBAN COMP PLANS
Abstract ID: 350
Individual Paper Submission

HOCH, Charles [University of Illinois at Chicago] chashoch@uic.edu, presenting author

I study the plans that professional planners make for places and how they talk about their plans. This paper will compare two comprehensive plans for nearby suburban municipalities on the edge of the Chicago Metropolitan Region after the 2007 recession.

First I review a sixty year history of suburban development for the Chicago region between 1950 and 2010 using critical political economy to frame suburban formation. How does the mobilization of state power foster and support a racially and socially segmented hierarchy of places clustered in legally equivalent, but economically and fiscally disparate jurisdictions? Second, I adopt rational planning to frame the comprehensive regional plans prepared to contain and guide regional suburban growth. I briefly explore how the conceptions of regional and local spatial order shifted even as the containment of low density development remains salient. Third, I recast the role of suburban planning for the Chicago region using insights from some of the recent work of Lew Hopkins & Nikhil Kaza, Bob Beauregard and Emily Talen. Hopkins & Kaza show us how many plans segmented suburbs into many separate places. Beauregard how the technique and form of physical construction and use produced the decentralized suburban landscape. Talen shows us how cumulative impact of incremental subdivision and zoning rules contribute to sprawl.

I do not reconcile these insights, but combine them as I conduct an interpretive analysis of the plans prepared by professional planners for the suburban municipalities: Frankfort and Orland Park. I focus on comprehensive plans because as local professionals (and other actors) make these plans they tend to think about both what they need to know and do to make the plan; as well as what features of the municipality and the adjoining region to include within the plan.

I adopt a pragmatist approach to conduct the research. This means that I believe everyone makes plans and that rational planning is just a specialized institutional version of a widespread capability. I do not expect the professional planners to espouse ‘theory’ like following directions from a cookbook; but do expect they use ideas about places and planning as they compose plans.

What ideas inspire and guide the judgments these planners take as they conceive comprehensive municipal plans? I search for each of four kinds of influence:

1. What cognitive and emotional orientation do they take making the comp plan?
2. How do they select, describe and assess the salience of causes for suburban spatial change?
3. How do they compose goals, objectives, solutions, options and strategies as options for the plan?
4. How do they imagine future effects and evaluate impacts for the municipality and its environs?
The plan evaluation literature describes methods that assess outcomes and impacts; but my approach focuses more on the theoretical influence on the craft and what this means for interpreting their respective quality. I will show both plans work as advice for their respective municipal audiences; but that one plan offers better quality advice because it draws upon a wider range of theoretical ideas that improve the practical scope of its message. Both plans will fail to meet the criteria set by radical political economy or scientific rationality. Taken pragmatically, theoretical ideas work like prosthetic attachments enhancing the cognitive craft for plan making rather than as justifications for moral perfection or scientific certainty.

References

Key Words: Pragmatist, Judgment, Intenition, Cognition, Imagination

ENVIRONMENTAL AESTHETIC EVALUATION & INTERPRETATION
Abstract ID: 358
Poster

BRITTON, Jennifer D.W. [Montana State University] jennifer.britton@montana.edu, presenting author

While landscapes provide a canvas upon which we experience our social and environmental perceptions, investigations into identifying constraints and opportunities in landscape planning and stewardship seldom incorporate cultural landscape interpretations (LaGro, 2001; Stephenson, 2007; Wallach, 2005). Yet when designating places of outstanding value for cultural and natural heritage protection and preservation the United Nations Educational, Scientific and Cultural Organization (UNESCO) considers cultural relationship to landscape, place, and natural systems. Thus to understand and in turn create enduring, holistic places we cannot overlook our physical, emotional, and intellectual values. So how do we uncover and interpret cultural values inscribed on a landscape at our perceptible, human scale?

To illuminate our aesthetic experience this research, comprised of two qualitative case studies, investigated a layered interpretative methodology (Deming & Swaffield, 2011) through semiotic analysis, the study of signs, historical review, and aesthetics description. Of the three methods semiotic interpretation of advertisement media offered the most immediate knowledge model for cultural landscape interpretation. Thus, this presentation will focus on the use of semiotic process to reveal socially effected meaning and representation, connotative and denotative expression, and consumer motivation in place aesthetics.

The analysis revealed societies mediate their environmental aesthetic experience between an ideal and necessity. Highly desired landscapes had several dominant cultural landscape memes, specifically a triad of human values manifested through pleasure, paradise, and power (Britton, 2015). By delineating these human motivations the study offers a critical look at cognitive processes towards place and provides
cues for those who critical shape landscape aesthetic and function such as planners, designers, marketers, and a wide variety of environmental disciplines.

References

Key Words:
Landscape value, Cultural value, Hermeneutics, Semiotics, Aesthetic ecology

DESIGNING FOR GOOD JUDGMENT: THE CASE OF ECOLOGICAL WISDOM

Abstract ID: 483
Individual Paper Submission

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This paper will build upon the work of Rob Young, Wei-Ning Xiang, Barry Schwartz and Ken Sharpe, first, to set out the notion of ecological wisdom, second, to provide three instructive cases to illustrate such practice, and third, to infer from these three cases what kinds of political/organizational and process designs may plausibly foster practical judgment and wisdom in planning more generally. Our cases come from the work of Jason Corburn in Brooklyn's Red Hook neighborhood, from Anne Whiston Spirn's work in the Mill Creek neighborhood of Philadelphia, and from Laura Saija and Giusy Pappalardo's work on the Simeto River in Sicily. The argument will explore the soundness of treating the development of judgment and wisdom as a challenge of weaving together three abiding processes of dialogue, debate, and negotiation that answer the constitutive questions in actual planning contexts of what's important, what do we know, and what should we do (all including, of course, just who are "we")?

References

Key Words:
Regulations governing street vending in New York City are a mix of local laws, agency rules, New York State law, and Federal case law. The result of this complex legal genealogy is a knot of regulations that is convoluted and at times contradictory. This creates a situation at the level of street in which regulations are difficult to follow and difficult to enforce in any sort of clear and consistent manner. How then is street vending actually managed on the sidewalks of New York? Using on-the-ground ethnographic methods, this paper demonstrates how the opacity of law leads various actors, including police, private security forces, Business Improvement District personnel, store owners, and vendors themselves, to utilize the condition of uncertainty to manage public space in an informal way—one case by case, block by block basis. The sum total of these street-level negotiations creates a landscape of street vending where most vendors are excluded from high value areas of the city, and those that remain cling to tenuous rights to space.

This paper shows how informality is not a condition characterized by the absence of law, but can exist as an important mechanism of spatial organization that interacts with formal law in complex ways (Roy 2009). It is informed by the idea that formal and informal should be conceived of as a “bricolage” of multiple connections, disjunctures, and meldings (MacFarlane 2012). In the case of New York, street vendors exist in a grey zone of shifting legal certainty and are subject to provisional and negotiable forms of authority (Yiftachel 2009). In providing planners with a clearer understanding of how power operates in the spaces between laws as written and laws as enforced/experienced, this paper responds to the call from multiple scholars (see for instance, Watson 2009) within planning to add ethnographic detail to our understanding of the interaction between informality, the state, and urban space.

References


Key Words:
Informality, Governance, Street Vending, New York, Public Space

SELF ORGANIZATION IN THE 21ST CENTURY, OR THE INHERENT UNEASE WITH MANAGING STREET WORK

Abstract ID: 499
Street work including street vending, food trucks and day labor are common practices in cities throughout the world including the U.S. Street work plays a critical role by creating work and providing goods or services but, throughout the 20th century, it has been treated as a problem to eliminate. In the 21st century, the narratives around vending are shifting towards one where street vending is ambivalently accepted. This is because street work has low barriers to entry, and more people are relying on different forms of contingent work for both primary and supplementary income. These entrepreneurs also offer food, goods and services in a convenient way that reflects the rapid pace of contemporary life. In addition, street work contributes to dynamic streets and public spaces, ideas that gained currency in 21st century tourism and urbanism.

The changing narratives parallel an increased ambivalence about how to regulate or manage these activities. This paper addresses a puzzling dilemma: how to effectively and fairly manage activities that are fundamentally self organizing or, in other words, activities where participants organize their actions in response to other public space users and other stakeholders including abutting private properties and street level bureaucrats. Self organization has been widely documented in the pedestrian behavior literature as well as in the case of street vendors, market vendors, and food truck customers. Management practices have an inherently different logic than self organizing activities. They are characterized by rigidity and lack nuance in how relationships and spaces are treated. While not recognized in formal regulations, in practice, people including law enforcement officials respond to public space norms rather than the strict interpretation of the ordinances, and all parties negotiate the spaces and forms that public activities take. The formal ordinances nevertheless leave vendors vulnerable to uneven enforcement and harassment.

This paper addresses two interrelated questions to explore how management practices could recognize self organization. First, how does people’s tendency to self organize in public space influence the impacts of street work? This question will be explored using findings from two research projects, one on vending in New Orleans and a second on food trucks in Chicago, which used participant observation and direct observation, respectively, to understand how vending played out in public space. In both cases, the vendors or customers and other public space users were responsive to one another, facilitating travel and reducing impacts of the vending. In both cases, the vendors did not strictly adhere to the ordinances but instead responded to local circumstances. In both cases, new ordinances had recently been adopted and showed the limits of regulations to guide how activities occurred.

Second, can recognizing self organizing tendencies in street work shape formal management practices? This question will be explored through outlining numerous tensions inherent in public space regulation, including 1) the rigidity of rules versus the flexibility of public interactions, 2) people-centric policies that enable vending versus place-centered policies that create festival zones, and 3) the differences between regulating people (vendors) and things (carts).

This work contributes to both planning theory and practice. It examines actually existing activities and how they take place, and uses this to examine the convergence of different trends that are creating a new moment in how public spaces are conceived. It also speaks to concrete dilemmas that arise when regulating public spaces, making the tensions visible and highlighting paths to fair and effective policy and management.
References


Key Words:
street vending , contingent work, self organization , sidewalks, public space management

STREET POLITICS: MANAGING VENDORS THROUGH UNCERTAINTY
Abstract ID: 500
Pre-Organized Session: Managing Informality I: Urban Labor

TUCKER, Jennifer [University of New Mexico] jennifertucker@unm.edu, presenting author

This paper addresses how street vendors in Ciudad del Este, Paraguay are managed through uncertainty. Critical urban theorists increasingly recognize how negotiation, cutting deals and unpredictability in enforcement are central governing practices, especially in the Global South. “Unceasing negotiability” in land value regimes drives urbanization (Roy, 2002, p. 18), state actors govern through tenure uncertainty in street markets (Tucker, 2017) and informal settlements (Yiftachel, 2009), and getting by depends on a “capacity to construct elastic relationships” (Simone, 2013). While most research investigates these dynamics in the cities of the Global South, in the US contradictory regulations also produce uncertainty, structure conflict over the public-ness of sidewalks and inform how street vendors are governed (Devlin, 2011). Edgar Pieterse calls these practices “deal-making,” demonstrating how they stitch together everyday life in the Global South as poor urban residents negotiate temporary agreements with power brokers to access cash, information, street space, delayed eviction, or other favors. Of course, elites also cut law-breaking deals, albeit with less at stake as they seek fortunes, rather than livelihood.

Yet despite this important scholarship, most planning researchers persist in reading deal-making practices as lawlessness, corruption or a lack of state capacity. As a result, the formalization projects they propose tend to overlook enforcement as a site of politics, and a key way that vendors make claims on the state. Writing against these narratives, I draw from fifteen months of ethnographic fieldwork in a Paraguayan border town where informality and extralegality are the norm, a privileged place to examine the dynamics of deal-making and uncertainty. Individually and through collective associations, street vendors cut deals to access street space, thereby connecting to the economic life of the city. I found that projects to formalize vendors paradoxically keep vendors’ claims to urban space tenuous and uncertain. I demonstrate this through close examination of a census of vendors. Officials described the census as a technical instrument cataloguing an external object: the spatial distribution of vendors in the market. But technologies of knowing, like the census, are made possible by practices of power. In contrast to official claims that the census was a neutral instrument to ensure the fair distribution of vending upgrades, I found the power of this census lay in how it meant different things in different circumstances, that is, in
its capacity to produce uncertainty. I argue that the census is key to the spatial management of street vendors, even if it works differently from expectations that states uses censuses to produce intelligible, mapped space or calculable populations, as detailed by Foucault, James Scott and others. By demonstrating venders are governed through various dimensions of uncertainty, I help planners see the importance of understanding how the everyday politics of enforcement distribute access to livelihood for street vendors.

References


Key Words:
informality, street vendors, uncertainty, governance

PARTICIPATORY PLANNING, MUSEUM ‘LABS,’ AND URBAN PROBLEM-SOLVING

Abstract ID: 577
Individual Paper Submission

HOLLERAN, Max [New York University] max.holleran@gmail.com, presenting author
HOLLERAN, Sam [ETH Zurich] samholleran@gmail.com, co-author

This article examines socially engaged arts festivals and urban 'laboratories,' considering how museums use participatory programming to address social issues and urban planning questions with processes that incorporate art and design. Particularly of interest are festivals and other programming seeking solutions to pressing urban issues such as transport and housing (Quinn 2005). The paper analyzes recent programs in New York, Melbourne, and Berlin, using participant observation during festivals with attendees and organizers as well as follow up interviews.

As the role of the museum has expanded, many institutions have attempted to redefine themselves as incubators of civic conversations (Bishop 2012). Museums of art, architecture, and urban history have positioned themselves as natural places for land use and housing issues to be hashed out. Museum professionals, educators, entrepreneurs, and artists have created participatory planning events that take place in the—relatively neutral—museum festival or ‘lab’ context. This new field of practice incorporates and resolves calls from critics for museums to 'grow-down' and foster more engagement with the communities in which they are situated.

Museum-sponsored urban labs stress the need for creative and planning professionals to address urban problems through street-level interactions, forums, and playful interventions in the built environment (Pollock and Sharp 2012). Often with corporate partners, museums have advocated for these
interventions and 'design thinking' to fix endemic problems like deteriorating public housing, access to healthy food, and polluted waterways. Design thinking, with origins in the world of corporate innovation consulting, often elevates the trappings of community involvement, such as photogenic exercises involving sticky notes, in place of more sustained participatory initiatives. Another shortcoming with this strain of programming is that it typically runs on a very limited budget, and occurs over a brief ‘festival’ period, a timeframe insufficient to tackle entrenched issues.

In this paper, using three distinct national contexts, we analyze the new types of engagement created by museums when they reach out to surrounding communities and the ways in which they bring-in traditional neighborhood organizations. In examining these spaces, we find a useful analogy in the settlement houses that dotted New York’s Lower East Side one hundred years ago. Progressive Era reformers viewed American cities as ripe for intervention and manipulation through scientific management of social problems. The 'laboratory' metaphor has returned, this time, with design as the lens for examining and alleviating urban woes.

The use of design, not art, shows a telling difference in the way museums think about the neighborhoods in which they are situated. Museums abutting poorer neighborhoods have introduced more programs to connect with local residents, but, in a telling difference, high-income visitors are expected to consume art, while low-income community members need to be engaged through design; a field that tends to privilege bold, visual solutions. While well intentioned, the creation of labs to tackle urban problems marks a shift away from ‘base-building’ approaches advocated for by community organizations that have been operating in these neighborhoods for years (Baiocchi and Ganuza 2016).

Our paper goes on to posit best practices for museums working with design thinking—ways in which these institutions can serve as a springboard and neutral space for community conversations around the shaping of the built environment. By examining longer-term projects that incorporate annual festival elements, we find a way in which laboratories can go beyond one-off photo opportunities and meaningfully contribute to research, development, and evaluation of ground-up programs in the public realm.

References

Key Words: participatory planning, civic engagement, design thinking, social practice, parks

ORGANIZING & PLANNING II: THE SCHOLAR’S ROLE IN SOCIAL MOVEMENTS
Abstract ID: 584
Roundtable

TUCKER, Jennifer [University of New Mexico] jennifertucker@unm.edu, organizer, moderator
ISAAC, Claudia [University of New Mexico]
HINKLEY, Sara [UC Berkeley]
SCHAFRAN, Alex [University of Colorado Denver]

This roundtable convenes planning scholars who have long histories in organizing, activism and community engagement. Our conversation addresses the role of scholars, and planning, in social movements. How does our scholarship change when we view organizing strategies, activist tactics, and civil disobedience as legitimate planning practice? What is the link between researching organizers and being one? Could Universities be a key node for organizing in the 21st century? Given our approach to community building and urban development, what is the role of planners in rethinking organizing? We will strategize about adequately responding to Trumpism by locating current threats within long histories of racism, colonialism and other forms of violence. We also suggest post-election reconfigurations may offer new political openings. Given this, what practices, pedagogies and visions might promote interventions that aim toward justice?

References

Key Words:
Organizing, Social Movements, Community Engaged Scholarship, Radical Planning, Praxis

MAKING INFRASTRUCTURE VISIBLE
Abstract ID: 619
Individual Paper Submission

HSU, David [Massachusetts Institute of Technology] ydh@mit.edu, presenting author

More than a few books on infrastructure begin by focusing on a mundane act that we all usually take for granted: to these authors, the flicking of a switch or opening of a tap indicates our unwitting reliance upon particular resources such as electricity and water, while pointing out that we rarely if ever think about the large and complex infrastructure systems that provide them. This relationship is hard to see because infrastructure has social, political, and technological aspects that are hard to untangle, yet cities depend on infrastructure to provide water, food, energy, materials, and transportation; and infrastructure often serves as a principal connection to nature.

Changes in infrastructure systems are already happening rapidly through changes in public finance, decentralizing technologies, changing consumer expectations, and climate change. However, due to rapid technological and demographic shifts, institutions such as utilities and state-level regulation as have existed for the past century may not be able to cope with drastic changes (Hirsh, 1999; Pérez-Arriaga and Knittel, 2016).

This paper is therefore interested in two questions. First, in order for us to develop a different relationship between cities and nature – that is, to lessen the environmental impact of cities – what kinds of institutions or organizations are needed to build engagement with, and awareness of, infrastructure
systems? Second, what are some ideas and strategies for us to shape the institutions that govern infrastructure as it changes rapidly?

To unpack these questions, this paper discusses three very different literatures relevant to the idea of planning large infrastructure systems. First, anarchists from Kropotkin to Bookchin have had distinct ideas about how changing size and methods of production and craft could lead to freer and more communal associations (Bookchin, 1975). Second, John Dewey and other pragmatists explicitly sought to develop specific kinds of knowledge not for its own sake, but in order to achieve more democratic outcomes (Dewey, 1938). Third, recent work in environmental history and political ecology has focused on how political and environmental inequalities shape and reinforce one another (White, 1995).

From these literatures, this paper develops some strategies to shape infrastructure, including matching particular technologies with the sizes of institutions to enhance democratic engagement; thinking about ways in which people (often called “consumers”, “users”, or "the last mile") can actively participate within the operation of large infrastructure systems; and discussing under what conditions particular kinds of infrastructure are inherently leveling or unequal. This topic should be relevant to planners interested in planning the social, environmental, and physical aspects of large infrastructure systems that affect all cities, and planning theorists interested in how certain kinds of technical knowledge might affect larger political intentions.

REFERENCES:


References


Key Words:
infrastructure, participation, institution

"THE USES OF STORIES AND THE IMAGINARY INFRASTRUCTURE OF CITIES"
OR "WEESAKEECHAK'S NEW CONDO"

Abstract ID: 656

Individual Paper Submission

DORRIES, Heather [Carleton Univeristy] heather.dorries@carleton.ca, presenting author

Zibi is a condo development, currently under construction in Ottawa, Canada. Like most of Eastern Ontario, Ottawa sits on unceded Algonquin territory. Although one Algonquin community has publicly
supported the project, several others contest the right of the developer to build this project on a site of cultural and spiritual significance. In the face of significant opposition to the project, the development is being marketed using twin discourses of reconciliation and sustainability, which narrate the project as not only an example of “reconciliation in action” but also as an example of sustainable planning practice. Thus, powerful symbolism is mobilized to greenwash and redwash the project, normalizing processes of gentrification, colonialism, and ecological destruction.

Planning scholars have argued that “planning is performed through story” (Sandercock, 2003). Stories have the power to focus our attention on specific problems or situations, and can influence the ways that cities are planned and built. Stories have also been identified as an important foundation in Indigenous intellectual traditions. In the field of Anishnaabeg studies, scholars have argued that stories provide “a methodological and theoretical approach for scholarship” by embodying “ideas and systems that…allow for the growth and utility of diverse and disparate ways of understanding the world” (Doerfler, Sinclair and Stark 2013, xv).

Using a narrative style that contains both fictional and non-fictional elements, this paper explores how Indigenous intellectual traditions might re-orient planning theory, providing new ways of thinking about sustainability and justice. Specifically, it asks what planning might look like if it were based on Indigenous legal orders (Napoleon, 2016), which emphasize obligations to our more-than-human relations (Watts, 2014; Todd, 2016). The paper also considers how storytelling can be used as a method for theorizing planning in ways that foreground Indigenous epistemologies, methodologies, and political goals.

References


Key Words:
Indigenous planning, storytelling, sustainability, settler colonialism

“RIGHT TO THE CITY” AND INSURGENT PLANNING IN FORTALEZA, BRAZIL

Abstract ID: 660
Individual Paper Submission

FREITAS, Clarissa [UFC] urbcla@gmail.com, presenting author
Across the globe, the understanding of urban planning as an inherently progressive tool has been very problematic, although surprisingly common. In the context of the Global South, where the liberal democratic state project was incompletely implemented, the belief in a savior tool, positioned above individualized interests and external to local political dynamics, has transformed planning into an instrument of dominance, compounding and perpetuating pre-existing socio-spatial imbalances. Many have systematized the pitfalls of uncritical adoption of planning policies based on the Global North in the very distinct realities of young democracies or postcolonial contexts. Watson (2012), for instance, describes several possible specificities in these contexts, among which I highlight two: (1) a severe mistrust in government, which is reflected in the challenging of official information and knowledge by excluded civil society groups; and (2) the existence of “a consciousness of rights but not of responsibilities” (2012:85). In these contexts, a question increasingly central to debates on planning theory is: How can state representatives with little social legitimacy plan for all sectors of society? The concept of insurgent planning is a fruitful avenue to address this issue. It departs from other radical planning strands with greater reliance on the Global North because it understands planning not only those practices of trained professionals hired by the state to act in the name of public interest, but also those of the excluded groups themselves (Holston 2008; Miraftab 2012; Souza 2006). The message of insurgency is thus one of self-determination and resistance (Miraftab, 2012). Yet, this discussion’s greater challenge is to make specific cases meaningful to actors in very different local contexts. This paper is an attempt to fulfill this task. Based on action-oriented research and observation of urban movements in the periphery of Fortaleza, a 3,5 million inhabitant metropolis in Brazil, I investigate the extent to which current Brazilian Right to the City (RTTC) policies can be framed as insurgent planning. Through the case of Fortaleza, I examine the construction and de-construction of RTTC policies, depicting the ways in which legislative protection for disadvantaged urban inhabitants can coexist with, and sometimes reinforce, market-based dispossession of the urban poor, producing a contradictory context of rights-based inclusion and material exclusion. The analysis reveals that, even though the internationally acclaimed RTTC provisions, enacted during the country’s re-democratization period, effectively questioned the technocratic planning paradigm of the previous authoritarian political regime, its gradual incorporation of the more fluid neoliberal set of values has hindered its transformative potential. This perspective challenges the usual argument among local planners that elitist developments persist despite the adoption of progressive policies. It purposes instead that it was precisely the more progressive language that has allowed the implementation of exclusionary practices. In addition, a close examination of grassroots strategies of resistance during a 4-year period allowed me to identify not only the pitfalls of formal RTTC policies but also some instances of insurgent practices as a reaction to them. Results echo research from other Brazilian cities that call for an increasing awareness of the misuse of progressive language in planning policies (e.g., Kapp and Baltazar 2012). Rather than supporting the inexorability of instrumentalization of RTTC planning, the case supports the claim that If we want to build knowledge on the possibilities of radical planning, we ought not to limit ourselves to the potentially progressive state planning, but to consider the strategies of the excluded groups, because they are the ultimate sources of any substantive change in power relations. Ultimately, it contributes to an understanding of insurgent planning not as a formal/rigid response to a given set of state policies, but as a fluid and complex attitude that responds to the shifting nature of power within the current state–civil society relations.

References

This paper examines the deployment of an “equitable development” framing by planners and activists negotiating the terms of property-led development in cities undergoing revitalization through gentrification. It draws on an extended case study of West Philadelphia’s University City, which is currently undergoing transformative redevelopment spearheaded by Drexel University in conjunction with private partners and Philadelphia city officials. Members of the civic organizations and other community-based groups attempting to influence redevelopment in the interests of existing residents (particularly in the historically Black neighborhood of Mantua) are haunted by unsettling reminders of injurious past waves of “renewal” in the area, whose effects they continue to live with. They are also animated by traditions of protest and self-help with roots in that Urban Renewal and Great Society eras. The paper places the West Philadelphia case in the context of local governments’ strategy, under 21st century urban austerity, of fostering the remaking of formerly marginal (often historically Black) areas as neighborhoods of choice for middle and upper-income residents. The market-biased understandings of progress and development that dominate contemporary discourses of central city revitalization affirm this strategy as both desirable and necessary. But neighborhood reinvestment as it is typically practiced - led by the private sector yet supported in crucial ways by government tax expenditure, infrastructure development and land use policy – has been shown to exacerbate inequality and to disadvantage and dislocate incumbent households. This growing body of evidence, combined with increased activism and resistance among affected groups, has led planners to more strongly emphasize equity, inclusion, and even justice as priorities in changing neighborhoods. Advocates and academic commentators propose affirmative guidelines for directing, regulating and modulating the imperatives of real estate capital, such that vulnerable groups have a better chance to participate in revitalization’s “upside.”

Critical urban theorists would have us dismiss the new equitable development discourse as window dressing on a repeating process of racialized commodification and dispossession. The pragmatic strain in planning and policy practice, however, militates against this. Even as we deconstruct or unmask equitable development claims, theorists like Iris Marion Young would urge us to seize the mainstreaming of equity discourse as an opportunity to pursue institutional reorientations and structurally directed reforms that improve day-to-day life, and life prospects over time, for incumbent residents in neighborhoods being reinvested with capital after decades of decline. The pragmatic impulse
also encourages us to understand the politics entailed in securing and defending those reforms. In that vein, my research investigates the conditions under which “equitable development” amounts to something other than a simulacrum of justice. It reveals neighborhood groups, even as they conform with behavior deemed acceptable under the norms of civic participation under entrepreneurialism, in the process of attempting to alter rules and practices in markets for land and labor.

References


Key Words:
equitable development, gentrification, civic mobilization, race, justice

ON THE POLITICAL MEANINGS OF THE TRANSFORMATION OF PROPERTY AND OWNERSHIP IN THE UNITED STATES

Abstract ID: 666
Pre-Organized Session: Contesting "Community Development": Politics, Discourse, and Value

DEFILIPPIS, James [Rutgers University] jdefilip@rutgers.edu, presenting author

The last decade has seen significant growth in the numbers of, and interest in, forms of ownership that have been variously called, "solidarity economies" or "alternative economies" or "non-capitalist economies." While there is a lot written about these efforts, there is relatively little that has explored the lived meanings for those involved in such endeavors. The paper will ask how participation in forms of ownership that are different from the norm in American society impacts the political understandings and meanings that are attached to those forms of ownership. In short, does being part of such a form of ownership have political meaning to participants? If so, what are the meanings and how can they be properly understood by those looking to these forms of ownership to be part of a larger socially transformative movement? Drawing on scores of interviews with community land trust (CLT) residents, staff and board members, foundation and government funders, and others, this paper will discuss and analyze the reality that for most of the participants in such endeavors, the political meanings are muted, under-explored, and often fairly minor. It is this contradiction: between the significance of the change in the ownership form and the relatively insignificant political meanings attached to that changed ownership that this paper will probe. It will do so in order to better understand the political potential and limitations of "solidarity economy" forms of ownership, and to realistically assess what can be expected of these forms by those who aspire to have a more just political economy.

References

Key Words:
community land trusts, community economies, solidarity economies

EB-5: A NEW FINANCING MODEL FOR COMMUNITY ECONOMIC DEVELOPMENT?
Abstract ID: 667
Pre-Organized Session: Contesting "Community Development": Politics, Discourse, and Value

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My paper reexamines the conflict between capital and community in a post-2008 context marked, in part, by high levels of Chinese transnational investments in New York City commercial real estate. In particular, I focus on recent policy and planning studies on the EB-5 immigrant investor program as a source of low-cost financing for regional and community development (Singer and Galdes 2014, Zeuli and Hull 2014, Abello 2016). The 1990 Immigration Act’s employment-based categories include an immigrant investor program whereby investments of $1 million or $500,000 in a targeted employment area (defined by high unemployment) and creates 10 jobs will secure US permanent residency and eventual citizenship for the investor and their immediate family members. Known as EB-5, this controversial program was underutilized until post-2008 financial crisis when commercial real estate developers began to heavily tap EB-5 as a source of cheap financing. In fact, EB-5 has been described as “legalized crack cocaine” for the real estate industry. In 2014, Harvard University’s Initiative for a Competitive Inner City (ICIC) held a convening of non-profit community developers, foundations, economic development policy experts, and EB-5 industry representatives to explore how transnational capital can be applied to “impact investing in inner cities.” The ICIC conference featured local organizations including the Brooklyn Navy Yard and Asian Americans for Equality.

Self-described as a “national innovator” for developing “equitable communities”, Asian Americans for Equality, a non-profit community development corporation, has established a EB-5 regional center - The New York Renaissance Regional Center - to generate transnational financing for several of their projects in Queens, NY and Kansas City. Early 2015, Ocean Bay CDC, which serves 10,000 public housing tenants in five campuses densely concentrated in a four-mile stretch of Far Rockaway, partnered with Asian Americans for Equality to develop a commercial and community center on NYCHA-owned land (Abello 2016). A primary value added of Asian Americans for Equality is to direct EB-5 money to this project. Based on a detailed case study of this development partnership, my paper investigates the politics of CDCs as conduits for international finance in advancing the privatization of public housing.


References

- community economic development
- real estate finance
- community development corporations
- immigrant investments

Key Words:
community development, NYCHA, EB-5

BLACK FEMINIST POLITICS AND ATLANTA’S PUBLIC HOUSING DEMOLITION

Abstract ID: 680
Pre-Organized Session: Contesting "Community Development": Politics, Discourse, and Value

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This paper will examine the use of Black feminist politics in framing, planning, and rolling out the demolition of public housing in Atlanta between 1994 and 2011 at three public housing developments. Using a case study methodology that includes archival document analysis and interviews, this paper will address the following research question: “How can we understand the ways in which public housing developments, which long functioned as a space of practicing and developing a radical Black feminist politics in Atlanta, were demolished by an urban regime largely led by Black women?” During the Black Women Urban Regime of 21st century Atlanta, wherein Black women led the city, housing authority, and police department in a multi-pronged approach to demonize certain Black tenants as deviant while uplifting other Black tenants as deserving, in the push to demolish “severely distressed” public housing in Atlanta for redevelopment into mixed-income communities. This paper will first analyze how Atlanta’s leadership used Black feminist identity politics to marginalize Black women’s dissent against public housing demolition while cultivating a neoliberal community development politics of privatization, devolution, and “people’s capitalism.” Using tactics of devaluation, deception, deviant construction, and demobilization, the Black Women Urban Regime was able to frame public housing demolition not just as a logical solution, but as a black feminist solution that would overwhelmingly address black feminist grievances (e.g., access to decent housing, education, and jobs). In demolishing public housing, neoliberal Black women removed from the city one of the last spaces to engage in intersectional politics, that addressed racial, gender, and class difference, in the form of the end of the public housing tenant association. From a planning perspective, these demolitions and redevelopments had full tenant participation - participation that was both representative and inclusive of the population's' demographics and elected leadership. Nonetheless, across developments, the more critical, anti-demolition viewpoints were marginalized, and these tenants had to resort to more visible (and less sustainable) expressions of direct action to address this exclusion.

This examination of public housing redevelopment, demolition, and tenant mobilization will pay explicit attention to the roles of race, gender, and class in constructing and (de)constructing both a deserving and deviant tenant. These constructions drive planning decisions in that they decide whom is included in the participatory or inclusive portions of the planning process. In framing the end of traditional public
housing as a political project that marginalizes radical planning coalitions (deviants) while uplifting and sustaining more conservative, pro-growth coalitions (deserving), this paper contributes a more intersectional understanding of how planners can better conduct inclusive participation, particularly in communities of underrepresented minorities.

References


Key Words:
Race, Gender, Public housing, Community development

COMMUNICATIVE SOCIALIZATION: RETHINKING NEIGHBOURHOOD AND COMMUNITY

Abstract ID: 738
Individual Paper Submission

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In the West, New Urbanism has captured the imagination of planners and citizens who have grown weary of the social isolation engendered by privatized suburban lifestyles. Equally wary of urban high rise developments, which many associate with drugs, crime and social disintegration, this middle class coalition aspires to a Goldilocks compromise of denser, mixed use developments that they believe will rebuild the intimate communities of the not so distant past. This movement is based on the belief that shared spaces can create shared emotions and thereby rebuild communities. However, New Urbanists’ practices have long been challenged since their sole reliance on physical interventions is not producing stronger communities (Talen, 1999). Rather, studies indicate that better relations are generated from socio-economic homogeneity rather than the geographical closeness. The success or failure of physical interventions in fostering a sense of community appears to rely fundamentally on whether or not they support shared interests.

In this paper, we argue that such fundamentally ideological efforts, which perhaps reflect ideals at the core of many planners' value systems, represent a misguided resistance to the contemporary reorganization of social relations through disembeddedness and globalized connection (Giddens, 1991; Castells, 2011). Instead, we call for a strategic engagement with these transformed social relations of liquid modernity (Bauman, 1998). Rather than planning for the shared bonds of community through spatial proximity, planners should shift their focus to planning for the spatial support of shared interests, which we call "communicative socialization". Shared interests not only form the foundation for generating the shared emotions sought by those favoring "traditional" communities but also stand alone as an increasingly important component of contemporary living: practical communication of information (Werner et al., 1992).
Concrete inspiration and support for this argument is drawn from research in Korea, where contemporary developers and planners, like the New Urbanists, have striven to revive the emotional unity of shared bonds and space by recreating built environments from a period in which shared space generated richer personal bonds. Drawing primarily on semi-structured interviews and focus groups with residents in the Seoul metropolitan region conducted over the last several years, we offer three findings in support of this theoretical argument. First, as the typical resident and planner aspires to the suburban antithesis of high-rise apartments for both privacy and community, we argue that the built form is a secondary source of community rather than a primary one. Second, communication as a practical relationship is actively practiced across neighborhoods without obliging individuals to embrace a commitment to a particular spatially based community or disrupting their privacy. Third, despite the emotional distance maintained through communicative socialization, when genuinely shared interests are identified, it does not preclude the formation of shared emotional bonds that then become disembedded and dispersed as households move.

On the basis of these findings, it is then possible to argue that planners’ efforts should not focus solely on creating emotional bonds through deterministic measures of physicality but rather on hardware and software that will support communicative socialization across wider neighborhoods. Specifically, this calls for spatial planning that fosters contacts on the basis of shared interests and facilitates communication across neighborhoods. It also calls for developing techniques for increasing civil communication and educating citizens in how to make use of them.

References

Key Words:
New Urbanism, communicative socialization, community planning

**EPISTEMIC INJUSTICES? PUBLIC OPPOSITION TO SHALE GAS DEVELOPMENT**

Abstract ID: 786
Individual Paper Submission

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Whilst the idea of public participation within planning decisions continues to hold a normative status, the reality of formal public opposition to development has often been dismissed within the literature as unworkable or selfishly motivated (Innes and Booher, 2004, Bell et al, 2005). Whilst a number of authors have sought to complicate the narrative of NIMBYism highlighting the local forms of
knowledge that communities hold and planners often neglect (see McClymont and O’Hare, 2008, Bickerstaff, 2010), narratives of expert knowledge predominate more technical forms of decision-making. Whilst strong arguments exist that lay forms of knowledge can be missed within decision-making if communities are insufficiently involved, a tacit consensus remains that “expert” forms of knowledge lie within the hands of planners, the state more widely, and development interests.

This paper seeks to contribute to theoretical debates regarding the status of public participation. Nowhere is this more clearly demonstrated than in the controversy over shale gas extraction or ‘fracking’ where public opposition is often cast as “rational ignorance” that can be overcome through public education programmes.

This paper considers how expertise becomes politically constructed within debates. This paper draws upon archival and qualitative fieldwork conducted in Pennsylvania, USA, that challenges the lay/expert divide within oil and gas development. The paper traces aspects of the contested nature of oil and gas development and the complex relationships between commercial enterprise and the professionalization of geological science (see Lucier, 2008). It draws upon the work of feminist philosopher, Miranda Fricker, to engage with the concept of epistemic injustice. Drawing on these concepts, I argue that communities lack epistemic resources that allow them adequate credibility within discursive planning spaces. I shall make the case that we must engage with epistemic injustice to reveal the exclusions that superficially inclusive policies create. The paper concludes that, in this case, expertise is blurred and lies outside the state, encompassing the knowledge and experiences of diverse communities.

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Key Words:
epistemic injustice, fracking, public participation

REGULATING STREET VENDORS IN MEXICO CITY: HAS ANYTHING CHANGED?
Abstract ID: 857
Pre-Organized Session: Managing Informality I: Urban Labor

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The displacement of street vending activities from the streets of Mexico City is nothing new. It is a practice exercised by city authorities (in its different forms) that dates back to the XVIII. This paper provides an account of the multiple ways in which street vendors´ removal has been carried out and justified by urban authorities in different moments in the history of the city. Special attention will be placed on four key dimensions of such efforts: normative rationalities, imaginaries, practices, and spatial
references constructed around these activities during key historic moments in the political life of the city. Through a historical perspective, the objective of the paper is to shed light on the apparently new ways in which contemporary beautification policies implicated around the politics of the street unfold.

Historically, underlying most efforts to remove vendors from urban public space has been multiple and contradictory discourses around order, sanitation, and civility. During the XVIII century, normative rationalities around the governance of the street were driven by a constructed urgency around fear of the spread of insalubrious conditions. Drawing from ideas of the European enlightenment, particularly around the value of circulation based on principles of anatomy, movement became a critical category that permeated discourses and practices around sanitation and hygiene. A modern city was conceived as a functional organism based on the movement and circulation of people, goods, water, and waste. During this time, Mexico City experienced a growing enthusiasm for the “new science” of sanitation, spatialized on the street through functionalist notions of urban life in accordance with accepted activities defined by the colonial and urban elites. This is when street vendors first became targets of constructed understandings of disorder and filth.

Today, Mexico City’s political and economic elites continue to show concern over order, hygiene and civility on the streets of the city, locating much of the blame on street vendors themselves. However, as I will show in this paper, while the politics of the street in the XVIII, XIX and early XX century were permeated with normative rationalities of public health linked to sanitation and disease, contemporary efforts have also been linked to health, but more importantly to a form of what I call economic sanitation. That is, an economic health structured and defined by notions of legality, formality, and legal notions of order. Street vendors today represent chaos in an imaginary driven by an apparent order defined around a manufactured understanding of formal economic activities. Hence, discourses around the formal and the informal are key in understanding how street vendors are represented in contemporary normative and idealized public spaces in Mexico City.

A historical account of the different ways in which the displacement of street vending activities have been made legitimate by urban authorities and struggled over is important to shed light on contemporary practices of displacement and current normative visions of the street. Historically, while urban authorities efforts to remove street vendors from the city’s public spaces might seem to be carried out in similar ways, it is important to look at the different rationalities, imaginaries and practices underlying these efforts. Such differences might shed light on the significance of the street – as one of the most emblematic forms of what might be defined as public – in contemporary urban politics.

References


Key Words:
Street vending, displacement, Mexico City
MEMPHIS IN THE FACE OF AUSTERITY: IS THE PUBLIC INTEREST STILL A PLANNING CONCERN?

Abstract ID: 861
Individual Paper Submission

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This paper shares the outcomes of an in-depth case study of how planning is conceptualized and practiced in Memphis -- a mid-sized American city characterized by constrained public resources. In the absence of a robust public sector planning function, and with limited local public resources dedicated to planning, who finances, controls, and directs the planning and development actions that do occur? The analysis considers the prominent role and influence of philanthropic organizations (local and national), the local corporate community, and crowd-funding initiatives, with a focus on how the public interest is implicitly or explicitly conceptualized in local planning efforts. In the face of a limited public budget and a perennial conflict between inner city and suburban interests, the study examines the kind of financial and non-monetary resources used for planning-related projects (e.g., urban regeneration, community development, place-making, etc.). It also asks how the (public vs. non-public) nature of the resources impacts the conceptualization of the public interest and the very nature of planning.

The case study has been generated through a mixed methodology. The overarching questions draw from lessons learned by the authors through their involvement in several engaged scholarship projects carried out by the department of City and Regional Planning at the University of Memphis. These lessons are complemented by a series of in-depth interviews with key local planning actors.

The themes and issues raised by the paper are rooted in a long-term debate in planning, which dates back in the 1980s, when the profession of city planning became prone to an ensemble of austerity policies, including neoliberal cuts in government spending, and land-use deregulation. In response, scholars have generated a large amount of research focused on how planning approaches, tools, and methods needed to be innovated in the face of neoliberal powers (Clavel et al. 1980). The same research theme is today re-gaining international attention, due the significant global impact of the 2007-2008 financial crisis on both the public and the private sector. Once again, austerity has been a dominant political response to the crisis, turning the failures of financial capitalism into an acute crisis of the state (Hall and Massey, 2010). Opportunistically imposing new forms of discipline on public service provisions, particularly in economically peripheral locations, seems to have reinforced rather than alleviated the impacts of crisis on national economies (Blyth, 2013). However, ten years after the collapse of Wall Street banks in 2007 and some eight years into the crisis of European sovereign debt, this paper aims at contributing to the international debate on how these dynamics have affected and are influencing planning.

The paper draws on post-political planning theories (Swyngedouw 2010) to consider the shortcomings of planning scholars’ responses to 1980s-era austerity measures. It explores the need for new approaches to organizing for the public interest in the context of our contemporary conjuncture. The Memphis case contributes to this debate, from the perspective of a city that had been facing public financial limitations way before the 2007 recession and, therefore, has experimented planning with a scarcity of resources for several decades now. We believe that the study of the long-term consequences
of such a condition are worth the attention of the international audience, providing a peculiar contribution to the scholarly debate on planning in the face of austerity.

References

Key Words:
Austerity, Post-political, public-interest, case-study, engaged scholarship

DISPOSSESSION AND ITS LIMITS: COAL, LAND AND THE ENVIRONMENT IN SOUTH INDIA
Abstract ID: 909
Individual Paper Submission

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For more than a decade, the concept of dispossession has been central to debates in urban and planning theory. Situated within and against these ongoing debates, this paper examines the ways in which environmental planning is implicated in processes of dispossession. A relatively recent sphere of governance in postcolonial India, environmental planning emerged during the 1970s during a period of populist and authoritarian rule. Within this historical context, environmental planning often served as a means to mitigate social conflicts and legitimize state-directed development. Drawing upon eighteen months of archival and ethnographic research among planners, scientists, fishermen, and environmental activists in south India, this paper tracks how the state-owned coal industry draws upon technologies of environmental planning in order to dispossess coastal fishing communities of their lands and livelihoods. I argue that environmental planning has become an increasingly important site around which contestations over coal and land take place. By tracking such contestations from the 1970s to the present, the paper demonstrates that environmental planning constitutes a site of political struggle that both enables and limits often-violent processes of dispossession.

References

Key Words:
dispossession, land, coal, environmental planning, India
"THERE GOES THE NEIGHBORHOOD": CONTESTING LOCAL UNIQUENESS

Abstract ID: 929
Pre-Organized Session: Contesting "Community Development": Politics, Discourse, and Value

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This paper looks at a redevelopment conflict concerning divergent ways of addressing the perceived uniqueness of Coney Island, a historic amusement destination in Brooklyn, New York. Although still a popular destination, the district has shrunk significantly since the middle of the twentieth century, leaving behind large tracts of vacant or underdeveloped land. As a result, in 2007, the City of New York began to formulate a redevelopment plan with the objective of better capitalizing on Coney Island's uniqueness. The Administration's efforts initially received support from a wide range of community groups, many of which welcomed the City's interest after several decades of perceived neglect. Before long, however, an opposition coalesced against the City, driven by a general view that, far from building on the neighborhood's uniqueness, its plan undermined it. This paper examines the basis of this community group’s objections and considers how its sense of local uniqueness originated and translated into a development vision that differed from the City's. Finally, the paper draws from debates surrounding the redevelopment of Times Square--another nearby "unique" neighborhood that underwent a large-scale transformation about a decade prior-- to set forth normative standards by which we might evaluate the merits of approaches to development grounded on the notion of neighborhood "uniqueness".

The concept of uniqueness is common currency in both the promotion and condemnation of redevelopment efforts. On the one hand, cities have long sought to cultivate and promote local distinctiveness so as to better compete in the spatial sphere of consumption. On the other, communities seek to safeguard from neighborhood qualities that development might endanger. When these dynamics converge on a selfsame place, they may operate at cross-purposes, assuming the form of a preservation battle. They may also reinforce each other, aligned by a shared interest in local features. In either case, the values that inspire a regard for uniqueness often observe their own disparate logics. By studying these divergences, we can look beyond the stark distinction of pro- and anti-development and gain insight into the wide range of possibilities that "unique" development might comprise and, thereby, into potential avenues for addressing community concerns in the face of perceived neighborhood threats.

References


Key Words:
community development, urban redevelopment, New York City

SPECULATIVE PASTS AND DECOLONIAL FUTURES: GETTING OUTSIDE CONTEMPORARY PLANNING THROUGH THE ARCHIVE

Abstract ID: 940
Contemporary urban planning’s penchant for standardized solutions has not waned since the days of urban renewal. While planning embraces policies that explicitly seek to correct the profession’s 20th century mistakes -- smart growth instead of subsidized sprawl, Complete Streets instead of central city highways, public space instead of privatized amenities -- these simply replace discredited “best practices” with today’s favorites.

At the same time, policy advocates invoke yesteryear’s streetcar suburbs and downtown “main streets” as proof of concept for transit-oriented development plans or New Urbanism’s form based codes. The planning profession largely references planning history as instrumentalized rationalizations, whether in the service of a teleological narrative of progress or reassurances to a wary public that the city can be made great again. For planners seeking to practice participatory or insurgent modes of planning, is the past simply another source of state propaganda?

Using participant observation, auto-ethnographic methods and open-ended interviews to examine three archive-based planning projects I have collaborated on in Honolulu, I argue that planners seeking to escape the constrictions of conventional wisdom can draw on speculative pasts to destabilize contemporary planning practice and contribute to decolonial futures. Based on these empirical cases, this paper offers three propositions for more imaginative and equitable modes of urban planning.

One, archives as method can open a reflexive space for planners to consider their roles and responsibilities beyond convincing a skeptical public that any given project is in the public interest. In presenting the decades of planning studies for a single Honolulu neighborhood currently undergoing contested redevelopment, I foregrounded the continuities and disjunctions in conceptions of the public interest. Unearthing archived master plans can soothe planners by absolving the state of neglect and showcasing past efforts to address public concerns on displacement and affordability. But these dusty reports also unsettle their assumptions of “highest and best use” through reminders of spectacular failures and minor missteps.

Two, because the strange minutiae of archival sources cannot be contained within tidy narratives of decline or restoration, consideration of historical documentation can encourage the reassessment of present day planning. A collaborative walking tour titled “Papers in the Park” used excerpts from an archive of University of Hawai‘i student papers dating back to the 1920s to summon the tastes and sounds of the same neighborhood from 40, 60, 80, and 100 years ago. Contradictory evaluations of the neighborhood’s condition by students of the same historical era reveal the subjective determinations of “progress” and livability. Archives are far more than sources for images of a glorious past to be wielded as cultural cudgels to clear the way for top-down redevelopment.

Three, an archives-based planning practice can offer a direction for decolonial city-making through a politics of storytelling. Histories that suggest inquiries and trace contingencies open possibilities for change. The Hawaiian proverb “I ka wā ma mua, i ka wā ma hope” can be translated as “The future is in the past”. Colleagues in the Center for Hawaiian Studies, the Indigenous Politics program and the urban planning department at the University of Hawai‘i have designed a Decolonizing Cities symposium for planning scholars and practitioners featuring poets and decolonial tour guides who remake the always present past as a way to break settler colonialism’s frames.
For planners frustrated with unitary, rational-modernist and sometimes even totalitarian modes of state action, the archive can be a place and a method for getting outside of the limitations of contemporary planning.

References

Key Words: epistemology, decolonization, planning history, narrative, participation

THIS POLITICAL CLIMATE: URBAN AGE FOR/AGAINST IDEOLOGY
Abstract ID: 941
Pre-Organized Session: Planning’s Outside: Being Normative in the Face of Egregious State Action

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In March 2017, Michael Bloomberg, former mayor of New York, projected that despite President Trump’s attempts at rolling back environmental regulations, the US would remain on track to meet its commitments under the Paris climate change agreement. Bloomberg rehearsed familiar themes of distrust of federal government, and faith in technology, markets, and self-interest. He also expressed faith in the ability of cities to lead and act on climate change. On one level, Bloomberg’s position reinforces older debates on the hollowing out of the nation state in the face of globalized capital (Jessop 1995). On another, his claim about the power of cities aligns with the increasingly widespread assertion of the so-called “urban age,” embraced alike by political theorists like Benjamin Barber (2013) and global funding institutions such as the Rockefeller Foundation.

Bloomberg and other proponents of the power of cities idealize a bracketing out of the nation state, once the primary unit of governance through which issues such as environmental futures are negotiated, planned, and implemented. This professed ability to leave outside inconvenient reactionary politics, to cleave out a space for meaningful responses in the context of resurgent populism and nationalism, presents a new front in the conceptualization of local and global environmental action. On the one hand, it pushes back against assertions in urban theory that globalized urbanization processes now transcend efforts to comprehend, let alone act from, a bounded city (Brenner & Schmid 2014), and core precepts in sustainability science that we live in a closed system, on one planet (Daly 2005) – in effect, there is no outside, either to the urban, or to environmental actions. On the other hand, it presents a rejoinder to classic theories of the limits of cities to take on broader distributional issues (Peterson 1981).

But can cities take effective action on global collective problems? This paper investigates these new scopes and scales of planning. It focuses on three levels of interrelated phenomena: climate change scientific knowledge production; urban infrastructural and environmental adaptation plans; and the actors and institutions of environmental governance. The paper is based on the author’s primary research on the urban spatial politics of climate change in the United States, Indonesia, and the Netherlands, and
secondary findings from the author’s collaborative research on the equity implications of adaptation planning (see Anguelovski et al. 2016). It combines mixed-methods data (interviews, maps, and site visits) with institutional and document analysis of climate change plans. Theoretically, it draws on scholarship on cities and climate change (Bulkeley 2013), and extends theories of urban political ecology on social and ecological co-production in cities (Heynen, Kaika & Swyngedouw 2006) to engage more deliberately with multiscalar biophysical climate impacts and the agency of urban governance. The paper questions whether cities, individually or massively networked, can achieve a manner of environmental resilience in the face of climate change.

This research finds serious doubts not only about whether cities can act collectively to address more diffuse environmental challenges, but also whether they can equitably and effectively protect their own extended urban regions. It also finds that competing yet reinforcing ideologies of the urban age, amidst climate change exigencies, coalesce around and support specific modes of global urban development – a new global city boosterism – with particular implications for normative planning approaches. The paper concludes with the author’s proposition for a distinctly political urban environmental planning scholarship and practice – a spatial-ecological reading and extrapolation of Iris Marion Young’s (1990) appeals for difference and justice in cities.

References

Key Words:
climate change, urban age, urban politics, environmental governance

WASTING WELL? TURNING THE NORMATIVE LENS OF PLANNING OUTSIDE IN
Abstract ID: 942
Pre-Organized Session: Planning’s Outside: Being Normative in the Face of Egregious State Action

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Urbanization is, among other things, a process of commodifying resources, while simultaneously externalizing wastes. At the center of this process—the inside—lie cities. On the front end of the urbanization process, “outside” is anything that has not already been captured by the market—from land and natural resources, to ideas and knowledge, to materials, spaces, and bodies. On the back end, “outside” is constituted by the spaces, bodies, and ecosystems designated as pollution “sinks.” But the
concept of a sink that can infinitely accommodate our pollution is untenable. There is nowhere on this small planet to hide the growing volume of unwanted substances forever, a fact that is increasingly undeniable in the face of global climate change.

With this paper, I use solid waste management as a case to problematize planners’ historic engagement with the outsides of urbanization. And further, I ask how else planners might better apply the tools, skills, and epistemologies of our profession to the problems of wastes.

Historically, planners have worked in partnership with consummate insiders to organize processes of waste disposal. As planning emerged in its modern form during the Sanitary City era, the imposition of spatial order was a predominant preoccupation; central to this mission was the consolidation and removal of solid waste from the urban environment (the inside) to distant disposal facilities (the outside) (Melosi 2005). In more recent history, planners have used processual tools to encourage communities to accept waste disposal facilities as neighbors; this practice reached its height in the 1980s when cities across the country were turning to incinerators to replace their rapidly filling landfills (for example: Klapp 1989; Siskind and Susskind 1989).

In both Sanitary City and 1980s-era incinerator conflict modes, planners planned for waste disposal. This work functioned to reproduce a political economic system that demands both ever-increasing consumption, and the creation of ever more, and ever bigger “outsides” to bury, burn, or otherwise manage wastes. The work of planning for waste disposal also contributed to patterns of spatial and environmental injustice that structurally link physical and political “outsides” to degraded, toxic environments.

Can planners do better? Can we invert the planners view, not just to ameliorate the negative externalities of waste disposal, but to abandon the inside-outside framing altogether? What happens if we make waste itself the central object of planning, instead of waste disposal?

I am not the first to ask this question. Both Kevin Lynch and Mira Engler have pushed the lens of planning towards waste itself, explicitly arguing that it is possible to “waste well,” if we first acknowledge and examine waste and processes of wasting head on—in other words, if we bring waste inside (Engler 2004; Lynch 1990). Using Lynch’s and Engler’s observations and proposals to ground my analysis, I present two empirical cases of alternative approaches to waste management in the U.S context. The first, municipal waste management in Seattle, provides an example of an unusual and successful planning discourse that took waste as its central object. The second, a case of a composting cooperative in Boston, provides a window into the possibilities that arise when outsiders—in this case people of color who steadfastly refuse the exploitative environmental and labor relations of traditional garbage disposal—gain entry into the business of waste management.

On the basis of these cases, I argue that letting go of traditional waste problem frames that depend on a constitutive inside-outside dynamic—frames defined by the same insider interests that drive neo-liberal urbanization—opens up a range of radical possibilities for urban sustainability and the potentials of planning.

References

Key Words: solid waste, environmental justice, sustainability, infrastructure planning, planning's outside

BLUES EPISTEMOLOGY FROM THE UNDERCOMMONS: MAKING THE CASE FOR AFRO-OPTIMISM IN AN AGE OF STATE VIOLENCE
Abstract ID: 943
Pre-Organized Session: Planning’s Outside: Being Normative in the Face of Egregious State Action

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"Let us not pay tribute to Europe by creating states, institutions, and societies that draw their inspiration from it. Humanity expects other things from us than this grotesque and generally obscene emulation ... if we want humanity to take one step forward, if we want to take it to another level than the one where Europe has placed it, then we must innovate, we must be pioneers."
---Frantz Fanon, The Wretched of the Earth

What is our response to the fact of premature Black death? In an age of police and state surveillance, what does one do? This paper explores these questions through the use of a “Blues epistemology”, the term coined by the late radical geographer Clyde Woods (PhD in Planning from UCLA), in order to critique the centering of statist ontologies in our analysis of not only community-based interventions against the biopolitics of surveillance, but also against the very possibilities of societal transformation beyond state intervention. The interdisciplinary paper explores community-based “anti-surveillance” tactics used by the Black Lives Matter Movement and other decentralized organizing forces seeking to enact socio-spatial transformational justice across a number of areas of special concern to planners. The paper investigates the resistant tactics being developed by social media crafters, fugitive hackers and creative mixologists, towards identifying new ways for planners to re-theorize the meaning and import of social movement organizing in an era of state violence.

The conceptual and empirical framework for this project is founded on what the late Clyde Woods referred to as a “Blues Epistemology”. Woods developed the concept of the blues epistemology in his book Development Arrested (1998). Woods used the “blues” concept to argue for a research vision that allows us to see the connections between culture and political economy – rather than separating them into isolated strands of history. It was an important part of his efforts to help us see the multiple ways in which those who are socially evicted can build power, below the radar – in our “undercommons” (Moten, 2016). To understand a place, he wrote, we “have to explore the subterranean caverns that shelter the wellsprings of dreams during the seasons when hope can’t be found” (2009: 430). Those wellsprings were fed by the poetry and subterranean political force of the blues. Dr. Woods's "blues epistemology" is therefore a guide to discovering not only counter-narratives but also alternative development visions.
This paper is a reconsideration of the power and import of art and creativity in the time of surveillance and capital; it relies on Afropunk, Afrofuturism, AfroOptimism, the Black Arts Movement, and Afro Modern political thought as theoretical guides towards fashioning a radical theory for planning from, through and for the undercommons. In particular, it relies on the Black Radical tradition as a living tradition of struggle that calls into question the very purpose of institutionalized and legitimized forms of knowledge insofar as they issued from the political logics that underpinned the liberal order.

Using institutional ethnography, as well as relying on visual, archival, and interview data, this paper will present an analysis engaging concept mapping, process tracing (coding) and diverse forms of comparative histories including the use of radical planning and geographic understandings of space and place. This approach further theorizes how a Blues epistemic can lend a more Afro-Optimistic sensibility to planning theories of collective action and social transformation in turbulent social and political times. This is an analytic I hope conveys the need for militant hope and radical action in the spirit of “survivance” against surveillance – creative, persistence, resistance; a race geographic and historian’s perspective on social media as pessimistically automated, and optimistically conducive to trench creativity, and as conducive to new rituals of belonging, fraught, sick and generative for many kinds of resistance.

References
- Moten, F. 2016. A Poetics of the Undercommons. Sputnik and Fizzle, NYC.

Key Words:
- fugitive planning, race, space, afro-optimism

ORGANIZING AND PLANNING I: LABOR AND WORK
Abstract ID: 953
Roundtable

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DEFILIPPIS, James [Rutgers University] jdefilip@rutgers.edu

Over the past several years, we have witnessed rapidly escalating changes to how work is organized, the relationship between workers and employers, and the pay and conditions of work. These changes, accompanied and enabled by ongoing technological, political, and social transformations, are associated with rising inequality and new forms of precarity. From flex / on-demand work to right-to-work laws to ongoing deindustrialization, the material potential and social meaning of work are changing in ways that exacerbate economic vulnerability and pose a significant societal and economic challenge.

These changes directly challenge long-established models for organizing to improve people’s living conditions. This roundtable explores how these changes have generated new models of organizing (see e.g. Doussard 2017). While bargaining-centered models inherited from Alinsky and industrial unionism
remain the de facto basis for organizing (Alinsky 1971), workers’ organizations are moving away from approaches centered on singular workplaces, neighborhoods, and social classes (McAlevey 2015). Activists increasingly seek to build broad, cross-neighborhood and cross-ethnic coalitions; to organize entire sectors or cities; and to link challenges in the workplace to struggles at home, in the neighborhood, and in the public sphere (Simmons 2016). Each panelist will focus on a particular transformation of work and how workers and organizers have responded.

References

Key Words:
Labor, Organizing, New economy, Work

DETACHED URBANISM: HOW DO (PRIVATE SECTOR) PLANNERS MAKE SENSE OF THEIR PRACTICES?
Abstract ID: 955
Individual Paper Submission

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The normalization of neoliberal principles in the planning and policy realms affects practices in both public and private sectors resulting, for instance, in the increasing privatization of planning practice. As private sector professionals become major players in actually existing urbanisms (Shatkin 2011), their practices and their approach to planning are crucial to how cities are shaped. In this paper, I investigate the practices of private sector planners involved in the making of global suburbs, i.e. large exclusionary communities on the outskirts of major cities.

The main question I address is: how do planning professionals – who, by virtue of their professional education are generally aware of the potential negative effects of spatial segregation - make sense of their work planning and designing exclusionary communities? The analysis follows a practice theory approach connecting agency and structure under the assumption that they are mutually constituted (Giddens 1984). Thus, drawing from participant observation and in-depth interviews, I describe and analyze practice stories (Forester 2013, Watson 2002) and I connect the routines, tasks, interactions, perceptions, worldviews, concerns, and feelings of planners with the political economy characterized by the naturalization of neoliberalism.
The findings reveal a particular way of understanding planning practice. What I call ‘detached urbanism’ is an approach to planning that helps explain how these planners engage in daily practices of making global suburbs. It entails a) a sense of disconnection between planning practices and larger social structures (political detachment); b) an ability to narrowly focus on particular sites, developers, and tasks with no involvement in, or concern for, processes that precede or follow their interventions (professional detachment); and c) willingness to put aside personal and professional values to adopt market values (valuative detachment).

A series of features of planning practice enable planners to engage in detached urbanism. Using of technology, focusing on representation, fragmenting work, dealing with imaginary users, adopting legislation as a higher objective voice, developing relationships with clients, and the centering on client satisfaction, planners are able to cultivate the three dimensions of detachment. Rather than striving to advance progressive goals and to address public interests, these professionals work on specific sites to fulfill the goals of their clients. It is important to note, however, that despite their narrow spatial and temporal focus, the work of these planners have lasting impacts in the city as exclusionary communities are implemented in the existing urban fabric (sometimes in areas zoned for preservation and adjacent to low-income communities). The proliferation of these developments help to shape the city and the interactions between people.

These findings suggest that theorists must reconsider taken-for-granted assumptions about planning practice. Larger social issues such as equality and justice, which planning theories consider part of planners’ understanding of their work, might be largely absent from their practices, particularly in the private sector. Urban and environmental issues, which theories often place at the center of planning practice, are regularly put aside as market issues take the forefront. This is especially important as increasing privatization of planning is observed around the world.

References

Key Words:
private sector, planning practice, neoliberalism, practice theory, exclusionary communities

IS PLANNING FOR SOCIAL JUSTICE POSSIBLE IN DISTRESSED LEGACY CITIES?
Abstract ID: 982
Individual Paper Submission

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This paper assesses some of the barriers that may face efforts to carry out planning that promotes social justice in the specific context of distressed legacy cities in the U.S. Although a healthy body of planning
literature assumes that it is possible for planners to promote social justice in varied contexts, many of these works assume that the ability to do this is in some sense within a planner’s grasp, whether through focus on specific circumstances of injustice (e.g. environmental justice), dedication to the concept (as urged by traditional advocacy and equity planning proponents), ability to deploy effective pro-equity techniques (such as Fainstein’s check lists), support for bottom-up input or leadership (e.g. insurgent planning, various strands of participatory planning), or political acumen (various sources including Krumholz). While it is true that all of these factors are important, it is also true that, in many circumstances, even a healthy mixture of possible strategies just listed does not necessarily lead to the substantive movement toward social justice that city residents might need and expect, in part because of an overriding web of oppression (Young), but also because of other issues related to influence and power (Flyvbjerg). In this paper we will call out some of the possibilities for acting in such contexts, but also explore some of the little-recognized limitations in trying to overcome such barriers.

We will take a specific context, post-industrial Detroit, to point to various obstacles to carrying out planning for social justice even when injustice is manifest, and even if planners both profess dedication to the concept and use accepted ameliorative practices, including participatory strategies. The methodology of the paper will include, first, a brief overview of why literature related to planning for social justice tends to suppose efficacy and not adequately deal with describing external barriers to such efficacy, including but not limited to power and structural conditions. It will then describe the case of Detroit to point out that even under duress planners may strive mightily to promote some form of planning for social justice, but in the end still face profound barriers that are in some cases predictable (lack of money to support staff) and in some cases more subtle than not (the complexities associated with foundation support). The basic material for the research is qualitative analysis of interviews with sixteen planners and related professionals in Detroit, as well as commentary on a recent effort to create a participatory city plan that addresses issues of depopulation and land vacancy through visionary but limited strategies. In addition, interviews conducted for an allied project, on Detroit’s neighborhood decline, will be used to contribute deeper understanding of views of city government from the neighborhood level. All of this is discussed as a possible way to view the potential for continued efforts to use planning as a limited but important way to help counter forces of oppression and economic decline.

The findings section will discuss barriers planners face under such circumstances, as well as indicate how these affected the organization of planning in Detroit over the period of time covering from 2010 to approximately 2015. Difficulties that emerged in this case and that are sometimes overlooked in the planning literature—and would be relevant to explore in other contexts as well—include the fear of carrying out actions that further chase away commerce, the inability to maintain staff dedicated to participatory strategies, precipitously failing municipal services, lack of appropriate tools for social justice in such contexts, and the tendency of powerful corporate or foundation resources to impose their own goals for city planning initiatives.

References
Progressive institutional change is a slow and tedious process. It requires simultaneous transformation on many different levels for desired changes to take effect, from revisions in policies to shifts in the paradigms that professionals within those institutions live by. Changing mindsets and behaviors are as difficult as changing rules, but both are equally important and occur within a specific policy and political context. This paper argues that planners can play a unique leadership role in institutional change by attending strategically to both the process and the outcomes of planning so that mindsets and policies can be critically and collaboratively reshaped in some stepwise tandem. On the one hand, this approach suggests a model of advocacy planning that, as Paul Davidoff argued, is not prescribed from a position of value neutrality, but with desired objectives in mind about what a better vision for the future may be. On the other hand, it suggests a model of communicative planning where deliberation among stakeholders leads to deeper mutual understanding and collaborative engagement in forging change. There is an apparent rift, however, between the ideas of advocacy planning and communicative planning in that the former sees a necessary role of the planner in speaking for and acting on behalf of the powerless to instigate change while the latter sees the process of collaborative deliberation as the inclusive and equalizing vehicle for achieving desired change. Tension between these two approaches are found, for example, if advocacy planners in their drive to enact change bypass more deliberative opportunities for collective transformation that, ironically, may have a need for those who can advocate for the voiceless. Both models, regardless of their differences, set their sights on a future that is more just, equitable, and democratic.

This paper seeks to advance the idea of “transformative planning,” a term coined by Marie Kennedy, to address this tension and the voids that exist between the two bodies of theory. While developed in the context of community development planning, we apply the idea to a case of juvenile justice reform in Hawaii in an effort to further advance its meaning. We ask the question: What is transformative planning in the context of institutional change? We employed a process of reflexive praxis and grounded theory in a 6-year participatory research and planning process in which the authors served multiple roles as researchers, facilitators, and evaluators. This juvenile justice reform project unfolded in four phases: a) study of the problem of racial disparities; b) disseminating findings and recommendations; c) designing an intervention that was later implemented; and c) evaluating the intervention.

The case highlights several features of transformative planning. First, it suggests multiple roles that planners can play in transformative processes. In this case, the planners played the roles of traditional researcher, planning facilitator, educator, evaluator, advisor, and advocate. While there were
primary roles that planners played at each phase of the project, there were multiple roles and a fluid shift in roles that were made to accommodate the changing needs and dynamics of change. Second, transformative planning required simultaneous attention to at least two dimensions of change: a) rules change and b) philosophical paradigm shift. Along with known factors that influence institutional change, strategic thinking about the sequencing of planning actions across both realms played a critical role. And third, the transformation of operational paradigms required stakeholders to see the world of juvenile justice from a different epistemic lens, in this case one rooted in Native Hawaiian culture. This required new modes of planning, including ways to simulate a different future that participants may not have directly experienced or imagined in the past.

There are many challenges to successfully facilitating transformative planning for institutional change. Some concern the strategic and political development of transformational leaders within institutions undergoing change and the intentional engagement of planning participants instrumental in implementing and sustaining new institutional practices.

References

Key Words:
Institutional Change, Racial Disparities, Advocacy Planning, Communicative Planning, Deliberative Planning

WESTERN PROPERTIES AND SUBVERSIVE IMAGINARIES
Abstract ID: 1015
Roundtable

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This roundtable unravels urban property and problematizes its various manifestations in theory in practice across (il)legal, (un)conventional, and (in)formal worlds, near and far. Property owners (e.g. land, housing) claim rights and yield the law via the state as the raw machine of institutionalizing property customs. In other cases, communities claiming rights to the city, rights to stay, or rights to alternative property configurations, challenge and counter Western notions following enclosure and economies of exchange value. This panel explores the gap between these worldviews and takes property
not to be a fixed entity, but a contested and malleable system of social relations. We hope to take up various conceptualizations, mobilizations, and materializations.

Much urban scholarship highlights how classical and neoliberal ideology have become engrained in urban governance restructuring practices, resulting widely in inequality, gentrification, displacement, and banishment. What role did distinct Western property systems play in defining and/or shaping those conditions? How do such manifestations serve as frames of reference into emerging urban systems? How do urban economics, economic geography, marxian urban political economy, feminist political economy, or postcolonial theory take up property? Which imaginaries and materialities do they (de)legitimize?

By raising these questions, we hope to foster a discussion that unravels some of these interconnections, contradictions, and insights into alter-worlds of property relations and praxis. If property is itself a contingent, partial, and malleable category, what radical potential do social movements, occupation, or collective ownership play to decentralize regimes of state legitimated property and create a new democratic zeitgeist? Working as scholars, activists, planners, and geographers, how can we think property with the ethical imperative to imagine the city beyond its numeric representation? How do our various allied perspectives and activities complement subversive property praxis?

References

Key Words:
Property, Occupy, Eviction, Law

**DEMOCRATIC PUBLIC OR POPULIST RABBLE: RECONSIDERING AN EQUITABLE PATH FROM PROCESS TO OUTCOMES IN THE AGE OF TRUMP**

Abstract ID: 1147
Roundtable

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This round table addresses the role of planning theory, pedagogy, and practice in the age of populist, racist, and xenophobic regimes. The current fractured nature of relationships between and within communities has called into question a series of long held planning assumptions about the viability of
collective deliberation. Plainly put, requisites for effective and fair deliberation that had always seemed far-fetched now seem utterly out of reach. More fundamentally, the increasing prevalence and popularity of invidious and exclusionary policy decision make us question our commitment to collaborative deliberation as the proper democratic means to achieve just results.

As planners, we are increasingly confronted with the pragmatic question of how to deal with a divided public. In doing so, however, we must acknowledge and learn from our failure to successfully address the longstanding trends that have brought about this social fracture and made possible the rise of political regimes whose policies exacerbate divisiveness and inequitable outcomes. These trends include, most notably, a stark rise in economic inequality, an acute skepticism of expertise, and a mistrust of the public institutions that mediate the very processes that might renew broader solidarities and thus make possible different results.

This round table is not, however, a conventional panel discussion. Building on the format adopted in the “unsettling planning theory” roundtable at last year’s ACSP conference, it intends to reorient the process of knowledge production and dissemination that occurs at major academic conferences such as ACSP. The panelists – who are early career scholars working in different planning contexts and on different substantive issues – will have organized and moderated a pre-conference workshop including a broader network of early career scholars. The group includes both scholars who have previously participated in last year’s “unsettling planning theory workshop” and new participants. The four panelists will have shared with the group a short piece of writing that outlines their insights on the current role of planning theory, pedagogy, and practice in our fractured democracy. During the round table, the panelists will moderate a conversation based on the reflections arrived at during the pre-conference workshop.

During the round table, the panelists will moderate a conversation based on the reflections arrived at during the pre-conference workshop.

References


Key Words:
Collaborative Deliberation, Equity, Planning Theory, Early Career, Politics

THE ECOLOGY OF URBAN SPACE: CYBORG, COMMUNICATIVE ACTION, CRUCIBLE
Abstract ID: 1176
Individual Paper Submission

TAUFEN WESSELLS, Anne [University of Washington Tacoma] atw5@uw.edu, presenting author

What does it mean for a city to be a new life form, ontologically speaking? Urbanization is creating changes unprecedented in natural or social history. This paper explores new conceptual language for understanding and characterizing the hybrid assemblages of urban nature, enlisting insights from science and technology studies (STS), critical urban geography, and urban political ecology, and drawing on case examples from waterway infrastructure planning.
Science changes, despite our assumptions to the contrary. Ecological systems and individual species are being transformed by the adaptations they must make to survive the conditions imposed by urbanization. Competition for available habitat; limitations and alterations to energy sources, water systems, and indigenous food webs; and the quickening effects of global climate change have changed the biological and physical context and the behaviors of plant and animal life in metropolitan regions throughout the world.

Society also changes, as planning scholars know. Human systems have been dramatically transformed by urbanization, with traditional kinship ties, bioregional place knowledge, and forms of economic and cultural sustenance challenged and displaced by the rapid pace of change, improved scientific and technological capacity, and demands for resident mobility that accompany urban development and globalization.

However, urban space is not either/or - a physical and scientific site of inquiry, or a socio-political production and cultural phenomenon. The ecology of urban space is both; it is a hybrid enactment. This paper explores this intersection of the social and the ecological, which even in the study of coupled urban social-ecological systems, tend to be kept separate and conceptually discrete, whether by methodological habit or epistemological limitation. It engages the concept of the cyborg (Haraway, 1991), borrowing from critical urban geography and urban political ecology, to interrogate the implications of encountering, representing, and planning for an urban reality that is not simply human, nor entirely natural.

Three claims are developed, drawing on examples from waterway infrastructure planning. The first, methodological and ontological, documents the presence of hybrid urban nature and social forms, where technological interventions change the functional character of both humans and the environment (Kaika, 2005; Swyngedouw, 2006). The second, practice-oriented and epistemological, argues the ongoing relevance of communicative action for planning theory, in light of this foregrounding of urban spatial flows and global processes, and consistent with a democratic expectation of context bound, multi-party engagement (Hoch, 2007; Holden & Scerri, 2015). The third, more expressly philosophical and normative, elevates the distributional obligations and sustainability imperative of planning as a field of practice, and incorporates the critical-materialist perspective of scholars who argue for the elevation of justice as an organizing principle for sense-making and decision-making in urban planning (Fainstein, 2010; Lake, 2017).

References

References
THE RIGHT TO THE CITY VS. THE RESPONSIBILITY FOR THE CITY: ENVIRONMENTAL STEWARDSHIP AND URBAN SURVIVAL

Abstract ID: 1233
Individual Paper Submission

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The concept of the right to the city has been discussed and re-interpreted for over 50 years. From its Marxist roots, threaded through the works of Henri Lefèbvre and David Harvey, to its framing within critical urban theory, most prominent in the work of Peter Marcuse, the right to the city today elicits more questions than answers. The World Charter for the Right to the City signed in 2004 revived interest in the subject, which had been all but forgotten after the flurry of interest during the neoliberal discussions of the 1970s and 1980s. Most recently, it was “officially” adopted by the UN; “Right to the City and Cities for All” was the theme for Habitat III in 2016.

This paper argues that the socially-focused interpretation of the right to the city detracts from an environmentally-focused discussion that becomes more and more urgent as our urban areas and the natural systems that contain them are degraded, in some cases to the point of no return. Critical urban theory has considered the right to the city from a social justice perspective with little regard for the natural environment. Scholars have asked the question, if there is a right to the city, to what city? However, the sustainability of our urban areas and the quality of the built environment to which people are supposed to have a right is rarely addressed. What is the benefit of having rights to a city that is polluted and congested, where quality of life is absent, with no recreational amenities and deficient infrastructure, where the health of individuals is compromised every day?

A review of the literature reveals two aspects of the right to the city discussion that are pertinent to urban theory. First, determining to what extent environmental issues are considered (or not) in the right to the city debate globally. While social movements have adopted the right to the city as a cry for social justice and exclusion and humanitarian groups have used the phrase within Hannah Arendt’s “the right to have rights” concept, the strength of the environmental argument is questionable. Second, comparing how the right to the city is interpreted in different parts of the world. For example, in the US, where individual rights prevail over those of the commons, the right to the city has been used by racial, economic and environmental justice organizations as a response to gentrification and displacement. In
other developed countries, the phrase has been used by groups fighting the commodification of urban space and opposing real estate development interests that benefit only a few rather than the community at large. In Latin America, where most legislation is based on Napoleon’s Civil Code, Constitutions recognize the “social function of property”—a social obligation to the commons established and enforceable by law—and protect communal rights in the face of profit or gains that benefit any single individual or business entity.

This work is relevant to critical urban theory, particularly in light of most recent discussions post-Habitat III and the establishment of a New Urban Agenda in conjunction with the newly adopted Sustainable Development Goals. If we are to make our cities livable and sustainable places that offer decent quality of life for all, urban theorists will need to bring the discussion of responsibility for the city and environmental stewardship for the natural systems that contain and sustain our cities to the fore. Engaging in further critical debate of not only the rights, but also the responsibilities that citizens have for their cities at a time when our urban future is uncertain, shall prove a worthwhile exercise.

References

Key Words:
urban theory, social theory, right to the city, environment, sustainability

SPECTRAL TIME, ARCHIPELAGIC UTOPIAS, AND PLANNING IN THE AGE OF CLIMATE APOCALYPSE
Abstract ID: 1357
Individual Paper Submission

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Urban planners in Jakarta are currently considering a plan for a massive eagle-shaped seawall to manage sea level rise in the Bay of Jakarta. The Great Garuda project is simultaneously a symbol of national urban triumph, a private real estate development, and a long term infrastructural intervention to manage Jakarta’s flooding problem. The project reiterates an archipelagic vision of nationalism and development for Indonesia articulated by Suharto, and deploys a new archipelagic utopia that legitimates the current regime. However, despite years of work towards a viable project, the plans remain vague and distant if not impossible. Planners have addressed technical problems of the last plan with ever larger and longer-term plans, and claim that private developers will step in to not just to build the project but also to sort out major problems like sand scarcity and the enormous cost. Thus I think about contemporary climate infrastructure planning practices as a circulation of spectacular urban models and fantastical plans where the images and not the infrastructure do the work of statecraft. While many scholars focus on the role of
the spectacle in the production of the global city, I follow De Boeck (2011) and suggest that in this context, urban spectacles slip into the realm of the spectral. I further suggest that spectrality of this future is apropos to the contemporary specter of climate change, where apocalyptic imaginaries of climate disaster are counteracted by outsized utopian responses. The current ephemerality of planning practice, justified by the specter of climate apocalypse, suggests what Guyer (2007) calls the “long term” frame of evangelist or monetarist time that functions beyond the foreseeable and calculable future. Jakarta planners’ response to climate change and flooding challenges displaces staged interventions (“planning”) with a narrative of capitalist development and national progress. Like Guyer’s concept of monetarist planning, the rationality of spectral time is not based on specific interventions, but focuses on stabilization in the short term while the long term is imagined in a series of images and fantasies. What matters is not the whether the project is ultimately built, but that the circulations of images is a strategy of governance.

References

Key Words:
Jakarta, Indonesia, Southeast Asia, Climate change, Governance

ASSEMBLAGE THINKING AND INDIGENOUS COMMUNITY PLANNING
Abstract ID: 1423
Individual Paper Submission

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Assemblage thinking is offered as a new tool for advancing critical urban studies on two key fronts. First, assemblage thinking provides a way of conceptualizing the processual aspects of urban change. Secondly, in cities where interculturality is emerging, assemblage is seen as a way of thinking about the multiplicity of urban groupings that make up the city. This paper proposes building on the critical engagement with assemblage in an urban setting to investigate the use of this concept in indigenous community planning. Through this paper, I will explore interactive elements of three specific community engagements in the Indigenous Community Planning Program in the School of Community and Regional Planning at the University of British Columbia to provide a base for reflections on the potential of assemblage as a tool for consideration and analysis of evolving relationships between Indigenous peoples and the rest of Canada.

Canada has embarked on an aggressive agenda to address historical wrong-doing by the state and churches who managed the extensive network of residential schools. Through the late 19th Century and into the late 20th Century, government forcibly removed children from family homes and brought them to residential schools far from their home community. The list of atrocities inflicted is long and upsetting, but in summary, racist colonial policies aiming to de-Indigenize students led to significant
personal trauma. Abuse suffered in these facilities reverberates to future generations through inter-generational trauma.

In a British Columbia context, Reconciliation is further complicated by a lack of treaties with most of the Province’s 200 First Nations. First Nations vary in both size and capacity and together claim 110% of BC’s land mass (overlapping claims). Twenty years of court decisions in favor of First Nations dictate that any development taking place on land leased from the Province must include consultation with First Nations. This is significant, as over 98% of British Columbia’s land-mass are leasable lands that operate under the Crown (government).

Communities facing inter-generational trauma with capacity challenges resulting from geographic isolation are consulted to make substantive decisions. The courts have clarified this is First Nations’ constitutionally declared right. These communities now have a significant voice on major projects which impact the entire economy of British Columbia and Canada. Often, these communities face ‘consultation fatigue’ in the face of multiple enquiries on potential investments (Peach, 2016). Overarching the whole situation is a sense that a western capitalist land ethic is inconsistent with a land-based land ethic held by many Indigenous Canadians.

Students in the Indigenous Community Planning Program at the University of British Columbia School of Community and Regional Planning are working to advance these conversations on a small scale through facilitated practicums with First Nations. The intent of this paper is to consider students’ engagement while exploring assemblage thinking as a new frame of that may be useful in other areas where indigenous planning is emergent.

References

Key Words:
First Nations, Indigenous Planning, Assemblage, Reconciliation, Rural
PRE-ORGANIZED SESSION: SUSTAINABLE REGIONS? PROMISES AND PITFALLS IN THE POPULIST ERA
Proposal ID 21: Abstracts 252, 254, 255, 1155

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The wave of populism sweeping the U.S. and beyond has led commentators to pin their hopes for environmental leadership and social justice on progressive metropolitan areas. The scale of many infrastructural, ecological, and economic systems further heightens the need and potential for regional action. But just what sustainability gains can regional initiatives deliver, given historic political constraints on regional governance? Papers in this panel present how planners have effected meaningful change in established domains and emerging frontiers for regional sustainability planning, as well as their limits and challenges. Cases explored range from regional climate adaptation in Southeast Florida and the energiewende (energy transition) in Northern Germany, to the equity contributions of regional and local food hubs in Michigan and the networked development of cooperative businesses in the San Francisco Bay Area.

Objectives:

- Evaluate limits and opportunities of regionally-scaled actions in the current political environment.
- Contrast how sustainability goals are being incorporated across different domains of interest for regional planners.
- Discover emerging regional strategies, of both a formal and informal nature, to advance equity in sustainable development.

DEMOGRAPHIC CHANGE, AUTONOMOUS VEHICLES, AND ENERGY PRICE VOLATILITY: AN EXPLORATORY SCENARIO EXERCISE FOR A SUSTAINABLE BALTIMORE-WASHINGTON REGION
Abstract ID: 112
Individual Paper Submission

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Demographic Change, autonomous vehicle technology, and energy price volatility could have dramatic but uncertain impacts on development patterns, travel behavior, and environmental quality in metropolitan areas of the United States over the next several decades. In the context of this uncertainty, exploratory scenario analysis has become an increasingly common practice in metropolitan and regional
planning. Unlike normative scenario analysis, exploratory scenario analysis does not take development patterns as choices, but instead takes development patterns as the outcome of exogenous driving forces and policy choices. Policy choices are thus better informed when future trends in driving forces and their impacts on development patterns are well understood.

In this paper, we report the results of an exploratory scenario exercise for the Baltimore-Washington region. To develop four scenarios, we formed a Scenario Advisory Group and asked them to identify driving forces that could have important but uncertain impacts on the Baltimore-Washington region in the near future. From these driving forces, we constructed four exploratory scenarios that vary in assumptions regarding economic growth, the uptake of transportation technologies, energy prices, and more. The assumptions behind these scenarios were then conveyed as input values to a suite of integrated models. This suite of models—that includes economic, transportation, land use, air and water emissions, and health impact models—is then used to derive for each scenario parameter values for development patterns, travel behavior, GHG emissions and water quality, human morbidity, mortality, and more. The results suggest that plausible differences in critical driving forces could have important ramifications for the sustainability of the region. Rapid growth, autonomous cars and low fuel prices, for example, could escalate urban sprawl, vehicle miles traveled, greenhouse gas emissions and water quality degradation. The rapid adoption of electric vehicles, however, in a high growth and fuel price environment, could encourage more compact growth, transit ridership, reductions in GHGs and improved water quality. Alternative assumptions, reflected in the other two scenarios, yield alternative results. We then conducted policy experiments in each of the four scenarios to identify robust strategies that yield more sustainable outcomes under a range of driving forces.

The interconnected character of human and natural systems requires integrated decision-making and therefore integrated modelling linking different disciplines required for scenario generation. The analysis demonstrates how scenario analysis and integrated models can produce robust and contingent strategies for metropolitan and regional planning. Such scenarios help exploring the range of possible futures and the policy inventions needed to shape growth in a more sustainable fashion.

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Key Words:
scenario analysis, regional planning, integrated models, Baltimore, Washington

**JOB ACCESSIBILITY, RACE/ETHNICITY, AND EMPLOYMENT: REVISITING THE SPACE VERSUS RACE DEBATE IN THE NEW ERA**
This research investigates to what extent race/ethnicity and job accessibility affect individual person’s employment outcomes. It contributes to a debate that has continued for half a century. John Kain (1968) proposed the Spatial Mismatch Hypothesis, which posits that the lack of spatial access to jobs partly explains black’s inferior employment outcomes in the U.S. On the other hand, Ellwood (1986) emphasized that race, not space, remains the key variable explaining the employment inequality. The debate is not yet settled.

This research revisits the debate in the new era, which is characterized by three transformations that can affect the complicated relationships between space, race/ethnicity, and employment. First, socioeconomic gaps within racial/ethnic groups have enlarged (Clark, 2007), demanding careful identification of the disadvantaged groups, who are not necessarily racial/ethnic minorities. Second, many U.S. metropolitan areas are polycentric with multiple employment clusters in the suburbs. The polycentricity can potentially offer relatively pervasive access to jobs, and consequently job accessibility might have declining effects on employment. Third, economic restructuring has shifted from manufacturing to service economies and thus changed skill/education requirements. Many low-education job seekers, regardless of race, face challenges in the labor market.

I examine the effects of job accessibility and race/ethnicity on individual job seekers’ employment status and commute distance in California. Two steps of empirical analysis are conducted. First, I estimate job accessibility by the education level based on Shen’s (1998) relative gravity job accessibility measure. Two datasets are used to estimate accessibility. Employment data come from the 2012 Longitudinal Employer-Household Dynamics, which provide the number of jobs by education at the census block level. The data of the labor force size by education come from the 2010-2014 5-year average American Community Survey (ACS). Next, I apply structure equation models to investigate the effects of job accessibility and race/ethnicity on employment. Particularly, I include interaction terms of the two key variables to examine their jointed effects. Data of individual person’s employment, commute, and socioeconomic characteristics come the 2012 California Household Travel Survey (CHTS).

Preliminary results suggest that in California, race has little effect on employment, once job accessibility, education, and other factors are considered. The findings support the spatial mismatch hypothesis in the new era. They also indicate that the civil rights movements and anti-discrimination policies in the last half a century have significantly improved labor market equity between race/ethnic groups, if not eliminated it, in the study area.

References
A COMPARATIVE ANALYSIS OF CHINA'S WORLD-CLASS LARGE CITY CLUSTERS FROM THE PERSPECTIVE OF ECONOMIC GLOBALIZATION - BASED ON THE FOREIGN ENTERPRISES PROPERTIES
Abstract ID: 181
Poster
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Large city cluster is the highest spatial organization form of urban development to a certain stage. Cities through gathering a large number of industries and population to developing rapidly, they continuing overspread then forming to metropolitans. With the expansion of scale, the adjacent area becoming closer to a large city cluster, that’s why the definition of large city cluster is based on geographical relationship. Since the advent of the information era, network society affects human life deeply. Globalization makes large city clusters not only have adjacent relationship in geography, but also more important link in economies. And the enterprises play an important role in the city interlocking network. This paper through carding concepts of the world-class large city cluster, global city system, etc. Based on the theory of global economic network which formed by international capital and information flows, we selected the data of branches’ quantity of foreign enterprises, headquarters’ location of foreign enterprises and industry type of foreign enterprises form China Foreign Enterprise Directory 2015. Then doing the research by comparative analyzing China’s three world-class large city cluster, the Beijing-Tianjin-Hebei Large City Cluster, the Yangtze River Delta Large City Cluster and the Pearl River Delta Large City Cluster, using approaches of interlocking network and value-added hierarchy. We want to find out the differences between them and evaluate their strengths and weaknesses in development, furthering put forward possible development strategies.

The study shows that the Beijing-Tianjin-Hebei Large City Cluster attracts more different countries’ foreign enterprises investment due to political and cultural status of its gateway city-Beijing, but it has many low level cities in interlocking network. The Yangtze River Delta Large City Cluster has a high agglomeration degree of foreign enterprises, and its global city-Shanghai has a stronger connection in interlocking network. Also the Yangtze River Delta has more high value-added hierarchy industrial enterprises which indicating that it has gradually turned to high value-added level in the economic activities. The Pearl River Delta Large City Cluster has two gateway cities-Guangzhou and Shenzhen through interlocking network analysis. And the relevance to Hong Kong foreign enterprises of Pearl River Delta is far higher than the Beijing-Tianjin-Hebe and Yangtze River Delta Large City Cluster. So to a certain extent, Hong Kong can also be considered assuming some gateway function in the Pearl River Delta Large City Cluster.

In the whole, the Yangtze River Delta Large City Cluster has obvious advantages in terms of the amount of enterprises, the location of headquarters and the industrial value than other two, which is in line with the current ranking and positioning of the Yangtze River Delta and its global city. The Beijing-Tianjin-Hebei and Pearl River Delta Large City Cluster need to be adjusted via many aspects in the process of moving towards a real world-class large city cluster, especially for the transformation and promotion of the industrial value segments in value-added hierarchy of the third and fourth level cities, thus establishing more contact with the world's core regions in the global economic interlocking network.
SOMETHING NEW, EVERYTHING INHERITED: HOW INSTITUTIONS FOR REGIONAL PLANNING SHAPE REGIONAL ADAPTATION TO CLIMATE CHANGE

Abstract ID: 252
Pre-Organized Session: Sustainable Regions? Promises and Pitfalls in the Populist Era

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The long-term consequences of climate change for coastal metropolitan regions threaten to change the physical landscape of what is habitable and uninhabitable. Future impacts require a massive effort to coordinate land use plans and infrastructure investments in ways that help to reorient development and ensure the wellbeing of existing residents and businesses (Melillo, Richmond, and Yohe, 2014). In recent years, over a dozen metropolitan areas across the country have developed initiatives to tackle climate change at the regional scale. To date, adaptation practitioners and scholars have emphasized individual agency, and helping elected officials and planning staff overcome barriers to action. These efforts prioritize embedding climate change in existing planning systems, without scrutinizing how underlying institutions enable or constrain adaptation action (Rauken, Mydske, and Winsvold, 2015). This paper contributes to this emerging policy domain by asking, how do institutions for long-term regional land use and transportation planning shape the strategies of regional adaptation initiatives? What are the strengths and weaknesses of different regional planning models? What do they tell us about what reforms to regional governance may be needed in future to effectively address regional adaptation challenges?

I consider these questions in the context of three regions – the Bay Area, Southeast Florida, and Metro Boston – that vary in their institutions for regional planning, but all face extensive consequences from climate change by the end of the century. Each has developed a long-term regional land use and transportation plan within the last 10 years, and confront the challenge of implementing these plans across 100-plus local municipalities. I analyze their regional spatial and adaptation plans, and supplement this analysis with over a dozen interviews in each region and secondary literature on regional planning institutions.
The findings suggest that all regional efforts are influenced by dominant, neoliberal modes of planning (Sager, 2011), as is evident in their emphasis on deregulation and deference of control to local government, assumptions that enhanced access to information and technical capacity among staff will lead to sufficient voluntary participation, and reliance on vertical relationships between state and local government, as opposed to horizontal relationships between cities within a metropolitan area (Uittenbroek, 2016). Where regional agencies lack land use authority, or where regional planning structures do not tie vision plans to infrastructure investment decisions, regional adaptation efforts dissolve into opportunistic and piecemeal projects. These likely will not add up to something greater than the sum of their individual parts, and could also further exacerbate inter-local inequality. However, where agencies hold regional land use authority, they are more likely to draft and implement regionally consistent plans that task local governments to comply with new standards for adaptation in zoning, permitting, and development. These agencies are also more likely to develop regional strategies that address the interdependencies between local governments. The importance of regional land use planning authority suggests this is a way to overcome neoliberal adaptation practices.

Scholarship on regional governance has shifted away from debates about institutional centralization versus inter-local competition (Foster and Barnes, 2012). However, these findings suggest a need to re-center research and discussions on the importance of empowering regional planning and governance institutions in order to meaningfully reorient the future of metropolitan regions under climate change.

References

Key Words:
regional planning, climate change, adaptation, institutions, governance

(RE)BUILDING LOCAL FOOD ECONOMIES AND EQUITABLE FOOD SYSTEMS AT THE REGIONAL SCALE: THE ROLE OF FOOD HUBS IN MICHIGAN
Abstract ID: 254
Pre-Organized Session: Sustainable Regions? Promises and Pitfalls in the Populist Era

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The US food system today is a hollowed-out and bifurcated system. Nationally and globally-focused corporate concentration of the food market dominate, even as direct-sales and other hyperlocal grassroots food movements continue to expand. The forgotten food systems of the middle, on the other hand, have largely eroded, to the detriment of scaling up more sustainable, economically viable and socially equitable food systems. One emerging strategy for rebuilding this middle through aggregation and processing infrastructure at the regional scale – food hubs – aims to connect small and mid-sized farms to schools, hospitals, restaurants and other institutional buyers. As food hubs attract attention, foundations, investors, state governments, and other stakeholders are hopeful that they can rebuild local food economies while also increasing food access and equity.

In this study, we ask about the extent to which and under what conditions food hubs can successfully operationalize these dual social and economic goals. To answer this question, we carried out a comparative case study of ten diverse food hubs that have emerged across Michigan over the last ten years, drawing on in-depth interviews with food hub managers, a survey modeled after the National Food Hub Survey (Hardy et al 2016), a document review and key informant interviews.

Our findings suggest that food hubs may not be able to – and should not be expected to – place food access at the forefront of their operations, especially in low-income communities, without jeopardizing the livelihoods of the small to mid-size farmers most food hubs work with. Our study also reinforces national-level findings that non-profit food hubs may be best equipped – and the most driven – to take on food access goals. As we found, however, this does not preclude for-profit operations from contributing to food access and equity in more indirect ways. We found innovative food access strategies across all the food hubs in our study, as well as overlooked contributions they are making to equity; most food hubs, for instance, reported working with new food enterprises and farms owned and operated by women and people of color at rates twice the national average.

Ultimately, just as planners should avoid “the local trap” (Born and Purcell 2006) – expecting local food to be a panacea for social and environmental goals – regional planners should not look to food hubs as a magic bullet for scaling up progressive food systems gains. In helping to rebuild the middle of the food system, however, food hubs should be seen as an emerging, adaptable solution capable of addressing multiple economic, social, and food systems goals.

References

Key Words:
Regional planning, food systems planning, equity, economic development, food hubs
A new wave of planners and policymakers is working across multiple geographic scales in governments, markets, and civil society to promote worker cooperatives and related forms of ownership in the US (Dubb, 2016; Metcalf; 2015). As a regional development tool, they offer promising benefits on all sides of the "planner's triangle" of equity, environment, and economics. But despite their current association with the "New Economy" movement, cooperatives are not new; they have a long history of use as a response to economic crisis. Does their renaissance offer anything innovative to urban and regional planning? Or is this merely a tired retread of a planning idea from the “Progressive Cities” era? Drawing on historical research, as well as contemporary evidence from interviews with more than 30 cooperative sector stakeholders in the San Francisco Bay Area region, I find that the current wave of interest is marked by distinctive features.

In the last sustained wave of interest, from the late 1960s through the early 1980s, cooperatives were utilized in worker buyouts, which were brokered with the help of the federal government, states, and the labor movement, as a way to save jobs in struggling enterprises in the wake of deindustrialization (Dickstein, 1991). Community activists, including equity planners (Krumholz and Clavel, 1994), also promoted cooperatives and related self-help economic structures; deployed across a hodgepodge of industries by disillusioned progressives, environmentalists and marginalized groups, they sought to exit the mainstream economy and exert "community control". Though sometimes voiced in city-scale plans, these efforts were rarely deployed or implemented in a comprehensive manner in urban or regional economic development policy toolkits.

I find four innovative features of the current wave of interest, which distinguish it from activity during the last cycle. First, the current wave is marked by a comprehensive and systematic attempt to implement model legislation which uses city governments’ purchasing, policy, and convening powers to promote cooperatives and employee ownership as a sustainable local wealth retention and generation strategy. City actions currently being implemented, approved, or proposed in the Bay Area cities of Oakland, Berkeley, and Richmond include tax/fee reductions, expedited land use processing, favorable consideration in city procurement contracts, enhanced loan fund eligibility, and education and technical assistance around business conversion. Second, cooperative actors are simultaneously developing a networked, multi-scalar strategy, targeting both state and regional governance initiatives, policies and plans to enhance their agenda. This includes efforts to leverage the resources of regional planning bodies, and incubate regional networks and hubs of action into a self-sustaining regional cooperative ecosystem (Lingane, 2015), as well as modify outdated state enabling legislation. Third, proponents are strategically focused on models of success, not failure. Rather than starting a menagerie of businesses which reflect personal preferences, they are incubating start-ups in industries chosen to maximize probability of success. Rather than buyout struggling businesses in legacy industries being destroyed by technological change, they are converting successful businesses, in growing industries, from retiring Baby Boomer owners. Lastly, rather than fighting or resisting ICTs and associated industry change, they are embracing it, as exemplified through the development of both renewable energy businesses and
“platform cooperatives”, which offer an alternative to corporate models for the sustainability-oriented, “sharing economy” sector.

Challenges to scaling up the regional cooperative ecosystem nonetheless remain. Beyond existing policy obstacles, interviewees confirm four key barriers: popular education; community capacity; competitive market pressures; and early stage finance. Opportunities and strategies for regional planners and local policymakers to work with regional cooperative networks in mitigating such barriers are also examined.

References

Key Words:
Regional Planning, Sustainable Regions, Economic Development, Community Development, Cooperative Ownership

CROSSING REGIONAL DIVIDES? COLLABORATIVE REGIONAL ECONOMIC DEVELOPMENT IN THE POLARIZED MILWAUKEE REGION

Abstract ID: 280
Individual Paper Submission

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Regional planning in the U.S. frequently relies on voluntary collaboration between municipalities and other local government units due to weak or absent legal authority at the regional scale. Collaborative regional planning tends to occur in regions that are growing, and less politically and demographically polarized, for various reasons including lower political opportunity costs and closer alignment of citizen preferences (Gerber, Henry, and Lubell 2013). These regions have also attracted a preponderance of research interest in collaborative regional planning, from which scholars have attempted to draw general insights about the theory and practice of voluntary regionalism (Foster 2011; McKinney and Johnson 2009). However, it is unclear how well these insights transfer to other regions, particularly those characterized by economic stagnation, deep polarization, and a lack of supportive state policy. The extent to which collaborative regional planning processes can effectively function in such regions and the factors influencing their success or failure are relatively underexplored. This oversight takes on particular urgency in light of recent elections and their likely consequences for regional polarization and federal support for regionalism.

My paper addresses this gap through a recently completed critical case study of collaborative regional planning in the highly-polarized Milwaukee region, arguing that both polarization and substantive policy
focus influence the process and level of participant engagement in regional planning. Despite profound racial and political divisions that have earned Milwaukee the dubious title of “America’s most segregated city”, for the past decade it has served as the site of an ambitious experiment in collaborative regional economic development. The Milwaukee 7, an organization that includes the region’s business and political leadership, has managed to articulate and gain broad endorsement for a common regional economic development plan. In contrast to the extant literature’s emphasis on adopting broad initial goals, it has done so by initially maintaining a narrow focus on business recruitment and retention, only recently branching out into broader issues of transportation equity and land use after achieving more limited goals. It has also diverged from recommendations for bottom-up, participatory processes by limiting stakeholder engagement primarily to business elites, political leaders, and key civic organizations within relatively closed forums, only sharing the results of this process with the broader public. While this has shut out less powerful groups from the planning process, it has also helped suburban and urban elites overcome mistrust and forge agreement through repeated interaction (Innes and Booher 1999). Although this model appears to have served the Milwaukee 7 well while it remained focused on conventional economic development policy, it is less clear whether this strategy will remain effectual as the organization branches out into the broader and more contentious domains of transportation and land use policy. This critical case demonstrates that context (political, institutional, and demographic) and substantive policy focus play critical mediating roles in the relationship between collaborative regional governance processes and plan adoption.

References


Key Words:
regional planning, collaboration, regional economic development

EFFECTS OF THE CAPACITY OF CIVIC ORGANIZATIONS AND THE MATURITY OF LOCAL EMPLOYMENT GOVERNANCE ON THE PERFORMANCE OF LOCAL JOB CREATION PROGRAMS IN KOREA

Abstract ID: 299
Poster

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Background: The Local Job Creation program introduced in 2006 is one of the representative policies that are being promoted as decentralized employment policies. This program is led by local governments for the formation of an alliance with civic organizations to identify and solve employment problems in their region. However, the method by which the program is conducted has the risk that the quality of
program contents will depend on the endogenous conditions of each region, such as the capacity of local actors and the maturity of local governance (Azfar et al., 2004; OECD, 2014). The high-level capacity of local actors and the high-level cooperation among them are required to identify the local labor market conditions and propose suitable program contents for each region; these factors are highly important in determining the number of high-quality programs to be implemented in each region.

Objective: This study aims to analyze the effects of the capacity of local actors and the maturity of local governance on the regional performance of the Local Job Creation programs conducted in 31 cities in Gyeonggi Province from 2009 to 2013. The detailed research hypotheses are as follows. First, the Local Job Creation programs will perform well in regions where civic organizations are highly competent. Second, the Local Job Creation programs will perform well in regions where local employment governance is mature. Third, the Local Job Creation programs will perform well in regions with high capacity of civic organizations and maturity of local employment governance.

Method: A fuzzy-set qualitative comparative analysis developed by Ragin (2008) was adopted in this study. The comparative analysis, which was developed for medium-N research, is a powerful alternative to conventional quantitative and qualitative methods. Moreover, this analysis enables the construction of a combinatorial causal argument that the combination of the capacity of civic organizations and the maturity of local employment governance can enhance the performance of the programs.

Results: In this study, the capacity of civic organizations and the maturity of local employment governance are divided into two sub-concepts: the amount of activities and the existence of a physical base from which to support these activities. As a result, three solutions (namely, complex, intermediate, and parsimonious) were derived. The intermediate and parsimonious solutions are theoretically the more meaningful solutions among the three. The intermediate solution shows that the Local Job Creation programs performed well in regions with a large amount of activities in civic organizations and local employment governance. Above all, the amount of activities of civic organizations, which is present in the parsimonious solution as well as in the intermediate solution, is the most contributing factor.

Conclusions: This study reveals that the high capacity of local actors and good local governance serve as a foundation for solving local problems via decentralized policies (Julian and Ross, 2013; Tewdwr-Jones et al., 2006). The analysis in this study is useful for informing practitioners the manner in which such policies can be designed to be more effective. For example, the present procedure of the programs should be modified by expanding the role of local governments in the process of proposing program contents. From a long-term perspective, other complementary policies are imperative to develop the capacity of civic organizations consistently and activate practices of local employment governance.

References
This decade, metropolitan areas across the country have utilized the expanding wealth of planning and demographic data in numerous, creative ways. One notable trend has been for cities and regions to create online portals to equity or opportunity “atlases” or databases. The data in these atlases can serve as reference points for scholars and policymakers, and if used effectively, can comprehensively show how inequality manifests spatially across regions. Further, many regions have recently attempted to orient their planning - for housing, transportation, and environmental equity - spatially, as spatial opportunity structures have permeated discussion and application of urban policy. Given these recent trends, we seek to investigate how the recent trend toward data democratization and publication, especially surrounding equity and opportunity, has been integrated into the planning process in cities across the country.

We utilize a case-study approach to assessing these equity atlases and databases in five metropolitan areas: Portland, Seattle, Denver, Atlanta, and Minneapolis-St. Paul. Our methods are largely qualitative and operate through two procedures. Primarily, we utilize coded and analyzed results of semi-structured interviews with key stakeholders in each city. The interviews are conducted with consultants and staff members who compiled and organized the data, planners and executives at government agencies and nonprofits who organized the efforts to build the databases, and staff involved in community engagement around the equity data. Second, we utilize the equity and opportunity portals and associated publications, and further, planning documents or media items that reference or utilize the equity and opportunity data.

The paper will present a comprehensive overview of how the different equity and opportunity databases were organized, funded, and constructed. Perspectives on the effectiveness of different organizational approaches - through federal grants, private foundation, or regional funding - will be discussed. The paper will also discuss how the equity data has been incorporated into the planning process in each city.

Based on the evidence obtained, the paper will draw lessons from each case study about the use equity and opportunity data in planning efforts. These lessons will center around three key areas: the production of equity and opportunity data, community engagement and public input into the process of aggregating and publicizing data, and the use of the data in regional planning. The lessons are critical in
an era where federal guidelines and funding encouraging regional organization around spatial opportunity are likely to dry up.

References


Key Words:
Equity, Opportunity, Community Engagement

MAKING A CASE FOR SOCIAL INNOVATION AS A STRUCTURAL COUNTERPART TO PUBLIC PARTICIPATION IN REGIONAL PLANNING

Abstract ID: 477
Individual Paper Submission

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As the human population becomes predominantly urban, regions grow in significance as planning and governance entities. For the growing number of urbanites, the most commonly relatable urban experience is that of multi-locational living – working, shopping, playing, learning and commuting across administrative and sometimes even political boundaries. It would seem that the everyday experience of the physical, social and economic interlinkages between urban communities would automatically engender a regional outlook in planning and governance. Yet, in the United States, historically persistent problems demonstrate that the lived regional experience does not easily translate into a regional governance structure. This paper is driven by the belief that a synergistic relationship between the public and the planning process can facilitate the expression of the lived regional experience in regional planning and governance.

Regionalism faces criticism for advocating the planning and governing of communities across instead of within boundaries, a notion that challenges traditional political and administrative structures. Yet in reality, the interconnectedness wrought by urbanization requires ‘planning across boundaries’, and broad based participation of people and governments at scales varying from the local to the global. This paper contends that just as the large-scale complexity of urbanization challenges established systems of planning and governance, it requires different benchmarks and expectations of public participation than those currently in vogue.

Literature bears evidence that while strong legislative support ensures the public its rightful place in metropolitan regional planning it has regretfully bred a procedural focus that reduces public participation to an end in itself. Consequently, current approaches to public participation at the
metropolitan scale limit the extent to which the public can meaningfully engage with issues of regional import, contribute their experiential knowledge towards envisioning solutions, and impact plan outcomes. This paper presents a structural approach to public participation that redresses the current procedural focus by emphasizing the significance of interlinkages between governance structure, planning process and public participatory process in determining the quality and outcome of public participation in planning processes.

Applying the structural approach to the case of metropolitan transportation planning (MTP) in the United States, this paper presents the results of the comparative analysis of the public participation exercises of two Metropolitan Planning Organizations (MPO) in the New York - New Jersey - Connecticut (Tristate) region, the New York Metropolitan Transportation Council (NYMTC) and the North Jersey Transportation Planning Authority (NJTPA). The NJTPA and NYMTC, despite being neighboring MPOs with a common regional legacy, have responded differently to the Tristate region’s dynamics and evolved to be MPOs with very disparate organizational characteristics and regional impact. An in-depth study of newspaper articles, plan documents and government reports, and interviews of key office bearers demonstrate how this disparity impacts the design and implementation of the respective MPO’s public participation exercises. On a broader level, the structural approach demonstrates how the MPO governance structure and MTP planning process focused on allocating federal dollars prioritize public participation as an accessory to decision making thereby undermining its potential for problem solving and social innovation. Addressing this lack, this paper advocates for recognizing public-led social innovation as a structural counterpart to public participation for devising visionary solutions to regional scale issues. It concludes public participation in regulatory planning tasks such as allocating funds for transportation improvement programs is the right mechanism for implementing solutions but not necessarily the right one for devising solutions.

References


Key Words:
public participation, regional planning, social innovation, planning process, structural approaches to planning

PRIVATE DEVELOPER AND MUNICIPALITY CONFLICT: PROJECT RELOCATION THREATS OF DEVELOPERS
Public choice advocates say regional competition between communities for tax dollars drives communities upwards, while regionalists claim it hurts sustainable and equitable development. At the municipal level, there is the perception that livability and economic development are in conflict (Godschalk, 2004). Private developers can leverage this growth management conflict by threatening to relocate or walk away completely from a project if local officials are not accommodating. New urbanism and other smart growth strategies promise a win-win relationship between developers and their host municipalities. However, negotiations between municipality and developer are often contentious and local officials, especially elected leaders, can feel that they might lose out on property tax dollars when a developer threatens to take a proposed project to a neighboring municipality. These win-lose feelings can be particularly strong in regions without much intermunicipal cooperation. Also, regional competition may reduce the ability of local governments to shape the projects proposed to them (Been, 1991). Although many studies in planning and conflict literature have focused on disputes between developers and residents related to common good and public interest, there is very little on the tension between local governments and developers. Yet practitioners regularly face this tension.

We use data from our New York State local government planning survey (n= 308) that asked planners and elected officials whether a developer ever threatened to take proposed development projects to another municipality. Using a logistic regression model, we find that more cooperative intermunicipal relations regarding development projects and property taxes decrease the chances of developers threatening to take projects elsewhere. Having a municipal staff person (as opposed to a contractor) support planning boards also reduces the likelihood of a developer’s threat. However, the professional background and expertise of that staff person has no influence. We also find that 33% of those threats influence local decision makers to approve the project and 23% do not shape a projects outcome. Communities seeking to be more sustainable will have to negotiate this conflict in order shape the development within their borders. This study is among the first to examine the often-contentious relationship – and explores a new aspect of regionalism. This study will help local officials, especially planners, understand the extent to which other places face similar threats and help them understand what might predict whether a particular place is threatened. By seeing the results of those threats, at least in New York State, officials can understand the options they face.

References

The HUD Sustainable Communities Initiative Regional Planning Grant (SCI-RPG) awarded $165 million to 74 metropolitan regions across the US for regional planning (Geevarghese and Tregoning 2016). HUD encouraged the SCI-RPG consortia to have diverse members, such as regional agencies, local governments, nonprofits, foundations, universities, and business interests, and applicants to the program started out with a broad range of understandings of sustainability and social equity (Chapple and Mattiuzzi 2013; Frick et al. 2015). Recent research has shown that the process of developing a regional plan helped grantees improve relationships and understandings of equity in their regions, and that many regions are implementing their plans (Gough et al. in preparation). This paper examines the extent to which these diverse consortia were actually able to form relationships of understanding across sectors (“epistemic communities”) (Benner and Pastor 2015). We conduct in-depth case studies examining how and why epistemic communities formed in regions where the literature suggests that it would be difficult to do so. Our research includes over twenty-five interviews in three regions implementing regional plans generated through the SCI-RPG program: an economic development district in East Arkansas; Shelby County, Tennessee; and a regional planning commission in the New River Valley, Virginia. These cases provide a contrast in terms of regional fragmentation and racial tension. Interviews examine the factors behind epistemc community formation, as well as their inclusiveness and sustainability. Conclusions from this paper will expand understandings of epistemic communities, regional sustainability planning, and regional governance.

References


Key Words:
epistemic communities, regional governance, sustainability, regional planning

THE HOUSING COST IMPACTS OF URBAN CONTAINMENT IN PORTLAND, OREGON
Abstract ID: 548
Individual Paper Submission

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Since 1980, the population of the Portland metropolitan area has grown by 78% while the area inside the Portland Metro urban growth boundary (UGB) has risen by only 10%. By limiting land supply in the region, Portland’s UGB would be expected to raise land prices and housing prices, and indeed, Portland’s rents and prices have outperformed other metropolitan markets since 1990. However, the region has placed considerable faith in the role of higher density in accommodating population demand, or under the mantra of the supporters of the Region 2040 Plan, Portland should “grow up, not grow out”. This study assesses the degree to which densification and housing affordability are consistent. Using data from recently-built apartments in the region, we find that higher density projects cost more per square foot than lower density apartments, although the impact of location and neighborhood quality mitigates this. The study looks further at the volume and mix of new housing construction in the region (along with information on demand) to assess the impact of land supply restriction is having on Portland housing market, particularly the mix of single-family and multi-family housing units. Finally, the paper assesses the role of regional and local institutions in limiting the supply of housing, given three recent policy shifts that promote sub-regional market analysis, early identification of urban reserves, and smaller and more frequent urban growth boundary expansions, along with new State of Oregon initiatives favoring inclusionary zoning and rent control.

References

Key Words:
Urban Growth Boundary, Density, Sprawl

INTERACTIONS BETWEEN URBAN DECLINE WITH ITS SPATIAL DIFFUSION AND URBAN SPRAWL
Abstract ID: 556
Poster

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Recently, many regions have experienced urban decline and urban sprawl. In some regions, urban decline has been accelerated and spread to surrounding areas possibly due to urban sprawl. The spatial diffusion of urban decline caused migration from inner city to suburbs that in turn intensified urban sprawl. This means that there are close relations between urban decline and urban sprawl. Although cities experiencing such urban decline have enforced urban revitalization policies, they have focused on only declined districts. As urban decline is characterized as spatial problems and interacts with urban sprawl, it is important to examine the adjacent areas of the declining area as well as the declining area itself.

Given this background, the purpose of this study is to measure the spread of urban decline in Seoul, South Korea and to analyze the interactions between the decline with its spatial diffusion and urban sprawl. To analyze the interactions, this paper uses simultaneous equations models with 3 stage least squares. Change in population, potential of urban decline, and urban sprawl index is used as endogenous variables in each model, and the characteristics of urban decline and urban sprawl along with other control variables are used as exogenous variables.

The results show that there exists spatial diffusion of urban decline in Seoul, and there are negative circulative relations between urban decline and urban sprawl. This implies that the relationships between urban decline and urban sprawl as well as the neighboring areas of the declined districts need to be taken into account when urban regeneration policies are developed.

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Key Words:
Spatial Diffusion of Urban Decline, Urban Sprawl, Spatial diffusion Model, Simultaneous Equations Model

THE FAILURE OF SMART GROWTH IN TORONTO: THE IMPOSSIBILITY OF SUSTAINABILITY WITHOUT EQUITY
Abstract ID: 570
Individual Paper Submission

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Unlike many American cities, postwar Toronto did not experience extreme disinvestment and racialization in central urban areas and has maintained relatively high densities even as it expanded into surrounding suburbs (Hackworth, 2015; Filion, Bunding, McSpurren, & Tse, 2004). However, as
Toronto continues to attract newcomers and grow rapidly, it is experiencing income polarization and a housing affordability crisis (Hulchanski & Bourne, 2010). At the same time, a regional growth plan, “Places to Grow”, legislates intensification in areas of existing infrastructure and transit while protecting the surrounding rural greenbelt from development. This smart growth approach is similar to ones adopted by many large North American metropolitan regions (Filion, Sands, & Kramer, 2016), which have transformative intentions but do not explicitly address affordability or inequity. Within this context of rapid growth and ‘smart growth’ planning, this research explores paradoxical spatial patterns of declining population in existing, central residential neighbourhoods and declining transit ridership. To offer an explanation, I look to zoning and planning policy, housing markets and gentrification, patterns of transit investment, and spatial socioeconomic transformation.

I map changes in population and housing at the census tracts level in 2006, 2011 and 2016. Most new growth in Toronto happened in the form of high-rise development in a few designated ‘urban growth centres’ while the majority of the city’s residential neighbourhoods saw little growth and in some cases even population decline. These neighbourhoods are considered ‘stable’ and protected from intensification. The remainder of the metropolitan region’s new residential development – and indeed, the vast majority of net new population – is located not in Toronto but in surrounding suburban municipalities, in the form of new single-family unit subdivisions in peripheral areas. This pattern speaks to a tendency for North American plans to focus density in ‘nodes’ rather than allowing redevelopment to be more evenly spread across cities along transit corridors (Filion & Kramer, 2012). Perhaps related to the restrictions on supply in urban areas, housing costs, both at the neighbourhood and regional scale, are out of reach of the majority. This has implications for intergenerational inequity and newcomer accommodation.

Changing patterns of transit ridership over time are also explored in relation to these growth trends. A spatial exploration of transit ridership shows that ridership has declined slightly city-wide and that there is a potential correlation between declining ridership and route segments in gentrifying areas of stable urban neighbourhoods, which would make sense based on our understanding of transit use and income. The current provision of transit and the location of new transit investments, planned and under construction, contrast with these underlying patterns of population change, income and ridership demand. Growth is aligning with areas that lack transit capacity, whether near overcrowded existing routes or in auto-oriented peripheries.

Toronto tells a story of growth targets being met, and major new transit investments being made, while failing the underlying intentions of the plans, which are to welcome newcomers into existing urban neighbourhoods and improve sustainability and access by shifting mode from driving. Imagine the implications for Toronto’s future if the dysfunction of these patterns continue. This story raises questions about where and how growth should be accommodated if these goals are to be met, and what kinds of transit investments are most needed. Policy to consider are curbs to speculation in housing markets, re-zoning to allow an increase in the supply of housing in stable urban residential neighbourhoods, identifying corridors and not just nodes for intensification, methods to encourage the development of purpose-built, non-luxury rental housing in areas well-served by transit, and transit investments that improve speed, reliability and capacity across heavily used urban transit routes. This paper draws from a case study of Toronto to join the conversation about the impossibility of sustainability without equity, whose voices include Fainstein, Soja, Chapple, Marcuse, Peck, and Roy among others.

References

Key Words:
smart growth, housing affordability, transit access

STATE-SPONSORED INTEGRATED REGIONAL PLANNING IN THE UNITED STATES:
WHERE DID IT COME FROM AND WHERE IS IT GOING?
Abstract ID: 615
Individual Paper Submission

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This paper examines how some states in the US have developed comparatively more intensive state-mandated approaches to regional planning than others, and analyzes four examples of state-sponsored integrated regional planning to uncover lessons for advancing the state of knowledge about effective regional planning.

Regional planning has been a topic of interest since the beginning of planning as a professional and academic field (Hoover and Vernon 1959; Johnson 2015). Because it often spans arbitrary municipal – and sometimes state – political boundaries, regional planning offers the potential to consider such phenomena as metropolitan transit systems, labor markets, and watersheds, and thus holds promise for goals as varied as sustainable development, economic revitalization, and collaborative governance. In the recent Planning Advisory Service report Emerging Trends in Regional Planning, Piro et al. (2017) find evidence to “strongly suggest that there is a bright future for regional planners and leaders in the United States” but note that more research is needed in order to make regional planning more effective and more widely used.

One aspect of regional planning that has been relatively under-studied, even in the recent PAS report, is the role of state government in regional planning in the U.S. Because the U.S. lacks general-purpose regional government, regional planning here is carried out by a diverse set of often overlapping organizations that includes Regional Planning Councils, Councils of Governments, Metropolitan Planning Organizations, Economic Development Partnerships and others. State governments have been involved in the design, legislative empowerment, and funding of most of these, even those created and funded at the Federal level. Over the years, state governments have thus played the lead role in shaping the current landscape in which regional planning occurs.
Today, this landscape varies widely. States like Kansas have virtually no regional planning of any kind, whereas states like New York have developed a robust planning infrastructure to support broad-based “integrated” regional planning by prescribing regions, mandating planning, and providing funding and technical assistance for planning and implementation. This paper aims to describe that variability, but also to identify common themes across multiple states.

We present a set of four case studies of states (New York, Indiana, Utah, and North Carolina) that describe the historical development and current status of regional planning in each. The cases were chosen to maximize regional, political, and organizational diversity, and though not comprehensive, provide a solid basis on which to examine common trends. We compare the historical development and current status of state-sponsored planning across the wide range of organizations involved in regional planning. From the analysis of the cases, we begin to develop an understanding of how some states have developed comparatively more robust regional planning infrastructure than other states. We are also able to identify common trends than span region and dominant state political party.

Our findings show that state-led regional planning varies not only by state but also by time period, and that there is no clear trend toward more or less-empowered regional planning. We also show that states have often created frameworks for regional planning multiple times, and that the current landscape in many states contains a mix of once-dominant and newly-empowered regional planning organizations. Finally, we also show that in most of the cases there has been a clear shift toward a more entrepreneurial or Neoliberal approach to supporting regional planning that includes a large role for the private sector, competition for funds, and an emphasis on development over planning.

References

Key Words:
State-led regional planning, Regional planning organizations, Regional planning in the United States

TRANSFORMING RELATIONSHIP BETWEEN CENTRAL CITY AND SUBURBS IN U.S. METROPOLITAN AREAS: FOCUSED ON THE LONGITUDINAL EMPLOYER-HOUSEHOLD DYNAMICS DATA (2002-2014)
Abstract ID: 771
Individual Paper Submission

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This study examines the transformation of relationship between central city and suburbs analyzing the change of commuting pattern between them with the Longitudinal Employer-Household Dynamics(LEHD) Data of U.S. Census (2002-2014).
The early 1990s witnessed a significant number of debates on the relationship between the central city and suburbs in the literature, with many researchers emphasizing the regional context when dealing with the decline of central city and economic inequalities between the central city and the suburbs (Savitch et al., 1993; Ledebur and Barnes, 1993; Hill and Wolman, 1995; Mumphrey and Akundi, 1998). The rationale behind the regional approach assumes significant relationships between the central city and suburbs. Suburban dependency hypothesizes that since suburbs depend on the well-being of the central city, the decline of the central city leads to the decline of the suburbs (Ledebur and Barnes, 1993). Savitch et al. (1993) also argued that the central city and their surrounding regions are highly interdependent. However, critics argued that the apparent correlations between suburban and central-city growth might be attributed to overall state economic development (Hill and Wolman, 1995). Mumphrey and Akundi (1998) reviewed previous literature on the relationship between cities and regions and provided theoretical insights into the interdependency hypothesis. They argued that the central city and the suburbs have their independencies from each other while they also have their dependencies on each other. Particularly, Shermur and Motte (2009) examined the ties that bind central city and suburbs using commuting data in Montreal, Canada. They argued that the commuting ties were weak between the central city and suburbs.

Thus far, many researchers have acknowledged potential relationships between the central city and suburbs. However, the relationship between them has not been fully addressed in the academic literature. This study examines the dynamic relationship between the central city and suburbs using the commuting pattern over time which is a direct indicator of the relationship. The primary database is the origin-destination employment data of Longitudinal Employer-Household Dynamics (LEHD) 2002-2014 in U.S. Census. This study contributes to understand the dynamic relationship between central city and suburbs and suggests policy implications for regional planning.

References

Key Words:
Regional Planning, Central City-Suburbs Dependency, New Regionalism, Commuting Pattern

ASSESSING THE EFFECTIVENESS OF THE DENVER REGION'S CENTERS PLANNING
Abstract ID: 826
Roundtable

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Across the United States, metropolitan regions face ongoing challenges with low density growth patterns that have created significant challenges related to air quality, transportation and affordable housing. In most regions, metropolitan scale land use planning is conducted via voluntary visioning processes led by metropolitan planning organizations (MPOs). These regional plans have traditionally been driven by transportation infrastructure decision making, but decreased transportation funding and increased pressures to address air quality concerns have led to more integration of land use and transportation planning. The Denver Council of Governments (DRCOG) has led a collaborative regional visioning process to manage growth and transportation investment. This effort is supported a $6.5 billion investment in light rail, which is the largest system expansion in the country. A key component of transit investment and regional plans are the promotion of development around urban centers that are served by transit; that offer potential for future transit; or that reduce trips by providing access to local jobs and services. DRCOG has identified centers as a key regional strategy and developed policies and incentives to support their implementation.

A recent two-year study assessed the impact of the Denver Regional Council of Governments (DRCOG) regional strategies on local plans and centers. The research team analyzed the content of ten community plans over time to assess the impact of regional policies. They conducted interviews with planners to understand the range of responses to the centers policy. They also used a range of spatial data to categorize over 100 centers in the metropolitan region according to its current and future development and transit characteristics.

This panel involves researchers and practitioners to assess the region’s regional planning efforts, and the progress in challenges in implementing the centers concept. Richard Margerum led the team that conducted the regional study and will present the findings about both local plans and center opportunities and challenges. Brad Calvert is Director of Regional Planning and Development for the Denver Regional Council of Governments, and will discuss DRCOG’s initiatives and its new planning and monitoring strategies. Rocky Piro is a faculty member at the University of Colorado, Denver who has worked on regional planning in Puget Sound and Denver. He will offer his perspective as a researcher and former City of Denver planner. Sarah Nurmela is the Real Estate and Development Manager for the City of Westminster, which has strongly supported the centers concept and is investing $100 million to transform a defunct shopping mall into a new “downtown.”

References

POLICY AND GOVERNANCE IN THE ‘RESILIENT’ REGION
Abstract ID: 912
Individual Paper Submission

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The term regional resilience has grown in popularity during the 21st century. While scholars are mainly responsible for introducing the concept of regional resilience to the popular and public imagination, it has increasingly been governments and institutions that have assumed the mantle more recently. In adopting the concept, governments and institutions define and use the term differently. Such differences have implications for how related policies and plans will influence regional economic, physical, and social environments. This paper explores the nature and implications of these differences by asking the following research questions: 1) To what extent have regional governments and other institutions in the United States adopted the term resilience in their policies and plans? and 2) How are these governments and institutions defining and subsequently using the resilience concept to shape the future of our economic, physical, and social environments?

Some of the most notable contributions to resilience scholarship come from the research community, philanthropic entities, and development organizations like the MacArthur and Rockefeller Foundations and the National Association of Development Organizations Research Foundation (Foster 2011, Dabson, n.d.). Along with other networks and initiatives, these groups have helped advance the concept of place resilience and have thrust the resilience concept further into the spotlight. Like sustainability before it, resilience “has become a critical policy and planning goal” (Schilling and Vasudevan 2013) with more and more regions engaging in resilience initiatives designed to address economic, physical, and social issues at the regional scale. However, as Chapple and Lester (2010) remind us, regional experiences and capacities differ greatly and there is no one size fits all resilience policy. As such, one can appreciate that translating the resilience doctrine into practice would present a series of challenges and a multitude of approaches for those who choose to do so.

For regions across the United States who are grappling with the concept of resilience, these decisions and associated challenges have not been well documented. As such, we have little sense of whether and how regions in the United States have adopted the term resilience in their policies and plans. And perhaps more importantly, we know even less about how regional leaders define and subsequently use the term to shape the future of their economic, physical, and social environments. This study addresses this shortcoming by documenting and quantifying the usage of the resilience concept in regional planning initiatives across the United States. Through content analysis of regional plans and strategies, the paper sheds light on the growing number of regions whose leaders have adopted the resilience concept as a way to shape their futures. The content analysis approach mirrors the method utilized by Schilling and Vasudevan (2013) and assesses the content of regional planning documents across three categories: 1) resilience goals and principles; 2) resilience policies; and 3) plan implementation and resilience indicators. The findings suggest that there is limited but growing formal documentation of regional resilience in practice and that there is wide variety in terms of how regional stakeholders define
resilience and what they are doing in terms of resilience initiatives. Planning educators and practitioners will likely take interest in a discussion of these differences and how they might shape the future of our economic, physical, and social environments over time.

References


Key Words:
resilience, regionalism, content analysis

HUD SUSTAINABLE COMMUNITIES INITIATIVE: ENABLING REGIONALISM THROUGH A COLLECTIVE IMPACT

Abstract ID: 1011
Individual Paper Submission

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In 2008, when the US was faced with increasing economic distress, the Obama Administration called on its federal agencies to find better ways to leverage agency financial investments that could facilitate economic recovery initiatives. In response, the US Department of Housing and Urban Development (HUD), the Department of Transportation (DOT), and the Environmental Protection Agency (EPA) established the Partnership for Sustainable Communities, recognizing their collective ability to influence community-level conditions and heighten the potential for local economic opportunity.

To be considered for the SCI Sustainable Communities Regional Planning Grant (SCRPG), applicants had to design a consortium of cities, counties, private and non-profit partners who would govern the project and work collectively to achieve intended outcomes of the grant. A total of 74 regions were funded through SCI’s three-year regional planning grant program, 45 of which were funded in the 2010 fiscal year. These first 45 regional consortia put into operation a novel federal approach to seeking regional collaboration, one that was built around requirements for who was involved, how engagement was sought, a governance structure for how priorities were set and decisions made.

As metropolitan areas continue to grow their economic, infrastructure and natural resources interdependencies, governance of these regions largely remain independent and result in conflicting decisions that fail to meet a region’s overall welfare. Consistent with earlier theory in collaborative planning, these collaborative regional arrangements are more successful and long-term in practice when a structure is in place to bring together diverse and interdependent stakeholders, enable regular dialogue, facilitate joint knowledge development and create shared social and political networks.
In order to cultivate a collaborative culture, stakeholders must be engaged to ensure that individual and joint needs can be met, and which facilitates agreement on how the collaborative arrangement will work, given the specific goals, stakeholders and resources. Collective Impact (CI) is a framework to guide disparate groups so they can organize and implement community change efforts designed to solve social, environmental and economic challenges on a large scale. What sets CI initiatives apart from collaboration is its governance structure: CI infrastructure always includes a backbone organization, which provides infrastructure and resources for convening, engaging and implementing collective approaches.

Although the SCI SCRPG was never officially communicated as an initiative informed by a CI approach, a U.S. Federal Reserve report made the case that the activities of the Partnership for Sustainable Communities mirrors the growing movement toward collective impact strategies. In this article, we examine the framework used to promote regional planning in the HUD Sustainable Communities Initiative, and reflect on its use of a collective impact approach to increase potential for change brought by larger “systems” of coordinating organizations.

We consider the experiences of four SCI SCRPG participating regions: Gulf Coast Regional Planning (Gulf Coast of Mississippi); Metropolitan Area Planning Commission (Boston Region); New River Valley Planning (Virginia), Puget Sound Regional Council (Seattle-Tacoma Region). Data sources included survey data from consortium members, interviews with planning process leaders and intensive document review of planning and reporting documentation. A preliminary online survey and phone interviews to inform our research questions. Document review was utilized to triangulate findings produced via surveys and interviews. Our findings suggest the regional plan acted as the vision for collective impact efforts, data benchmarks were encouraged for grantees (and mandated in the case of the FHEA), and the consortium provided the mechanism for constant communication and trust-building, while the lead grantee (usually the MPO) acted as the backbone organization. We conclude that there is much to learn from this federal experiment in creating an intentional structure for regional sustainability planning in terms of supporting representative engagement, reconciling different understandings of equity, and ensuring a commitment to implementation.

References


Key Words:
Regional planning, collaboration, collective impact, Sustainable Communities Initiative (SCI)
RESILIENT ENERGY TRANSITION PATHWAYS IN NORTHERN GERMANY
Abstract ID: 1155
Pre-Organized Session: Sustainable Regions? Promises and Pitfalls in the Populist Era

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The increasing frequency and severity of extreme climate events, combined with unprecedented demographic pressures, changes in lifestyles and technologies, pose formidable challenges to understanding the dynamics of urban centers and the regions within which they are embedded. Yet, if policy and investment decisions are to improve resilience and promote sustainability they do require such understanding as well as an ability to explore how the dynamics change in response to deliberate interventions. Traditional risk assessment and forecasting tools are of only limited use in this context, given the potential for the emergence of novelty and surprises. Drawing on a case study from northern Germany, this presentation provides insight into the interdependencies of rapidly changing environmental and socioeconomic conditions, and, using dynamic modeling and visualization, identifies robust energy transition strategies designed to reduce local and global environmental impacts while improving a region’s ability to withstand, or bounce back from, adverse developments.

References

Key Words:
Climate Adaptation, Stakeholder-informed planning, Dynamic Modeling, Roadmap for Change

UNBRANDED OR BRANDED: IDENTITY OF PLACE AS REFLECTED IN THE BUILT ENVIRONMENTS OF WESTERN GATEWAY COMMUNITIES
Abstract ID: 1242
Individual Paper Submission

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Central Theme
During the last three decades, migration patterns have had a profound impact on gateway communities in the American West, as Americans seek places characterized by high quality natural amenities, abundant outdoor recreation opportunities, and scenic value (Howe, McMahon, and Propst,
Gateway communities—particularly those situated in close proximity to national parks—are exemplar destinations for visitors and new residents alike who value a unique sense of place and high quality of life. To differentiate themselves from their competitors, communities often employ branding to create and convey an identity that reflects their local history, culture, and natural surroundings (Sleipness, 2014). While often communicated via promotional campaigns and programmed activities, brand identity is also expressed through the built environment (Twitchell, 2004). Relying on the built environment as both an intentionally planned physical artifact as well as an “unwitting autobiography” that reflects cultural values in tangible and visible form (Lewis, 1979 p12), this study explores how five western gateway communities communicate their respective identities through conscious branding of their built environments, how these identities have evolved over time, and their long-term planning implications.

Methodology
Five gateway communities were analyzed using a comparative case study approach. Cases were selected based on their proximity to national parks in the western US, and initially apparent branding of the built environment. During 2005, open-ended interviews with key informants situated within each community, review of planning documents, and on-site observation and documentation of the physical environment were conducted within each selected community in order to document the provenance and development of each community’s brand as well as its manifestation in the built environment. In 2017, selected communities were similarly re-evaluated to document whether their previously identified brand identities had endured, evolved, or become supplanted by a new brand identity.

Findings and Significance
During initial evaluation, selected communities were found to exhibit brand identities grounded in their natural environment and their flora and fauna, landscape setting, and proximity to the national park; traditional land-based livelihoods such as ranching, timber, and mining; and nostalgia for past cultural practices and lifestyles. In some instances, communities exhibited competing brand identities, such as Williams, Arizona’s frontier and Route 66 identities simultaneously occupying the same physical space. While multiple brand identities were found to cater to sub-groups of visitors and residents alike, they were found to be concentrated most intensively in the downtown core, secondarily in suburban commercial development, and least in residential neighborhoods. During subsequent evaluation, significant changes were documented in Jackson, Wyoming, where sleek, new infill development marks a departure from the town’s earlier traditional Western brand identity, as characterized by stone and log timbers. Within land-constrained settings with sought-after natural amenities, burgeoning populations of urban in-migrants have resulted in built environments that reflect their urbane tastes. Changes in the communities’ identities, manifested in their redeveloped built environments, simultaneously reflect both “unwitting” change and purposefully planning decisions. Mediating among competing ideals of place, and how these ideals are manifested in sought-after built environments will continue to challenge planners in academic and professional settings, alike.

References
With the passage of the Metropolitan Statute in 2015, Brazilian State governments are now required to address urban planning issues at the regional scale. This follows in the trend of increasing planning powers through federal government enabling legislation that began with the passage of the City Statute in 2001. While many of Brazil’s pressing urban problems may be better addressed through region-wide thinking, the implementation of this new scale of government has exposed new forms of political confrontations.

Building upon research previously conducted on regional planning theory, urban and regional governance, and previous efforts in Brazil, this paper examines the processes and outcomes of implementing new regional planning requirements at the federal level, and in the states of Sao Paulo and Bahia. Research on this topic is important in that (1) urban governance in Brazil is now housed across all three scales of government—at the national level where enabling legislation is structured, at local levels where municipal plans are formed, and now at the state level bridging multiple local governments at a regional scale. In doing so, (2) the politics of planning today occur at the federal level in defining the regulations for regional planning, at the state level between various regional planning institutions and those tasked with sectoral (i.e. water, sanitation, etc) planning, and at the local level between various municipalities in a given region. And (3) Brazil’s unique mandate for regional plans has not been explored in the literature.

Authors, such as Katz (2000), note a resurgence in regional planning in North American and European contexts and point out that “devolution in governance” changes the ways in which planning issues are addressed. Likewise, Wheeler (2002) suggests that the new regionalism will occur “not through top-down regional government, but through incremental development…between existing levels of government” (267). In Brazil, metropolitan regional governance was mandated during the military dictatorship (1964-1985) and housed at the state level. Souza (2005), however, argues that its demise occurred as a result of its negative associations with the authoritarianism and centralization of military rule. As a result of this and other economic and political restructurings at the end of the dictatorship, Brazilian urban planning was left highly fragmented until the creation of the City Statute (Melo, 1995). Caldeira and Holston (2014) point out in the case of São Paulo planning, the recent institutionalization of innovative reforms around participation and social justice in that Statute has not been enough to ensure their fulfillment at the local level due to complicated party politics. Therefore, this research asks: What new forms of urban politics have emerged in the context of new requirements for regional planning in Brazil?

This paper expands and complicates the previous research on regional planning conducted in different urban contexts. In Brazil, this new statute and resulting efforts have been marked by a lack of clear definition at the federal—enabling and regulating—level; conflicts between new regional institutions and existing ones tasked with sectoral planning; and confrontations between principal cities and their smaller counterparts within given regions. Unlike Wheeler’s observation, therefore, regional planning
in Brazil is occurring between existing levels of government through the creation of new top-down forms of government. Additionally, although Melo noted that the City Statute, and in turn the Metropolitan Statute, helped defragment Brazilian urban planning, these new scales of urban politics, conflict, and brokerage point to new forms of fragmentation compounded by party politics—as observed by Caldeira and Holston. For planners, careful attention must be placed in structuring these new plans in accordance with their definitions in federal regulations and the intent of the statute, as well as through focused articulation between various local governments and state governments—along with other regional planning instructions ignored by the Statute. Additionally, the combination of specific requirements but unclear regulations at the federal level ostensibly complicates planning efforts at the local and regional levels, but may provide more flexibilization in breaking from top-down planning structures.

References


Key Words: regional planning, politics of planning, planning in Brazil, urban and regional governance, planning regulations

BRIDGING THE ECOSYSTEM DIVIDE: MARGINALIZATION ACROSS SPACE, RACE AND INDUSTRY IN REGIONAL ENTREPRENEURIAL ECOSYSTEMS

Abstract ID: 1434
Individual Paper Submission

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Entrepreneurial ecosystems are the latest framework embraced by economic development practitioners, scholars and policy makers to understand development and build strong economies. Mason and Brown (2014 p.5) define entrepreneurial ecosystem as “a set of interconnected entrepreneurial actors, entrepreneurial organisations … institutions … and … processes…which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment.” The goal is that an ecosystem would birth, nurture and support new businesses in hopes that they will mature and contribute to the area’s economy. However, Isenberg warns that entrepreneurship always leads to inequality which suggests that the benefits of the ecosystem may not benefit all residents/citizens/ stakeholders equally.

Ecosystems manifest across geographical, social and economic space. The specific patterns of information and resources flow through the system have implications for which entrepreneurs, organizations, and communities participate and prosper from a specific ecosystem. Research shows that
entrepreneurship and innovation are becoming increasingly concentrated geographically (Guzman and Stern 2016). Further, there has been increased focus on high growth firms (Mason and Brown 2014). There has also been a disproportionate focus on technology-based entrepreneurship. Inequality in entrepreneurship has been well documented with a lack of women and minority entrepreneurs, particularly in technology-based fields despite the fact that minorities are the fastest growing entrepreneurial. The purpose of this study was to examine the effects ecosystem geography, funding priorities, and management capacity on economic inequality. Many studies on entrepreneurship focus on individual entrepreneurs and their connections through networks. However, individual entrepreneurs receive most of their resources and information through assisting organizations. This study focuses on entrepreneurial assisting organization (EAO) as the primary unit of analysis. I argue that the current conditions and trends common across many urban entrepreneurial ecosystems may be exacerbating existing patterns of economic inequality.

This study uses a multi-method approach combining results of GIS analysis with interview data and survey results to analyze geographic distribution, management capacity, technology-focus in four regions (Chicago, Detroit, Pittsburgh and Richmond). GIS is used to map the location of entrepreneurial serving organizations relative to income and race. Data from 165 interviews is used to compare the professional background (as an indicator for entrepreneurial capacity of management staff) of EAOs serving disadvantaged demographic groups and communities. Survey data is used to assess goals and values of EAOs in each region and their potential impact across various types of entrepreneurs. I argue that each of the conditions uncovered in entrepreneurial ecosystems exacerbates inequality. I find a limited number of EAOs located in neighborhoods where poor and minority people live which limits the access that these groups have to the services provided. Interviews reveal that a disproportionately high number of the staff managing entrepreneurial assisting organizations serving disadvantaged people and communities experience and training in entrepreneurship compared to those running mainstream organizations. I also find that ecosystems in major cities have become obsessed with technology and scalable businesses to marginalizing all other types of entrepreneurs from the ecosystem.

The result has been a stratification of the ecosystem which largely disconnects organization serving entrepreneurs and communities that do not fit the prototype. Interview and survey results suggest a separate, unequal and ineffective system for those businesses and entrepreneurs

References

Key Words: entrepreneurship, inequality, ecosystem, technology
PRE-ORGANIZED SESSION: NOVEL METHODS IN BICYCLE RESEARCH
Proposal ID 7: Abstracts 156, 157, 158, 159, 160

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BUEHLER, Ralph [Virginia Tech] ralphbu@vt.edu, proposed discussant

In their review of bicycling research needs, Handy et al. (2014) identified areas within the field that would benefit from further contributions, of which this session will address two: describing the extent of bicycling and assessing strategies to encourage bicycling. Knowing where and how many bicyclists are riding helps cities evaluate their policies and investments. Improved automated bicycle counting technology can address conventional devices’ shortcomings in estimating the spatial spread of bicycling on a street network. Accurate bicyclist volumes also contribute to understanding exposure to crash risk and can be used to assess the causes of differences in metropolitan regions’ bicyclist fatality rates. An extensive body of literature has been dedicated to understanding the choice to ride a bicycle, yet opportunities for contribution remain. Novel measures of comfort and attitudes, such as psychophysiological metrics and psychological tests, can help policymakers better understand the factors driving bicycling behavior. Also, insights into the causes and timing of pro-bicycling attitude and skill formation can directly inform policy.

Objectives:
- Learn about new automated bicycle counting technology and how it improves upon traditional devices.
- Learn how barriers (e.g. stress) and facilitators (e.g. pro-bicycling attitudes and skills) influence bicycling behavior.
- Learn how and why metropolitan regions differ with respect to bicyclist fatality rates.

PRE-ORGANIZED SESSION: PLANNING IN A BRAVE NEW WORLD: DATA AND NEW MOBILITIES
Proposal ID 18: Abstracts 308, 309, 310

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Information Communication Technology (ICT) and the data they produce and/or transmit are rapidly changing the field of transportation. ICT has altered the speed, scale, and reach from which transportation decisions can be made and needs met - ultimately enabling new behaviors, modes, and policies. On the demand side, ease of data sharing and communication has enabled work, shopping and other activities to be more easily accomplished remotely which shifts the nature of travel for some. While on the supply side new services like real-time transit arrival, modern bike share, and shared ride-sourcing (like LyftLine, UberPOOL) have expanded urban and suburban transportation options in a very short amount of time. Autonomous vehicles may expand these services by another order of magnitude. This session will explore how real-time data is underpinning operational shifts in transport and mobility and ultimately point towards policy and process that will aid transportation planning.
Objectives:
- Understand the role of 'real-time' data in changing transport supply and demand
- Gain insight into how transport may shift in the foreseeable future
- Learn some potential responses to these transport shifts

PRE-ORGANIZED SESSION: URBANISM NEXT II: AUTONOMOUS VEHICLES, EFFECTS ON POLICY AND BEHAVIOR
Proposal ID 36: Abstracts 415, 416, 417, 418

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Connected and autonomous vehicles are positioned to revolutionize transportation and future society. Still, the understanding of the potential changes that these technologies will prompt in the use of transportation, activity and travel scheduling, the value of travel time, mode choice, and other components of travel behavior, are not well understood. Driverless vehicles can increase the car dependency of society or become part of policies for increased sustainability of transportation. The overall effects of autonomous vehicles on passenger travel will largely depend on the policies and regulations that are implemented, including, but not limited to, eventual restrictions to portions of the road network, regulations for specific categories of users, ownership models, taxes and incentives, traffic regulations and parking requirements, etc. This session will focus on the current research frontiers in understanding the impacts of autonomous vehicles on travel behavior, the need to include AVs in future planning processes and the role of policies in affecting the impacts of AVs.

Objectives:
- Understand the impacts of autonomous vehicles on travel behavior, the value of travel time and the use of other transportation modes
- Identify the research gaps to understand and incorporate the impacts of AVs in transportation planning processes
- Discuss the role of policy in affecting the potential impacts of AVs on transportation and the future of cities

PRE-ORGANIZED SESSION: EQUITY IN TRANSPORTATION POLICY
Proposal ID 54: Abstracts 595, 596, 597, 821

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This session will foster a dialogue on the transportation policy challenges preventing equal access to jobs, services, and opportunities. What are the inadequacies in current policies, and how can they respond to equity needs? What can they do to ensure that new transportation technologies are offered equally to different income groups, and different sectors of society? Most crucially, how does the policy process itself hinder planners’ efforts to rectify such problems, often through lack of attention to the issue, and failure to grasp the extent of the problem? This session will uncover some of the most consequential policy gaps, and begin a open a discourse on how the policy process can work to provide more equitable transportation.
Objectives:

- Discuss the transportation policy process.
- Identify equity gaps in the transportation system.
- Assess how the transportation policy process can be improved to resolve equity issues.

CROWDSOURCING BIKE SHARE STATION LOCATION: EMPTY VOICES OR POWERFUL PARTICIPATION?

Abstract ID: 8
Individual Paper Submission

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Public participation is a requirement for most planning processes, yet many critique the limited impact on plans and infrastructure. Planning processes are increasingly incorporating online map-based commenting platforms—a form of crowdsourcing public participation geographic information systems (PPGIS), but few studies investigate the role and impact of crowdsourcing PPGIS on actual changes in the urban environment. Recent planning of bike share systems in the United States demonstrate large-scale deployment of crowdsourcing PPGIS. Because of their relatively short planning and development timeframe, bike sharing systems also serve as a valuable set of planning cases for analysis—there are fewer intervening factors involved that could affect results, as compared with larger infrastructure changes. This study incorporates a mixed-method research design with spatial analysis of public-suggested bike share station locations against the actual stations as constructed in Chicago and New York, including qualitative analysis of public comments. Results show that most stations were constructed close to the suggested locations, and comments about these locations qualitatively differ. Comments near built stations emphasize rational analysis, whereas those that were further away from stations as they were built tended to rely on normative claims to influence the process. This study demonstrates that crowdsourcing PPGIS is a viable tool for incorporating public input during planning process, while affording detailed contributions that provide transparency. PPGIS can support co-productive planning efforts, but is not a replacement for in-person participation techniques.

References

TRANSPORTATION PREFERENCES AND PERCEPTIONS OF OLDER ADULTS IN A MID-SIZED CITY: THE CASE OF TALLAHASSEE, FLORIDA

Abstract ID: 16
Individual Paper Submission

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A number of transportation alternatives are available for older adults living in auto-oriented cities, from public transit and paratransit to ride-share programs and taxicabs. While research has shown that older Americans are generally open to these alternatives to driving, at least in an abstract sense, it is not yet clear from existing literature how open these individuals actually are to using each specific alternative. This study explores the transportation preferences and perceptions of older adults in Tallahassee, Florida, a mid-sized city. The research questions focused on which specific attributes of transportation and general mobility were most prized by older residents, while also exploring which modes of transportation (other than driving) were most preferred by older residents and why. In addition, the study explored the ways in which existing transportation options for this population could be adapted to address their preferences and increase ridership among older adults. These preferences and perceptions were gathered first through a county-wide survey distributed via local nonprofits and community leaders, and later through group interviews with survey respondents who expressed a willingness to discuss one or more facets of their transportation preferences in greater detail. The investigation yielded several noteworthy findings regarding older residents’ knowledge and opinions of the transportation options available in their community. Respondents generally viewed driving or being driven in an automobile as the most preferable means of transportation. Taxicabs and ride-sharing services (Uber, Lyft, etc.) were viewed least favorably, and transit/paratransit services were midway between these two. These rankings roughly mirror the general consensus from the literature of transportation preferences. When asked to rank the various attributes of transportation programs, respondents listed cost/fare and cleanliness of vehicles as the most important attributes, while ranking safety/crime and reliable scheduling as the least important attributes. This directly contradicts the consensus from the literature, and suggests that older adults may be more sensitive to a mode’s costs and appearances than its overall punctuality or safety from crime. Respondents generally felt that their transportation choices were satisfactory in their current state and did not wish for more or better options, with the notable exception of the region’s demand-response transportation, which has a poor community reputation due to several high-profile incidents with older riders in recent years. Finally, many respondents noted that their peers’ experiences with a particular mode – whether positive or negative – had a direct and lasting effect on their own likelihood of using that mode in the future, suggesting that word-of-mouth is especially vital for this age group. The study finds that perception matters substantially as an influence on older adult travel behavior, and negative perceptions of a specific mode or provider are particularly difficult for an agency to overcome. The findings also suggest that transportation providers seeking to increase older adult use of their services should pay particular attention to the cleanliness and comfort of their vehicles and the costs charged to users, and they should also prioritize the training of staff to engage with older adults in a highly professional manner. There remains a need for scholars to further this line of research in order to better understand the importance of perception and preference as a primary driver of older adults’ travel behavior.
References


Key Words:
Transportation Alternatives, Older Adults, Preferences, Qualitative Analysis

CASE STUDIES IN FINANCING BIKE/PED INFRASTRUCTURE

Abstract ID: 17
Poster

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Despite recognition that improving bicycle and pedestrian infrastructure is complimentary to the goals of health and sustainability (Weber, 2014), it is expected that dwindling federal support for this infrastructure will cause most proposed bicycle and pedestrian projects to go unfunded, and therefore unrealized, in the US (Moe, Wilkinson, Denney, Beltz, & Clarke, 1997; Walsh, 2012). This study examines a number of local mechanisms that cities have used to finance bike/ped infrastructure and some of the implications in doing so. Case studies in four U.S. cities of crowdfunding, Tax Increment Financing, bonds, donations, and sales tax are used to discuss trends, one-offs, and the potential pitfalls involved.

This multiple case study elucidated a variety of ways that cities are funding bike/ped infrastructure. Some of these methods, such as crowdfunding, have not to date been able to raise enough money to fully fund bike/ped projects, but they have provided other benefits such as raising awareness and spurring other larger organizations to contribute to the bike/ped cause. Other methods, such as bonds, TIF financing, and sales tax can raise significant funds but need targeted campaigning to gain political and community support. These financing methods are also contingent on the health of the local economy, so project timelines are subject to fluctuations in the local economy.

References


Key Words:
bicycle, pedestrian, financing, funding, bike lane

RESTRUCTURING TURKISH PARATRANSIT OPERATIONS: PUBLIC TRANSPORT SYSTEM INTEGRATION IN ANKARA, TURKEY
Abstract ID: 22
Poster

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In the 21st century’s metropolitan city, public transport is the vital element to attain a sustainable urban environment. In the face of increasing private car ownership and sprawling spatial development, the most influential tool that can be used by transportation planners is the encouragement and improvement of public transport. For some of the developing country cases, paratransit (also known as informal transport) should be emphasized (Cervero, 2000). In the developing country context, paratransit modes often emerged to meet the mobility need of rural migrants in urban areas, who generally settled in neighborhoods that were not well served with existing public transport systems (Iles, 2005). By time, paratransit systems increased their role in urban transport and became one of the main transport modes in the cities. It has often been argued that the role that paratransit systems play would diminish and they would eventually disappear, with the development of high-quality public transport systems. This has, however, not been the case in many developing countries, and paratransit systems continue to exist in most developing countries, despite the development and expansion of new public transport systems, including urban rail and bus-based solutions. Since privately operated paratransit services have often competed with public transport systems rather than complementing and integrating with them, there have emerged what one can refer to as the ‘problems of fragmentation’. Considering both these fragmentation problems and the technological advances that make smart and integrated ticketing possible, there is clearly a need for the restructuring of paratransit operations. One of the options for such a restructuring is the removal of paratransit systems from the network entirely. Nevertheless, most authors disagree, emphasizing the innovative and attractive attributes of paratransit systems from both users’ point of view and from the point of view of offering a diversity of travel options (Dimitriou, 2013). Indeed certain characteristics of paratransit as a significantly flexible transportation mode against conventional substitutes provide many advantages to the users in the network. Especially in the developing world, the emergence and continuity of these systems can only be explained with the advantages they offer to their users. Besides, the policy to remove all paratransit systems may not be an ideal or realistic approach, as urban transport policy and planning challenges in the developing world differ significantly from those in urban areas of the developed world. Rather than eliminating paratransit operations altogether, an understanding is required to analyze the needs and the perceptions of the locality (Schalekamp & Behrens, 2010). For developing such an understanding for transportation, it is necessary to emphasize the mobility needs, accessibility opportunities, concerns and expectations of the users.

In order to understand the user perspective in Ankara case, a transportation survey is conducted on 623 Middle East Technical University (METU) students. The reason for the decision on a sample consisting of only students is to understand the perceptions of a more transit dependent user group. The scope of
the survey covers the mode choices of the users in campus, their perceptions on existing transportation network and expectations on possible future investments with a particular emphasis on the paratransit mode in Turkey, which is known as “dolmus”. The evaluation of survey results provide valuable insights on the characteristics of paratransit mode “dolmus” that are valued positively by users and with the help of this information it is possible to look for applicable strategies, which would increase the efficiency of public transport vis-à-vis private cars in Ankara. The approach that is based on user perspective provides clues as to which characteristics of paratransit are valued by its users and the reasons behind decisions of those users who prefer paratransit systems. Based on these findings it has been possible to discuss how users may be affected by the complete removal of paratransit services from public transport network. Through the results of this analysis, possible policy options in restructuring paratransit are defined and formulated.

References

Key Words:
Paratransit, Dolmus, Transport System Integration, User Perspective

BUILT ENVIRONMENTAL FACTORS TO THE SPATIOTEMPORAL PATTERNS OF PEDESTRIAN COLLISIONS: AN APPLICATION OF BIG DATA
Abstract ID: 23
Individual Paper Submission

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Although pedestrian activities contribute toward sustainable communities as promoting healthier lifestyle and social interaction, unsafe pedestrian environment is one of biggest barriers that prevent people from walking. In 2015 there were 5,376 and 70,000 pedestrians killed and injured in traffic crashes, respectively. The fatality rate shows a 9.5 percent increase from the 4,910 pedestrian fatalities in 2014. (NHTSA, 2017). A large body of literature identified built environment as a contributing factor to pedestrian collision. The built environment includes development density, land use, roadway design, pedestrian infrastructure, and roadway characteristics (Clifton and Kreamer-Fults, 2007; LaScala et al., 2001; Stoker et al., 2001). However, much research measured pedestrian collision rate by employing proxy measures such as population and/or roadway length, although it is desirable to measure collision rate with the collision density, the number of pedestrian collision per pedestrian counts. The main reason for that is lack of archived pedestrian count data. For the same reason, there has been lack of temporal analysis on this research topic.

The purpose of this paper is to examine the spatiotemporal patterns of pedestrian collision by time of day and to identify built environmental factors on the patterns in the City of Seoul. Employing a big data
set, pedestrian count data based on cell-phone signals, this paper normalizes pedestrian collision counts per 1,000 pedestrians on the street by time of day. Setting a spatiotemporal analysis framework that divides the study area into 300 by 300 meters grid cells and that measures pedestrian collision rate for eight time-periods per day (three hours per period), this paper constructs spatial regression models that tests the influence of built environment on pedestrian collision by different times of day. The built environment includes transportation, land use, and destination. By comparing the results from the models, it would be possible to identify the contributing built environmental factors to pedestrian collisions by different time of day. Based on this case study, this paper will discuss insight into the relationship between built environment and pedestrian collisions by time of day.

References


Key Words: Spatiotemporal, Pedestrian Safety, Built Environment, Big Data

FAIR FARES? HOW FLAT AND VARIABLE FARES AFFECT TRANSIT EQUITY IN LOS ANGELES

Abstract ID: 33
Individual Paper Submission

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The majority of U.S. transit agencies today charge flat fares; that is, they charge the same fare no matter when or how far riders travel, despite the wide variance in both how people use transit and how much transit services cost to provide. As a result, the fare structures adopted by the majority of U.S. transit agencies may actually be unfair to the majority of its users: low-income riders, who on average make more transit trips but travel shorter distances per trip compared to higher-income riders.

Many previous studies of transit fare equity rely on decades-old and/or on-board survey data, which may not reflect current transit use or be representative across wider populations. To fill this methodological gap, I utilize activity-diary survey data from five Southern California counties in the 2012 California Household Travel Survey (CHTS) to 1) investigate transit rider and trip characteristics, including trip time of day and distance variation by income group, 2) assess the equitability of flat fares given existing transit use patterns, and 3) evaluate how alternative fare structures may reduce fare regressivity and promote equity.

Analysis reveals that low-income transit riders travel shorter distances and make a higher share of transit trips during off-peak periods compared to higher-income transit riders. As a result, current flat transit fares in Los Angeles are highly inequitable, with lower-income travelers paying more than twice as
much per-mile on average ($0.34) compared to higher-income riders ($0.13). Evaluation of three alternative fare scenarios (off-peak discount, distance-based, and off-peak discount plus distance-based) reveals that varying fares by time of day and distance increases equity, but that imposing fare minimums and maximums undercuts the equity gained by variable pricing. A variable fare structure that provides discounts to off-peak trips, charges fares on a per-mile basis, and does not impose fare minimums or maximums could greatly improve transit fare equity across different income riders and better align fare payments with individual ability to pay. Given that the technology to implement variable fares not only exists, but is also already practiced in many cities around the world, American cities should reform transit fare policies to vary transit fares and ensure that all riders pay their fair share for transit.

References


Key Words:
Fare policy, Transit, Distance-based fares, Fare reform, Equity

TRIP AND PARKING GENERATION AT TRANSIT-ORIENTED DEVELOPMENTS: FIVE US CASE STUDIES

Abstract ID: 39
Individual Paper Submission

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Guidelines for trip and parking generation come mainly from the Institute of Transportation Engineers (ITE). However, their trip and parking manuals focus on suburban locations with limited transit and pedestrian access. This study aims to determine how many fewer vehicle trips are generated at transit-oriented developments (TODs), and how much less parking is required at TODs, than ITE guidelines would suggest.

Our sample of TODs is small, which limits our ability to generalize. However, the five cases selected for this study are more or less exemplary of the D variables. They are characterized by land-use diversity and pedestrian-friendly designs. They minimize distance to transit, literally abutting transit stations.
They have varying measures of destination accessibility to the rest of the region via transit. Three have progressive parking policies, which fall under the heading of demand management. Two have high residential densities, and one has a high intensity of commercial development.

Simply put, our case study TODs (even the most auto-oriented) create significantly less demand for parking and driving than do conventional suburban developments. With one exception, peak parking demand in these TODs is less than one half the parking supply guideline in the ITE Parking Generation manual. Also, with one exception, vehicle trip generation rates are about half or less of what is predicted in the ITE Trip Generation Manual. Automobile mode shares are as low as one quarter of all trips, with the remainder being mostly transit and walk trips.

Reducing the number of required parking spaces, and vehicle trips for which mitigation is required, creates the potential for significant savings when developing TODs. Guidelines are provided for using study results in TOD planning.

References


Key Words:
- transit-oriented development

INNOVATIVE APPROACHES TO TRANSIT INFRASTRUCTURE FUNDING AND FINANCING THROUGH PUBLIC-PRIVATE PARTNERSHIPS: A DENVER CASE STUDY

Abstract ID: 43
Individual Paper Submission

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For many years, cities and states in the U.S. have been facing a shortage of funding for transportation infrastructure. Increasingly, public entities are turning to the private sector for help with building, financing, and/or operating major transportation projects. Until recently, most of the transportation public-private partnerships (PPPs or P3s) in the U.S. have been toll roads or bridge projects. The purpose of this research is to examine the recent use of transit public-private partnerships (PPPs or P3s) in the Denver Regional Transportation District’s (RTD) FasTracks program, a 2004 voter-approved $4.7 billion transit expansion program. After a shortfall in funding, RTD partnered with several private consortia to enable the FasTracks program to move forward. We identified five transit PPPs in the FasTracks program with varying levels of private sector participation. Using in-depth interviews with key stakeholders and policymakers in the Denver region, we identified the degree to
which the P3s in Denver have been successful and whether they could serve as a model for transit infrastructure expansion in other metropolitan regions in the U.S. Results from the data analysis show that almost all of the respondents rated the P3s in Denver quite favorably. The two most important and most cited benefits of the full-scale PPPs were accelerated delivery of the projects at low cost and appropriate allocation of risk. The major shortcoming of P3s is that they are “complex and opaque,” and difficult to explain to the public because PPPs are misunderstood, unfamiliar, and still novel. Most respondents felt that the P3s in Denver, especially the rail line project to Denver International Airport (pending successful implementation), could be a model for other transit agencies seeking to expand their infrastructure. Many respondents were also quick to point out that each P3 is different based on local circumstances, and that what works in one case may not work in others.

References


Key Words:
public-private partnerships, rail transit

TRIP AND PARKING GENERATION RATES FOR DIFFERENT HOUSING TYPES: EFFECTS OF COMPACT DEVELOPMENT

Abstract ID: 49
Individual Paper Submission

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Central theme: Vehicle use and ownership are of interest from the standpoints of energy, environment and transportation. Over half of the world’s oil and about 30% of total commercial world energy are consumed by the transport sector. In 2013, about 31% of total U.S. CO₂ emissions and 26% of total U.S. greenhouse gas emissions were generated by transportation (U.S. EPA, 2015). Vehicle trip generation and vehicle ownership models are used by policy makers to identify factors that affect vehicle miles traveled (VMT), and therefore address problems related to energy consumption, air pollution, and traffic congestion (Dargay et al., 2007; Schipper, 2011).
Previous researchers have examined the relationship between urban density and transportation. Low density and separate land uses create high auto dependency. Compact, mixed-use development is one of the strategies for planners to mitigate the problems associated with high auto dependency (Ewing and Hamidi, 2015).

Guidelines for trip and parking generation in the United States come mainly from the Institute of Transportation Engineers (ITE). The ITE Trip Generation Manual and Parking Generation manual are considered “bibles” in transportation planning. However, these manuals focus on suburban locations with limited transit and pedestrian access. This study aims to determine how many fewer vehicle trips are generated, and how much less parking demand is generated, by different housing types (single-family attached, single-family detached, and apartment and condo) in different settings, from low density suburban environments to compact, mixed-use urban environments.

Methodology
Using household travel survey data from 21 diverse regions of the United States, we estimate a multilevel negative binomial model of vehicle trip generation and a multilevel Poisson model of vehicle ownership. Vehicle trip generation and vehicle ownership are logically modeled as count variables.

Findings
The models have the expected signs on their coefficients and have respectable explanatory power. Vehicle trip generation and vehicle ownership (and hence parking demand) decrease with the compactness of neighborhood development, measured with a principal component that depends on activity density, land use diversity, intersection density, transit stop density, and employment accessibility (after controlling for sociodemographic variables). The models capture the phenomena of “trip degeneration” and “car shedding” as development patterns become more compact.

Relevance to planning practice
Reducing the number of required parking spaces, and vehicle trips for which mitigation is required, creates the potential for significant savings when developing urban projects. Guidelines are provided for using study results in transportation planning. For the purpose of preliminary analysis, planners could apply the average vehicle trips and average vehicle ownership (per unit or per person) to a specific development site. On the other hand, with the complete data sets included in this study, planners are able to predict more accurate and reliable values of vehicle trip and parking generation.

References

Key Words:
trip generation, parking generation, car shedding, compact development, multilevel modeling
VERKEHRSVERBUND: THE EVOLUTION AND SPREAD OF FULLY-INTEGRATED REGIONAL PUBLIC TRANSPORT IN GERMANY, AUSTRIA, AND SWITZERLAND

Abstract ID: 81
Individual Paper Submission

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Throughout the world, urban areas have been rapidly expanding to cover larger areas, exacerbating the problem of a multitude of different public transport (PT) operators providing service over many different governmental jurisdictions. Over the past five decades, Germany, Austria, and Switzerland have successfully implemented regional PT associations (called Verkehrsverbund or VV), which fully integrate services, fares, and ticketing while coordinating public transport planning, marketing, and customer information throughout entire metropolitan areas, and in some cases, entire states. A key difference between VVs and other forms of regional PT coordination is the close collaboration and mutual consultation of representatives of government jurisdictions and PT providers in all decision-making.

This article first examines the origins of VVs, their spread to 14 German, Austrian, and Swiss metropolitan areas from 1967 to 1993, and their subsequent spread to 57 additional metropolitan areas from 1994 to 2017, now serving 85% of Germany’s and 100% of Austria’s population, and the Zurich metropolitan area. Organizational form and structure vary across VVs. Indeed, the VV model has spread quickly because it is adaptable to the different degrees and types of integration needed in different kinds of situations.

Most of the article focuses on six case studies of the largest VVs: Hamburg (opened in 1967), Munich (1971), Rhein-Ruhr (1980), Vienna (1984), Zurich (1990), and Berlin-Brandenburg (1999). Since 1993, all six of those VVs have increased the quality and quantity of service, attracted more passengers, and reduced the percentage of costs covered by subsidies. By improving PT throughout metropolitan areas, VVs provide an attractive alternative to the private car, helping to explain why the car mode share of trips has fallen since 1990 in all 6 of the case studies.

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Key Words:
public transport, regional coordination, multimodal integration, public transport association, Europe
URBAN CONTAINMENT AND INNER-CITY DENSIFICATION REDUCE AUTO OWNERSHIP

Abstract ID: 84
Individual Paper Submission

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Land-use policies such as transit-oriented development, densification and mixed-use development are favored policy interventions aimed at reducing car ownership and dependence. Previous studies show that both local and regional built environment (BE) characteristics influence auto ownership. However, the focus is largely skewed towards local or neighborhood-scale BE attributes while overlooking the importance of regional attributes. Furthermore, the literature focuses mainly on larger metropolitan areas. It is unclear whether the results from large metropolitan areas can be generalized to medium-sized metropolitan areas. Large metropolitan areas are more likely to have strong employment centers and extensive transit infrastructure, and experience more severe congestion than medium or small metropolitan areas. Accordingly, the influence of BE attributes on auto ownership and use could be expected to be stronger in large metropolitan areas than in other areas.

Using both cross-sectional and longitudinal analyses, this study explored the influence of the built environment on auto ownership and compared the results between two urban regions in Norway: the large, monocentric Oslo metropolitan area and the smaller, polycentric Stavanger metropolitan area.

Cross-sectional models show that in both Oslo and Stavanger the distance to the city center is positively associated with auto ownership. However, job density is significant in Oslo but insignificant in Stavanger. Further, built environment variables have larger explanatory power in Oslo than in Stavanger. Quasi-longitudinal analyses also show that the effects of residential relocation on change in auto ownership differ between the two metropolitan areas. In Oslo, inward relocation is associated with a reduction of auto ownership and outward relocation has a positive association with auto ownership, but inward relocation has a larger effect on change in auto ownership than outward relocation. In Stavanger, outward relocation tends to increase auto ownership but inward relocation has no significant effect on auto ownership.

For city and regional planning aiming at decreasing car travel and promoting sustainable transport modes, reducing the need for auto ownership is a key measure. Our studies show that urban containment, particularly through densification in the central parts of the metropolitan area, is crucial to this end. By reducing travel distance and encouraging the use of modes of transport other than the private car, densification close to the center of the metropolitan area decreases not only car dependency but also actual levels of car ownership. In addition to new inner-city dwellings, a high proportion of jobs (except freight-intensive and area-demanding ones) should also be located close to the city center instead of at suburban or exurban sites if we aim at reducing car dependency and auto ownership rates.

References

Key Words:
Built environment, car ownership, land use, longitudinal data, Causality

EVALUATING POTENTIAL ROAD DIETS: THE BENEFITS OF AVOIDING DETAILED ENGINEERING ANALYSIS
Abstract ID: 93
Individual Paper Submission

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Road diets are used to improve the safety of major streets, typically those that were over-designed when originally built. The most common approach is to convert a four lane road with no median to a two lane road with a two-way turning lane as the median. Experience suggests that these can result in safety improvements, and in some cases even improve traffic flow by providing a continuous turning lane, despite the reduction in road capacity. Communities that seek to implement road diets are often required to invest in detailed engineering studies that evaluate the changes in traffic flow. These studies are costly and can delay final project implementation.

In this research I challenge the need for these studies. As an alternative, a simple benefit/cost analysis screening approach is proposed. This is demonstrated using easily collected data from a sample of roads in New Jersey. Traffic counts were conducted at peak periods for 30 minute intervals and safety data was downloaded from NJ DOT. Using a variety of potential scenarios on travel time changes, safety benefits, and construction costs, results suggest simple metrics that can be used to determine candidate road diet sites, all of which require fast and cheap road restriping.

The analysis is supplemented with a discussion of two case studies of the problems associated with detailed engineering analysis. Similar to the problems Donald Shoup identified with the “scientific” precision of parking studies, these analyses present planners with detailed precise modeling results. These include traffic flow simulations, signal timing studies, and safety analyses; all are expensive and time consuming to produce and often wrong. A rough estimate is provided of how much these studies cost municipalities across the nation, let alone the delay they cause to actual project delivery, especially for those projects that can save lives.

References
Warehousing Location Choice: A Case Study in Los Angeles, CA

Abstract ID: 96
Poster

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Over the last decade, the logistics industry has not only drastically altered how goods are produced and transported but also reprioritized from storage to throughput to move a large volume of commodities frequently and reliably. Concurrently, the logistics and warehousing industry has significantly expanded, and their facilities have relocated from the urban core to the outskirts. Researchers in urban planning have been interested in this spatial shift because it implies more truck travel and associated negative externalities.

The purpose of this paper is to evaluate the determinants of warehousing location choice to understand how and why warehousing facilities have decentralized from the urban core to the periphery. For example, warehouses in old industrial zones in the urban core have been zoned-out and repurposed for residential and mixed use development. Meanwhile, new, large, and automated facilities have been built on the periphery, which has directly contributed to the decentralization. The location characteristics of the outskirts (low land prices; direct access to congestion-free transportation infrastructure; and favorable regulatory environments for warehousing operations) fulfill a logistics firm’s operational objectives. Moreover, if these warehouses are part of the regional- and national-level supply chain, they will be indifferent to having access to local markets. Rather, they will prioritize to have access to trade nodes. In other words, the location of a logistics facility is strategically selected based on the location characteristics that maximize productivity. Thus, a location change implies that the productivity-enhancing location attributes have been rebalanced. For example, as a new warehouse is relocated farther from the urban core, the gains of lower land prices and lower per-unit inventory costs from economies of scale outweigh the increase in transport costs, as the facility locates farther from the urban core.

Accordingly, to understand which factor has led to the location change, I hypothesize that (a) the logics of location choice vary with respect to the facility type and (b) the logics have changed over time. This paper evaluates the location choice of 5,364 logistics facilities built between 1951 and 2016 in the Greater Los Angeles area, CA. I adopt the research framework and econometric models, due to the structural similarity, from firm location choice studies. For example, in the discrete choice model, the characteristics of an agent (e.g. built year and size of a facility) and those of the chosen location (e.g. land price) influence a firm’s profit structure and the probability that a location is chosen. I compare two econometric specifications: multinomial logit (7 location alternatives) and negative binomial (3,920 census tracts). Results suggest that there have been significant differences that have affected location choices with respect to the size and built year of a warehousing facility. Furthermore, the warehouses...
built after 2000 have prioritized lower land price and access to rail-to-truck intermodal terminals over access to local markets and access to the labor pool. These findings imply that the current pattern of decentralization might not lead to more truck travel miles if the relocating facilities are involved in the regional/national trade.

References

Key Words: warehousing decentralization, firm location choice, location determinants, urban freight movement

DO NEW BIKE SHARE STATIONS INCREASE MEMBER USE: A QUASI-EXPERIMENTAL STUDY
Abstract ID: 97
Individual Paper Submission

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Bike share programs have the potential to reduce traffic congestion, provide environmental benefits by reducing greenhouse gas emissions, and provide health benefits by increasing physical activity (Shaheen et al., 2010). Thus, bike share programs have become increasingly popular throughout world, with over 1000 cities operating bike share programs (Meddin and DeMaio, 2017). Despite the growing popularity of bike share programs, little is known about factors that influence the demand of existing bike share users. Bike share station-level demand analyses (e.g. Faghii-Imani et al., 2014) have shown that demographic factors, adjacent land use, and bike infrastructure influence the use of bike share stations. Individual level studies (e.g. Fishman et al., 2015) also have identified socio-economic and spatial correlates that influence individuals’ likelihood of using bike share.

Accessibility to a bike share station (Fishman et al., 2015 and Bachand-Marleau et al., 2013) has repeatedly been found to have significant impacts on the use of bike share. For instance, Bachand-Marleau (2013) found Montreal respondents living within 500 m of a docking station were 3.2 times more likely to have used bike share. However, most research to date has been cross-sectional analysis and therefore inadequate to establish a causal relationship between accessibility and the frequency of bike share use. Furthermore, the impacts of the accessibility of bike share station could be different in different built environment settings.
This study adds to the literature by using the quasi-experimental, difference-in-difference modeling approach to explore the causal relationship between accessibility and frequency of bike share use. We use a five-year panel data set that include individual members’ bike share trips from 2010 to 2015 in Minneapolis-St. Paul, Minnesota. We examine the impacts of decreasing the distance to the nearest bike share station through installation of a new bike share station (the treatment variable) on the frequency of bike share use. We have two primary research questions: 1) how does the improvement of accessibility to bike share stations influence the frequency of bike share use? 2) How does the impact differ in different contexts, specifically, in relation to different features of the built environment settings near stations? By using multi-period difference in difference models, we minimize the effect of confounders (such as calendar event effects). By incorporating interaction terms of the built environment variables and the treatment variable, we demonstrate the heterogeneous effects of the treatment variable across different built environment contexts. We show that installing a new bike share station close to existing bike share users increases frequency of weekly use. These increases are significantly higher when stations are installed in areas with higher population density, bicycling infrastructure and dense transit services. These results have implications for bike share system managers who work to optimize efficiency of bike share station location and planners to promote bike share (bicycling).

References


Key Words:
Bike Sharing, Transportation, Built Environment

MAKING USE OF THE COMMUTE: TRAVEL-BASED MULTITASKING IN PORTLAND, OREGON
Abstract ID: 103
Individual Paper Submission

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The positive utility of travel concept (Mokhtarian & Salomon, 2001; Singleton & Mokhtarian, in progress) suggests that one way people benefit from personal transportation is by engaging in activities while traveling. Known as travel-based multitasking, this participation in activities while traveling happens for a number of reasons (Kenyon & Lyons, 2007). Some people may be actively trying to use
their travel time productively, for work, maintenance, or leisure activities. Others may sleep or daydream, using their commutes as a buffer or transition time between home and work. Most studies of travel-based multitasking focus on public transit commuters (e.g., Guo, Derian, & Zhao, 2015); fewer investigate differences across modes (e.g., Malokin, Circella, & Mokhtarian, 2015). This project answers the following research questions: What activities do people do while commuting by different modes? How useful do people consider their commutes to be? What factors affect activity participation during travel and the subjective usefulness of travel time?

This study investigates the twin topics of travel-based multitasking and travel usefulness, using the results of a multimodal survey of about 650 commuters in the Portland, Oregon, region. By estimating binary logit models of activity participation for several different activity types (grouped using exploratory factor analysis) and ordered logit modeling of subjective assessments of travel usefulness, the analysis examines differences by commute mode and various traveler characteristics. Walk and bicycle commuters found their commutes to be the most useful, apparently because they valued exercising. Auto drivers had the most wasteful commutes; most only listened to audio. However, transit riders and auto passengers engaged in a greater number and variety of activities while traveling, including information and communications technology (ICT-) based activities. Although age was negatively associated with ICT activities, listening to music, and travel usefulness, few other sociodemographic attributes were consistently significant. Instead, traveler perceptions appeared to play a bigger role. Study findings suggest that some people indeed make use of their commute travel time through travel-based multitasking, while others travelers may instead be doing things just to kill time. This research offers implications for understanding the behavior and time use of transit passengers and people walking and bicycling, and anticipating future technological developments. Planners can use this information to improve the quality and promote the attractiveness of non-auto modes, and to plan for some of the potential behavioral and time use impacts of semi- and fully-autonomous vehicles.

References

Key Words:
Positive utility of travel, Multitasking, Travel usefulness, Information and communications technology, Travel behavior

THE USABILITY OF UNMANNED AERIAL VEHICLES (UAVS) FOR PEDESTRIAN TRAFFIC MONITORING
An essential task in transportation planning and design is monitoring pedestrian volume and activity. Pedestrian traffic data can be applied to the assessment of the safety and the capacity of existing streets, the provision of input to traffic forecast models, measurement of the impact of changes before and after a street design intervention, and ultimately the efficient allocation of resources.

Pedestrian volume is typically measured in two ways: manual counting and automatic counting. Automatic counting is suited to long-term monitoring at a lower cost, but it tends to undercount pedestrian traffic in dense areas. Manual counting is capable of gathering more detailed information about travelers, but it is more labor-intensive. The most accurate and thorough counting method is the use of video cameras, which allow subsequent verification. However, they are both costly and subject to theft, vandalism, and occasional malfunctions. Another challenge is that most counting methods take place within a limited number of locations that may not represent the entire area of interest.

To fill in the gap of existing tools, this study provides a new method of pedestrian traffic monitoring: the use of unmanned aerial vehicles (UAVs), also known as drones. As UAVs cover a greater area in a shorter amount of time than manual counts, they save time and money required for data collection. They are also capable of capturing not only pedestrian volume, activities, and their demographic attributes, but also their moving patterns. The use of UAVs has become popular in environmental studies such as geology, forestry, agriculture, and construction engineering, but to date, only a few studies have tested UAVs in pedestrian counts. To the best of our knowledge, this study is the first to employ UAVs to observe humans on sidewalks for the purpose of analyzing the impact of built environments on pedestrian volume. Thus, this study establishes a consistent methodology for pedestrian monitoring using UAVs and to test its reliability in sample streets in Salt Lake City, Utah. Also, it will provide some practical implications of the new tool.

References


Key Words:
Drone, Direct observation, Pedestrian traffic monitoring, Urban design, Sidewalk

DOES INCREASING NEIGHBORHOOD DENSITY MEAN SAFER STREETS?
Abstract ID: 118
Individual Paper Submission
Do dense neighborhoods have safer streets? On the one hand, higher densities tend to mean more people walking, driving, and cycling in close proximity. This increases exposure and the potential for harmful interactions, particularly between motor vehicles and pedestrians. On the other hand, higher densities tend to mean slower vehicle speeds, less overall driving, and more awareness of the presence of vulnerable land uses. Safety researchers use population density as a proxy for good urban form, a proxy for exposure, a proxy for both, or simply a good predictor variable.

At the national level, denser cities tend to have lower overall traffic fatality than sparsely populated ones (Figure 1). Traffic fatalities and serious injuries tend to be lowest in cities with high population densities, narrow streets, and high shares of pedestrians, cyclists, and transit users. From a policy perspective, however, transforming Phoenix (fatality rate of 11.8 per 100,000 residents) to be more like Boston (fatality rate of 2.5) is neither likely nor likely to be up for discussion. Furthermore, there are a host of other characteristics that contribute to Phoenix’s streets being 5 times more deadly than Boston’s.

In this paper, we analyze whether increasing neighborhood densities resulted in lower collision and fatality rates over time. To examine changes over time and place, we create a panel by matching four years of crash data from the Philadelphia region to four years of ACS and economic data at the Census Tract level, as well as cross-sectional data about land use, road conditions, and traffic volumes. The Philadelphia region has substantial variation in built form, collision rates, and the socioeconomic composition of neighborhoods. While fatality rates are lower than the nation’s and Pennsylvania’s, they are comparable to cities like Los Angeles and Seattle. Findings from the study will contribute to understanding of the relationship between population density and traffic collisions, and to policy discussions about the relative benefits of using local planning powers to allow or prevent marginal increases in development.

References
DIRECT DEMOCRACY AND PUBLIC TRANSPORTATION: A STUDY OF LOS ANGELES'S MEASURE M
Abstract ID: 125
Individual Paper Submission

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Voters in the cities across the country now regularly approve new taxes to fund transportation projects, and particularly public transit projects. Yet despite this surging political support for transit, transit ridership remains flat. Why? One potential explanation is that voters support transit because they believe it make driving easier, not because they want more transit service per se. Drivers outnumber transit riders in most places, and may also be more likely to vote, so transportation agencies that want voter support for transit funding might appeal to voters' in their identity as drivers, rather than their identity as potential users of transit. If this is so, then transit's political support could rise even as its ridership does not. Moreover, transit agencies might, for political reasons, orient transit policy around the concerns of drivers, rather than those of transit riders.

This research examines the motivations behind voter support for transit spending by analyzing Measure M, the 1/2 cent sales tax for transportation that voters in Los Angeles County approved in November 2016. The research draws on a variety of data, but relies primarily on an online/Computer Assisted Telephone Survey of 1,400 LA county adults immediately after the election, and a subsequent intercept survey of transit riders as well. The survey results provide insight into why voters supported the transportation tax increase, and examines the differences in attitudes between people who ride transit and people who support it. It further examines the idea that fiscal changes might crowd out behavioral changes: how does support for a transit sales tax correlate with support for other policies that would make the transportation system more efficient? In theory support for new taxes that finance transit supply could complement support for policies that help manage demand—tolls, parking charges and better land use policies. But support for a sales tax could also crowd those policies out, by convincing voters they had already "done their part" and letting them avoid or oppose policies that more directly confront excess driving.

Finally, the analysis also takes on the question of whether the devolution of transit planning to the local level is optimal. From one perspective, transit is infrastructure, and theories of federalism suggest that infrastructure is best provided by lower levels of government. From another perspective, however, transit service is a form of progressive redistribution, and those same theories of federalism hold that redistribution is best accomplished at a higher level of government.

References
The relationship between vicarious and in situ surveys of the influence of road characteristics on bicycling comfort

Abstract ID: 156
Pre-O rganized Session: Novel Methods in Bicycle Research

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One of the most common methods used to evaluate road designs for bicyclists is a survey of stated opinions of comfort and safety based on hypothetical environments or vicarious experiences. This has been done through text (e.g. “a four lane road with no bike lane”), images, video, and most recently virtual reality. However, biases have been reported when comparing real and hypothetical surveys of many behaviors (e.g. product purchasing (Chang, Lusk, & Norwood, 2009), moral decisions (FeldmanHall et al., 2012), travel behavior (Wardman, 1988)). Therefore, in the context of bicycling comfort/safety, it is unclear how opinions based on hypotheticals or vicarious experiences reflect opinions based on real bicycling experiences. This motivates our primary research question: What is the relationship between vicarious and in situ surveys of the influence of road characteristics on bicycling comfort?

We address our question through a sample of female undergraduates at UC Davis who bicycled or participated in a video survey. We chose female undergraduates because they are a conservative target population when planning roads for bicycling (i.e. more sensitive to traffic safety and have minimal bicycling experience which). The bicyclist participants (n=20) rode in three distinct road environments (recording video), and rated their experience on a 10-point comfort/safety scale by providing their most common (mode) and range (minimum and maximum) of comfort/safety. The video participants (n=1203) were randomly assigned stimuli (five short video clips extracted from the bicyclist group) in a web survey, and were asked to vicariously rate their comfort/safety on the same 10-point scale. We compared the surveys of the bicyclists and video participants by examining the aggregated normalized rating distributions. We also randomly drew cohorts of 20 video participants to examine expected differences between small (n~20) samples to ensure differences were not based on the sample size of the groups.

Our results indicate that survey responses are slightly more negative for video participants compared to the bicyclists (rating difference of about 1-1.5 on a 10-point scale). This demonstrates that video surveys have a marginal systematic negative bias. In addition, our results suggest that vicarious experiences have more subtle biases between road conditions which may be caused by the choice of stimuli and survey technique.

These results suggest that vicarious responses to video stimuli consistently underestimate (to a small degree) the comfort/safety of roads, which is surprising given that video participants are not exposed to any real safety threat compared to the bicyclists. This points the challenge of getting more people bicycling; road environments seem less comfortable and less safe when people imagine themselves bicycling than they do when they are really bicycling. In terms of aiding road design, video surveys may
provide a conservative estimate of comfort/safety. However, future research on the relative differences between road condition stimuli/survey methods and in situ measurements is warranted.

References


Key Words:
bicycling comfort, road design, video survey, bicycling safety

THE VALUE OF A COLLEGE EDUCATION: CHANGES IN STUDENTS’ BICYCLING SKILLS AND ATTITUDES AT A BICYCLE-FRIENDLY UNIVERSITY

Abstract ID: 157
Pre-Organized Session: Novel Methods in Bicycle Research

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With increasing numbers of American adolescents entering adulthood without driver’s licenses (Sivak & Schoettle, 2012) and with few experiences bicycling and walking (McDonald, Brown, Marchetti, & Pedroso, 2011), colleges can play an enhanced role in fostering sustainable transportation attitudes, abilities, and habits among undergraduate students, with important implications for their current and future travel behavior. Though other researchers have investigated the role of habit and previous experiences (Rubin, 2011; Smart & Klein, 2017) on travel behavior, particularly transit use, this study is the first to address the question: How do bicycling experiences and exposure during college affect undergraduates’ bicycling attitudes and skills?

We address this question using data drawn from the University of California, Davis’ (UCD) annual campus travel survey (CTS). The university and the city of Davis, CA is an excellent setting to examine the role of bicycling exposure and experiences, as the city has been considered the bicycling capital in the U.S. since the late 1960s, when the town built the nation’s first on-street bicycle lanes. Ever since, Davis’ bicycle mode share continues to outstrip almost all other US cities by large margins, thanks in part to a substantial network of bicycle infrastructure, with over 50 miles of on-street bicycle lanes and 50 miles of off-street bicycle paths. On average, 30% of schoolchildren in Davis bicycle to school and approximately 50% of UCD undergraduates bicycle to campus on an average day (Thigpen, 2015). Davis adults also bicycle at high levels, as approximately 20% of UCD employees commute by bicycle (Thigpen, 2015).

In this study, we pool data from seven years of the CTS to create a longitudinal panel. We also added a retrospective section to the 2016-17 campus travel survey, asking questions regarding previous bicycling behavior, attitudes, and skills while at UCD and filling in missing years of relevant responses for some
survey participants. Using the panel data, we estimate a statistical model to analyze the influence of personal characteristics and experiences on individuals’ pro-bicycling attitudes and bicycling ability.

We find that pro-bicycling attitudes decrease slightly over time, contrary to our hypothesis of a positive association between bicycling exposure and attitude toward bicycling. About 83% of freshmen report positive attitudes toward bicycling, declining to nearly 80% of sophomores and 75% of seniors. In contrast, undergraduates’ bicycling ability increases throughout college. Approximately 60% of freshmen are “very confident” in their bicycling ability, jumping to roughly 70% of sophomores and 75% of seniors. The statistical model indicates that riding a bicycle at any point during college increases both pro-bicycling attitudes and bicycling ability.

This study demonstrates the role that prior bicycling experiences on bicycling attitudes and skills. Future work should extend this analytical framework to additional settings and other modes to improve external validity and could also include experimental work, such as randomly assigning individuals to a transportation program “treatment” group or to a control group to help generate concrete policy suggestions.

References


Key Words:
life course, mobility biography, bicycling, university, longitudinal panel

INTEGRATING EXPLICIT AND IMPLICIT METHODS IN TRAVEL BEHAVIOR RESEARCH: A STUDY OF DRIVER ATTITUDES AND BEHAVIORS

Abstract ID: 158
Pre-Organized Session: Novel Methods in Bicycle Research

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Introduction
Although overall traffic deaths in the United States have declined since the 1970s, car crashes remain a leading cause of death. Vulnerable road users (VRUs) like bicyclists and pedestrians continue to be injured or killed at rates that outpace their mode share or miles traveled. Planners, engineers, and advocates are increasingly adopting Vision Zero and Tactical Urbanism approaches and trying to better
understand the underlying causes of dangerous roadway interactions. However, existing research into crash causation has focused on instrumental factors (e.g. intersection type, vehicle speed) but little research has probed the role of attitudes or socio-cognitive mechanisms in interactions between roadway users (Musselwhite, 2010). Drivers’ attitudes toward bicyclists, and how those attitudes may affect drivers’ behavior, are a largely unexplored area of research, particularly in the United States. Previous research has demonstrated that drivers’ attitudes or safety-related behaviors like passing distance, gaze, and yielding behaviors are affected by the social identity (e.g. gender or race) of vulnerable road users or the mode of the observer (Goddard et al 2015; Gatersleben et al 2013; Walker 2007; Walker 2005a, 2005b). Many attitudes, like stereotypes and norms, are difficult to measure due to social desirability biases. This research utilized an online survey to measure drivers’ explicit attitudes and self-reported behaviors. Subconsciously held evaluations of drivers and bicyclists may better predict behavior in a high speed, high stress environment (Banaji & Greenwald, 2013; Kahn & Davies, 2011) like the roadway. These evaluations are tested via an Implicit Association Test (IAT).

Methodology
This study is the first use of an implicit method to examine transportation biases between drivers and bicyclists. In this IAT, respondents were shown either the words “driver” or “bicyclist” or stock images of driver and bicyclist silhouettes. Using timed keystroke responses, they were asked to pair these concepts with positive and negative words. The speed with which respondents can group congruent (e.g. driver = good) versus incongruent (e.g. bicyclist = good) items demonstrates the strength of the subconscious association of those items. Following the IAT, respondents completed a survey that included measures of drivers’ attitudes toward their own driving behavior, other drivers, and bicyclists. The attitudinal measures included both global stereotypes of bicyclists and potential sub-groups (e.g. the "avid cyclist") and whether drivers' differentiated between bicyclists based on appearance. The sub- stereotypes were further examined using “feeling thermometers”, which attempt to more precisely measure positive or negative evaluations by providing an answer continuum (Alwin, 1997). The survey also asked drivers to report their safety-related knowledge and behaviors around bicyclists, and to report crashes or near-misses involving bicyclists.

Discussion
The results yield information about the dimensions of drivers’ attitudes toward bicyclists, including lack of legitimacy as a fellow roadway user, stereotypes about different sub-types of bicyclists, normative beliefs about roadway behavior, and sub-conscious preferences for drivers versus bicyclists. Results demonstrate that the implicit method captured overlapping, but distinct, bias than the explicit measures. Encouragingly, one of the biggest predictors of more positive attitudes toward bicyclists was not demographics, but weekly driving frequency, weekly bicycling frequency, and whether respondents had bicycled as a child. Respondents did differentiate between different sub-types of bicyclists and attributed disparate motivations and expected behaviors based on bicyclist sub-type. Respondents were, as hypothesized, less critical of casual bicyclists than the “avid cyclist” type but the majority of respondents were still negative toward all bicyclists. These social attitudes were so of the most significant predictors of potentially unsafe behaviors toward bicyclists. The implicit attitude resulted in greater predictive power of certain attitudes and behaviors. The full research effort represents the most comprehensive exploration to date of United States drivers' attitudes and self-report behaviors toward bicyclists. This research demonstrates the potential value of measuring implicit attitudes to complement traditional transportation survey self-report measures. Understanding these subconsciously-held attitudes and their relationship with self-reported safety-related behaviors can improve potential educational, legal, programmatic, and infrastructural interventions to improve road safety.

References

Key Words:
imPLICIT Bias, travel behavior, roadway conflict

INSIGHTS INTO DIFFERENCES AMONG US METROPOLITAN REGION BICYCLIST FATALITY RATES
Abstract ID: 159
Pre-Organized Session: Novel Methods in Bicycle Research

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Annual US bicyclist fatalities involving motor vehicles increased by 30% between 2009 and 2015, reaching their highest levels in two decades. Research is needed to understand community characteristics associated with bicyclist fatality risk, since this can lead to safety strategies to reverse this trend. Previous studies have compared bicyclist fatality rates between large geographic areas. Pucher and Dijkstra (2003) found US bicyclist fatality rates to be two times higher than Germany and three times higher than the Netherlands in 2000. Distance-based fatality rates suggest that the safety gap for bicyclists between the US and European countries was even wider in 2010 (Buehler and Pucher 2017). The literature also identifies a number of demographic and community environment factors associated with bicyclist fatality risk. For example, US bicyclist fatality rates are generally higher for males and for older age groups (Beck, Dellinger, and O’Neil 2007). Bicyclist fatality rates tend to be lower in communities with more bicycling activity, a concept referred to as “safety in numbers” (Jacobsen 2003).

Our study had two primary aims: 1) quantify bicyclist fatality rates in 46 of the largest US metropolitan statistical areas (MSAs), and, if the rates are different among MSAs, 2) understand the underlying reasons behind these differences. We quantified MSA bicyclist fatality rates during two five-year time periods: 1999-2003 and 2007-2011. Like McAndrews et al. (2013), we used several measures of exposure from the National Household Travel Survey (NHTS) to calculate these rates. We divided the annual average number of bicyclist fatalities during 1999-2003 from the Fatality Analysis Reporting System by the annual estimates of bicycle trips, kilometers traveled, and minutes traveled from the 2001 NHTS and the annual average number of fatalities from 2007-2011 by similar estimates from the 2009 NHTS. During 2007-2011, the five most dangerous regions for bicycling averaged 458 bicyclist fatalities per billion trips while the five safest averaged 75 bicyclist fatalities per billion trips.
We used random-effects meta-analysis to identify MSAs that were statistical outliers from the global bicyclist fatality rate derived from all 46 MSAs. One region had a low fatality rate (Portland), while five had high fatality rates (Jacksonville, New York, Orlando, Tampa, and West Palm Beach). Qualitatively, Portland has a central city recognized as a leading Bicycle Friendly Community for investing in pedestrian and bicycle projects and programs. Central cities in MSAs with high bicyclist fatality rates received lower levels of recognition or were not recognized at all.

We also developed random-effects meta-regression models to explore MSA characteristics associated with bicyclist fatality rates. Higher bicyclist fatality rates were associated with greater shares of the MSA population being born in other countries. Lower bicyclist fatality rates were associated with higher bicyclist mode shares, revealing a safety in numbers relationship. These results suggest that bicycle infrastructure and safety programs should be complemented with strategies to increase walking and bicycling. In addition, safety initiatives should be honed to reduce bicyclist fatality risk in immigrant communities.

Our analysis also highlighted the challenge of using the small sample sizes available from existing national travel datasets to represent bicyclist exposure and suggests strategies for future data collection and research.

References

Key Words:
Bicycle, Safety, Metropolitan region, Fatality rates, Random-effects meta-analysis

DEVELOPMENT AND TESTING OF A REAL-TIME WIFI-LIDAR SYSTEM FOR PEDESTRIAN-BIKE NETWORK MONITORING, CLASSIFICATION AND DATA EXTRAPOLATION
Abstract ID: 160
Pre-Organized Session: Novel Methods in Bicycle Research

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Automatic real-time data collection and monitoring of pedestrian and bicycle facilities is an important topic in research and practice. An automatic real-time monitoring system should be able give
information about flow (volume) conditions, speeds, travel times or time spent in areas of interest. This can be useful in the planning, design and operation of public spaces such as parks, malls, university campuses, train stations, airports, etc. While there are some available technologies able to obtain count data at specific locations, most counting technologies cannot provide counts in high-volumes with mixed traffic, origin-destination matrices, travel times or time spent in an area. In an effort to overcome this shortcoming, few studies have explored the use of Bluetooth technology to capture the unique Media Access Control (MAC) addresses of mobile electronic devices carried by pedestrians. However, this collection method suffers from low-detection rates. As an alternative, MAC data coming from WiFi signals has emerged with very limited applications in non-motorized transportation. The objective of this work is to i) provide an overview of the recent research developments on monitoring systems including the introduction of a novel WiFi-Lidar system to monitor pedestrian networks mixed with bicycle traffic to estimate O-D matrices and volumes, ii) develop and validate a classification method for differentiating pedestrians from bicycles as well as iii) to propose extrapolation methods that combines different sources of data. This presentation will show the advantages and shortcomings of alternative technologies and methods to estimate volumes, travel times (speeds), classification of bicycles and pedestrians.

References


Key Words:
monitoring, wifi signals , sensors, counting, tracking

SELECTING THE ROUTE: DEVELOPMENT POTENTIAL AND EQUITY IN BUS RAPID TRANSIT DECISION-MAKING
Abstract ID: 168
Individual Paper Submission

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936
Implicit in the development of new transportation infrastructure is the potential to increase land value, encourage new development and re-shape urban space. However, along with the promise of growth, transportation investments also offer the potential to increase social equity and accessibility to those that are transit-dependent (Grengs 2005). Bus rapid transit (BRT) systems have been touted as a lower cost option that can provide similar development benefits as rail, albeit with less investment and added flexibility. Although BRT systems may be less costly than rail, they still represent a major public outlay and can reinforce existing spatial patterns of segregation, especially when there is a focus on attracting “choice-riders” to public transit. Despite substantial research on transit equity, there is less known about how equity and development goals interact in the planning stages of new infrastructure, rather than for systems already in operation. Some have pointed specifically to the lack of alternatives presented in planning processes as a weakness of major infrastructure projects (Priemus 2007). This leads to the question: in planning for BRT infrastructure, how are development goals balanced against improving access for disadvantaged communities?

Studies of U.S. cases have noted the reliance on voter support for local sales taxes to fund transit, resulting in investments designed to appeal to wealthier voters, rather than transit-dependent riders (Pendall, Gainsborough et al. 2012, Taylor and Morris 2015). In contrast, Canadian cities are largely reliant on property taxes and government transfers, with little power to raise revenue through different sources. This different context for transit agencies and local authorities potentially results in increased pressure for transportation investments to stimulate development and new growth.

This research addresses these issues by focusing on the decision-making processes for professional and political actors in planning BRT systems and analysis of both proposed and constructed routes. This paper examines BRT systems in three Canadian cities (Markham, Ontario; Ottawa, Ontario; and Winnipeg, Manitoba), drawing on (1) key informant interviews with planners, transportation engineers and political actors, (2) spatial analysis of built and discarded routes, and (3) content analysis of the plans, council documents and minutes related to each project.

We find that the goals for BRT systems predominately focused on non-rider concerns (such as reducing congestion), as well as encouraging choice riders and shaping the built form. The potential for BRT to encourage development opportunities was observed in all the cities studied, including the evaluation of routes based on developable land, servicing new housing or development, and ability to direct growth. In contrast, equity measures were rarely used to evaluate potential routes, with only the broadest definitions of equity employed. Furthermore, despite the premise that BRT offers more flexibility than rail, route selection often hinged on the availability of right-of-ways that could accommodate BRT infrastructure without reducing existing road capacity. Despite the long-standing academic concern with transit equity, measures to address this have largely not been adopted in the planning of the BRT systems studied here. Even without the need to obtain broad voter support to finance transit improvements, goals focused on non-rider concerns, raising questions about the public value of these investments.

References
This work proposes a framework incorporating the interaction among and the attributes of the potential stakeholders in an autonomous vehicle (AV) and public transit integrated system to explicate the opportunities that the shared AV service can be integrated into the transit system. Based on the framework, a feasible scenario is envisioned based on the real-world situation of Singapore. We present a transit smart data-driven method to investigate the impacts of shared autonomous vehicles (AVs) on the improvement of overall system efficiency, with a special focus on the first-/last-mile problem. In this study, the first/last mile is defined as the gap between the origin/destination and the subway stations. Based on the analysis of the bus network, we propose integration of shared AVs as an alternative on low-demand bus routes to improve first-mile connectivity during peak hours in the morning, while the substituted bus routes are also repurposed. An agent-based model was built to assess the performance of the new integrated service with three types of agents—the passenger, the AV, and the bus. A bus-only scenario was first simulated to mimic the real-world operation, for validation purposes. Next, 52 sub-scenarios integrating shared AVs in the public transit system, with various fleet sizes and ridesharing preferences, were simulated. The results show that if the AV users agree to share their rides with other passengers, the integrated service would be able to 1) enhance the overall service quality, 2) occupy less road resources than the bus-only scenario, 3) be financially sustainable, and 4) potentially utilize bus service more efficiently.

References

Lotteries and auctions are common ways of allocating public resources, but they have rarely been used simultaneously in urban transportation policies. This paper presents a unique policy experiment in Guangzhou, China, where lotteries and auctions are used in conjunction to allocate vehicle licenses. Guangzhou introduced vehicle license regulations to control the monthly quota of local automobile growth in 2012. To obtain a license, residents are required to choose between the lottery and auction method. Since the introduction of the regulations, there has been heated debates on the distributional effects of lotteries and auctions; however, the debates have not been grounded in empirical studies. We analyze the distributional effects of such mixed mode of resource allocation in a positive manner based on individual behavioral choices. We conducted a survey in January 2016 (n = 1,000 people * 12 months), and used mixed logit models to analyze how socio-economic status, including income and automobile ownership, determined people’s choices among lottery, auction, and non-participation alternatives. We find that income increased participation, but did not influence non-car owners’ choices between lotteries and auctions, which contrasts with the common notion that lotteries benefit the poor. Additionally, the positive impact of car ownership on participation indicates a car-dependent trajectory for automobile growth. The significant socio-economic differentiators between lotteries and auctions were age, gender, and education. Proxies of mobility needs were insignificant overall. The program attributes had a much larger impact than all other variables—people were more likely to choose lotteries with higher winning rates and more participants and more likely to choose auctions with higher prices and more participants. We concluded that for those who participated, the choice between lotteries and auctions did not depend on their income or mobility needs but, rather, the probability of winning plates and the opportunity for speculation.

References


Key Words:
automobile regulation, distributional effect, lotteries and auctions, mixed logit model
RAISE TRANSIT FUNDING THROUGH GAS TAXES OR HIGHER FARES? AN EXPLORATION OF OPINIONS ACROSS URBANIZED AREAS IN THE UNITED STATES, 2012 - 2016
Abstract ID: 192
Poster

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Americans show support for transit even though this stated opinion does not translate into higher transit ridership. Further, popular perception signals a tendency towards raising fares to support transit—or cutting back services—rather than relying on funds raised through gasoline-based taxes. We ask, what does the public think about gas tax revenue versus higher fares as a way to fund transit?

In this paper, we use a nationally representative sample from the United States, collected annually using random digit phone dialing from 2012 to 2016, to explore this question. We compare public support in urbanized areas for raising transit funding through a gasoline-based tax compared to higher fares. Our focus is on the urban population since this group has a higher likelihood of being transit patrons. We estimate models using logit specifications in this study, investigating changes across nation-wide urban geographies (i.e., all Census Urbanized Areas of 50,000 or more people) and five years of opinion data.

Looking at the country as a whole, our findings show that support for spending funds from gasoline taxes on transit projects is gradually growing in urban centers across the nation. By contrast, support for using fares to fund transit has held steady at around 55% across our sample. When we compare the results from different urban centers, we find that support levels have varied by place, suggesting that location matters when it comes to assembling funding for transit: some urban centers are more open to one form of funding for transit over the other. This suggests that location-specific policies for funding transit—moving away from federal to state and local tax regimes—can be an effective way to pay for transit in the United States.

References

Key Words:
Fares, Mixed logit, Taxes, Transit, Urbanized areas
MONITORING CITYWIDE SPATIAL PATTERNS OF RIDERSHIP CHANGE WITH CROWDSOURCED DATA
Abstract ID: 194
Individual Paper Submission

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Central Theme
To encourage increased ridership, cities are investing in cycling infrastructure. It is essential that cities monitor and report on the impact of infrastructure projects on ridership. Spatially explicit methods of monitoring ridership are limited by data, which lacks spatial coverage and long temporal extents. Data limitations are being overcome through technology such as smart phone Apps and creating large crowdsourced cycling datasets. Mapping change in ridership has been further limited by spatial pattern methods that were developed for two-dimensional space and are inappropriate for analysis of change in networks, such as road or cycling networks. Network appropriate spatial analysis techniques have recently been developed, but these have not been applied to crowdsourced cycling data. Our goal is to demonstrate how network-based spatial pattern methods and crowdsourced ridership data can be used to monitor changes in the variation of ridership across a city.

Methodology
Our study area is Ottawa-Gatineau, Canada and contains over 600 km of bicycle paths. The region has invested significant financial resources in bicycle and multi-use infrastructure. The crowdsourced dataset is from Strava, a mobile health and fitness application. The data includes activity counts per segment of transportation infrastructure in the Ottawa-Gatineau region, aggregated for weekdays in May 2015 and May 2016. There were a total of 4.49 million activity counts from 52,123 bike trips across 71,205 network segments.

We normalized activity count per segment by the sum of activity counts across the study area for each time period and mapped the difference in ridership between May 2015 and 2016. We then used the normalized change in ridership as input for network based local Moran’s I, to identify change in the spatial pattern of ridership. Local Moran’s I enables evaluation of where ridership has increased or decreased more than expected based on chance (α 0.05). A map of local Moran’s I was annotated with changes that occurred in the cycling network between May 2015 and May 2016 to contextualize how the approach can be used to monitor changes in the variation of ridership across a city.

Findings
By differencing normalized Strava data we can visualize areas of increase and decrease in the ridership, but it is difficult to identify where substantial change has occurred. Using network based Local Moran’s I measure we identify corridors and regions of statistically significant change in ridership patterns. We identify regions and outliers where patterns of change are unexpected based on a null hypothesis that change is generated from random processes. A high-high is a cluster of increased ridership; low-low is a cluster of decreased ridership; high-low is an outlier or a road segment where increased ridership is surrounded by a decrease; low-high is an outlier or a road segment where decreased ridership is surrounded by an increase in ridership. Clusters of increased in ridership and a decreased ridership are associated with a new multi-use bridge path and a tunnel closure (Figure 2).
Relevance to Planning
Monitoring and evaluation of the impacts of investment in cycling infrastructure across a city have been limited by a lack of spatially explicit ridership data. However, our results demonstrate the importance of considering patterns of change in cycling when infrastructure changes in a city. In both the example of a closed tunnel and new multi-use trail bridge infrastructure change in one location affects the flow and amount of bicycle traffic in multiple locations.
We demonstrated a method of monitoring change in the distribution of ridership across a transportation network. City planners can use these methods to monitor changes in ridership patterns following investment in infrastructure or other changes to the transportation network.

References

Key Words:
Crowdsource, Strava, Ridership, Infrastructure Monitoring, Active Transportation

WHAT'S STEERING CONSUMER PREFERENCES FOR AUTONOMOUS VEHICLES IN THE GREATER TORONTO AND HAMILTON AREA?
Abstract ID: 237
Individual Paper Submission

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Autonomous vehicles (AVs), driverless cars which do not depend on a human driver, may be on the brink of causing a revolution in urban mobility. This technology may significantly impact elements of travel ranging from safety, congestion, emissions, privacy and security, land use patterns, and auto ownership trends (Fagnant & Kockelman, 2015). AVs could reduce vehicle ownership levels by encouraging vehicle sharing (robo taxis) but could likewise lead to more extreme commuting and a stronger role for automobility. But while the extent to which AVs transform mobility depends on consumer adoption and use of this technology, consumer interest in AVs is poorly understood. AVs have already been deployed by transportation network companies (Muioio, 2016), most prominently Uber, in cities such as Pittsburgh (Uber,2017) and San Francisco (Uber,2017). Fully autonomous vehicles are expected to penetrate the consumer market within the next fifteen years (Litman, 2017) amid heavy investments in this technology by corporations such as Google, Uber, Tesla, Toyota, and General Motors. But while AVs show much promise as a commercially viable product in the private market, the implications of this technology for society and the public are less clear. Without a better understanding of how this technology may be adopted and used by consumers, transportation planners and policy makers will have little guidance on how to manage or guide this technology for the collective good.
In this study, we use new survey data collected in the Greater Toronto and Hamilton Area (Ontario, Canada) and estimate models of consumer interest in AVs. First, we conduct and present findings from a 20-minute internet-based survey of 3,201 adults between the ages of 18 and 75, conducted in November 2016. This survey includes questions related to social and demographic characteristics, preferences, work and commuting, travel and vehicle ownership, residential location, household structure, and questions related to interest in owning or using AVs.

Second, using the survey data, we estimate ordered probit models to explore the effect of demographic characteristics, individual preferences, travel characteristics, and built-environment variables on respondent’s willingness to pay for private autonomous vehicles (PAVs) and frequency of use for shared autonomous vehicles (SAVs) under different pricing thresholds. The results indicate that several factors influence interest in PAVs and SAVs, but that consumer differences in interest between ownership models appear to still be emerging. Regional express rail commuters, Uber users, respondents who know about the google car, and younger respondents were more interested in both ownership models. But respondents who have a higher household income, live in areas that have a higher job density within a 10k radius of their dwelling, and own a more expensive vehicle are good predictors of interest in PAVs, whereas individuals who have been in more car accidents as a passenger and individuals who commute using public transit or walk/cycle to work are generally more interested in SAVs.

The results of this research are inconsistent with the view that autonomous vehicles may present an opportunity for a reduction in personal vehicle ownership and use. Our findings also indicate that travel behavior changes will occur with the proliferation of autonomous vehicles. Specifically, commuters in the most urban contexts using the longest-haul public transit options appear to be most eager to seek AVs as alternatives to their current commutes. Future studies could continue to explore if the markets for PAVs and SAVs are significantly different from each other. Knowledge of which conditions will influence autonomous vehicle use is of great interest to shaping policies and transportation systems. This work will help guide policymakers and communities in estimating future adoption and implications of AV technology.

References

Key Words: autonomous vehicles, transportation planning, consumer preferences, toronto
Environmental justice in warehousing location has attracted increasing attention from the governments, the public and researchers. While a few studies have investigated cross-sectional spatial relationship between warehousing distribution and disadvantaged population, little is known about the mechanisms behind such relationship. A longitudinal analysis is needed to address the classic question “which came first”: whether warehouses are disproportionately sited in neighborhoods with high percentages of disadvantaged population, or the neighborhoods receiving new warehouses attract more disadvantaged people afterwards.

Whether environmental disparities exist in warehousing location largely depends on two socioeconomic processes—firm location choice of warehousing facilities, and housing location choice of disadvantaged population. Instead of estimating these two processes separately, this paper tests their interdependent relationship in a Simultaneous Equation Model. Contrary to many environmental justice studies, the test effectively reduces the potential bias due to the neglect of the interactions between those two processes.

Using data of the Los Angeles Combined Statistical Area in 2000 and 2010, this paper estimates two simultaneous equations, which respectively represent the location choice processes of warehousing facilities and minority population. Based on three-stage least squares estimation, the model has good overall fit, and results show that, all else equal, changes in percentage of minorities during 2000 and 2010 significantly affect the changes in warehousing activity density during the same period, but not vice versa. In other words, the environmental justice problem in warehousing location is found to be solely from the disproportionate siting of warehouses, instead of subsequent minority move-in. Furthermore, the variants of the model regarding different minority groups including Latinos, Blacks and Asians suggest that the patterns of warehouse-minority interactions are generally consistent across these groups.

Policy implications about the conclusions are profound. Warehousing developers, rather than the housing market, are largely responsible for the warehousing related environmental disparities. Governments and planning agencies should step in and evaluate whether local land use and environmental regulations are compatible with the objectives of mitigating warehousing-related environmental injustice. Meanwhile, to inform local residents of the problem and its mechanisms would be a prerequisite for empowering them to fight against the growing disparities.

References

Key Words:
environmental justice, warehousing location, longitudinal, minority population, simultaneous equation model

NEIGHBORHOODS AND SUBJECTIVE WELL-BEING: A STUDY FROM THE TWIN CITIES METRO AREA
Abstract ID: 268
Individual Paper Submission

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The focus on Subjective Well-Being (SWB) or happiness in urban planning is recent with limited research existing at lower levels of spatial disaggregation, such as the neighborhood. This poses a significant challenge for planners who typically design and intervene at smaller geographical scales. In addition to being scant, SWB research in urban planning has two critical limitations.

First, most of the studies conducted have limited their focus to objective attributes of the neighborhood and resident perceptions (e.g., population density, street connectivity, safety, neighborhood satisfaction, etc.) (Ettema & Schekkerman, 2016). While these studies identify what attributes of a neighborhood may impact SWB they overlook the importance of the neighborhood in inducing travel and activity behaviors, both of which have SWB consequences. The neighborhood environment influences leisure time activities, physical activity, travel choices and social contact (Leyden, 2003; Handy et al., 2002) all of which influence SWB. Second, due to time and economic limitations most studies use global measures of SWB (life evaluation) which are unable to capture peoples’ specific affective experiences as they interact with the environment they live in. Such experiences can only be captured through episode level (trip and activity) affective evaluations. Engaging in activities that incite positive affective responses plays into a loop of development that leads to better SWB in the long run (Fredrickson, 2004). A lack of research looking at episode level affective responses across neighborhood typologies results in an incomplete understanding of the neighborhood-SWB relationship as well as potential equity implications. Through this study we hope to bridge this gap.

We propose a Neighborhood-Behavior-Emotion framework to test the proposition that in addition to physical attributes, the neighborhoods influence peoples’ activity and trip behavior, which impacts their SWB. For the study we selected six neighborhoods, two suburban and four urban, in the Twin Cities Metro Area with varying neighborhood environments. The selection was based on median income (a proxy for neighborhood infrastructure) and structured site visits. Residents of randomly selected blocks within these neighborhoods are being recruited to attain a sample size of 450. The study is conducted in three stages, an entry survey, 7 days of episode level data collection, and an exit survey. The entry and exit surveys are used to collect information on global SWB, socio-demographic characteristics, neighborhood perceptions, and other variables that have been known to influence SWB. Episode level data for 7 days is collected from each respondent using the daynamica™ smartphone application. The application tracks and automatically breaks down the respondents’ day into a series of trips and activities for which they provide additional information (e.g., companionship, purpose, affective
response, etc.). To capture the affective responses, we use the U-Index proposed by Kahneman & Krueger (2006).

While the data collection for the study is ongoing (40% complete), preliminary descriptive findings show differences across neighborhood types in trip and activity engagement as well as associated affective responses. Looking at data for 6,029 trips and 5,048 activities there seems to be a hierarchy of trips and activities in terms of happiness. For trips (from highest to lowest average happiness scores), it is bicycles, car, walking, light-rail and bus. For activities, it is leisure/recreation, eating out, being at home, educational activities, shopping and work. We find that residents of neighborhoods with higher incomes tend to partake more on average in SWB enhancing activities such as biking, eating out, leisure/recreation. While engaging in similar trips and activities, suburban residents report higher happiness scores for eating out, leisure, being at home, walking and car travel. These findings suggest that given the hierarchy of happiness associated with various activity and trip types, varied levels of engagement in them across neighborhoods, and difference in happiness while engaging in similar activities and trips across neighborhoods, the neighborhood environment does impact SWB by influencing certain behaviors. Next steps for this study include completing data collection and using regression analysis to study these effects further while controlling for confounding variables.

References

Key Words:
Subjective Well-Being, Neighborhood Planning, Infrastructure, Happiness

APPLES TO APPLES: COMPARING BRT AND LIGHT RAIL WHILE AVOIDING THE “BRT LITE” TRAP
Abstract ID: 274
Individual Paper Submission

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Bus Rapid Transit (BRT) is frequently promoted as a low-cost alternative to light rail. An often-cited estimate is that per-mile light rail capital costs are four to twenty times greater than those of BRT. This paper reevaluates that finding based on data from 36 light rail and 13 BRT projects developed in the
United States since 2001. The principal challenge in analyzing BRT costs stems from vagueness in the
definition of BRT, in particular the role of dedicated right-of-way in boosting conventional bus service
to that of BRT. For a system to be considered BRT, the Institute for Transportation and Development
Policy (IDTP) requires--at a minimum--dedicated lanes separated by painted lines. (Extra points in
IDTP’s scoring system are granted for greater visual or physical separation). Yet many US BRT
systems fall short of this standard; 25% of BRT systems included in this study have exclusive guideways
for less than 60% of their length. BRT can shade into “BRT lite,” with less than 20% of right-of-way
dedicated to transit use. In some cases BRT can be little more than a brand within which to package bus
service that is fundamentally conventional. A fair comparison between BRT and light rail—the latter
tends towards fully separated guideways—must take right-of-way differences into account. Without this
proper accounting, some of the ostensible cost savings of BRT would stem from its operation in mixed
traffic, an attribute that might negate a system’s definition as BRT to begin with. To account for these
issues, the paper analyzes cost per exclusive guideway mile based on sources including FTA Before and
After Studies, FTA Capital Cost Database, environmental impact reports, and several other professional
reports. Systems were compared at the 25th, 50th, and 75th percentiles of per exclusive-mile capital
costs. Light rail capital costs were estimated at just over double BRT costs per exclusive guideway
mile, considerably less than the broadly cited 4:1 or 20:1 cost ration referred to above. Up to 31 percent
of the ostensible cost savings of BRT were an artifact of absence of shared guideway. Costs were further
evaluated by expenditure type. BRT and light rail spent similar shares of total expenditure on land
acquisition. By contrast, BRT systems spent a greater share on guideway and station costs as a share of
total expenditures; light rail projects spent relatively more on professional services. The relative
paucity of exclusive right-of-way in US BRT deployments is consequential. This study gauged the
impacts of varying levels of exclusive right-of-way through travel speeds of transit compared to the
private car in 24 BRT and 25 light-rail routes. Under congested conditions, light rail outperformed BRT
in the speed boost it provided to transit, but this was associated primarily with differences of exclusive
right-of-way share. The relatively low shares of exclusive right of way in BRT systems studied—and
the fact that nominal cost differences are in part a function of low right-of-way share—can help explain
support for light rail. High shares of exclusive right-of-way, a hallmark of high-quality transit where
congestion is present, are strongly associated with rail. Rail may thus be seen as the surest route to
guarantee that scarce right-of-way is in fact reserved for transit. In this environment BRT may be seen
as little more than a rebranding of bus service, as evidenced by a Seattle headline from 2013 about a
system that might be described as “BRT Lite”: “Don’t let RapidRide turn you off of bus rapid
transit.” BRT on exclusive right-of-way bears lower capital costs than light rail but remains a high-cost
transit form. Transit planners find it useful to brand as BRT bus improvements that fall short of exclusive
right of way. The strategy can assist in portraying the bus as a high-quality, low-cost alternative to rail
but threatens to dilute the BRT concept.

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This paper engages with a long-standing tension in planning: the balance between planning for individual preferences versus aspiring to deliver a more ideal set of future conditions which may constrain some current preferences. The tension is a deeply philosophical one, and can be traced in part back to Hegel’s differentiation between negative freedom based on individual preferences alone, and substantive freedom where our actions are seen as an outcome of current and historic societal conditions. This tension is highly visible in the debate over sustainability. In light of aspirations of a more sustainable future, researchers have been especially interested in the transportation behaviors of Millennials. Despite considerable heterogeneity, many have documented Millennials’ lower rates of licensure and propensity to drive. This research has spurred debate over whether the trends represent a long-term, permanent shift in social norms, or a temporary aberration brought on by young adults’ contemporary challenges in the labor markets that will dissipate over time as Millennials “catch up” to the trajectories followed by earlier cohorts (Garikapati et al., 2016; McDonald, 2015; Ralph, 2016). In other words, this research is framed as a question of how best to predict Millennials’ future travel demand. Given the disproportionate environmental impacts associated with the automobile, from this perspective it follows that the sustainability of our cities hinges considerably on the degree to which Millennials choose to adopt more automobile-oriented lifestyles as they age. This approach, following a Hegelian perspective, is problematic, as it does not consider the collective conditions that have shaped preferences, and in doing so inadvertently denies that alternate preferences are plausible if the underlying conditions shaping these preferences were changed.

In our analysis, we thus consider Millennials’ preferences in the context of their societal conditions, drawing on a unique survey of hundreds of young adults across North America to examine the residential location choices, transportation behavior, and social meanings and attitudes of Millennials. We frame our empirical analysis using sociologist Pierre Bourdieu’s concept of “habitus.” Habitus, or one’s embodied disposition, is “not only a structuring structure, which organizes practices and the perception of practices, but also a structured structure” (Bourdieu, 1984, p. 170). In other words, habitus is shaped by an individual’s social context even as it shapes their perceptions of and actions within that social context. In this way, habitus and the larger social context are mutually reproduced. By recasting associations between location, behavior, and attitudes as a form of habitus, rather than the result of completely autonomous consumer choices or a “residential self-selection problem,” the scope of action for planning is radically changed. The current social context where young adults increasingly live in dense urban areas (Moos, 2016) and use alternative modes of transportation – whatever the cause – fosters a habitus amenable to these features of a sustainable city. The normative implication of our research is that rather than trying to predict future lifestyle changes of young adults and react accordingly, planners should advocate for massive investments in active and public transportation infrastructure and supportive built environments right now to sustain a social context conducive to such
a habitus while such a habitus is at a peak. On the contrary, failing to do so will only further legitimize the socially dominant habitus of automobility, with all of its attendant social and environmental ills. Planners, in other words, are presently faced with a window of opportunity to implement a sustainable vision of the city and society.

References


Key Words:
Millennials, habitus, forecasting, automobility, sustainability

DO AMERICANS’ OPINIONS ABOUT FEDERAL TRANSPORTATION TAX OPTIONS DEPEND ON SURVEY MODE? A COMPARISON OF RESULTS FROM RDD PHONE AND ON-LINE SURVEYS

Abstract ID: 307
Individual Paper Submission

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This paper compares the results of a survey asking US residents their views on various transportation tax and fee options when the same survey questionnaire is administered via both a random-digit-dial (RDD) phone survey and to people contacted through an online survey panel (SurveyMonkey Audience). The survey questionnaire gathered information on support levels for a variety of transportation revenue tools, including raising the federal gas tax rate and replacing the gas tax with a mileage fee. In addition, the survey collected standard socio-demographic data and public transit usage.

Specific questions addressed in the analysis are:

- How did the response rates differ by mode?
- How do the characteristics of the respondents to each survey mode differ? For example, which mode achieved a more representative sample of the general population, looking at basic socio-demographic factors like age, gender, income, and ethnicity and race?
- How do responses to the questions differ by survey mode? This question addresses the problem of measurement effects, how a survey mode itself influences the way respondents answer a question. (For
example, some people might skip a household income question on an in-person survey but answer the question in an anonymous paper mail-back survey.)

The survey administration is complete for both modes, but we have not begun data analysis so cannot report on findings.

This research will be of interest to both researchers and survey consumers interested in understanding how survey mode choices influence responses. More specifically, the research will provide evidence about how switching from a more expensive mode (RDD CATI) to a cheaper one (online panel) can affect the survey results.

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Key Words:
survey mode, transportation taxes, public opinion

DATA AS THE NEW INFRASTRUCTURE: ICT AND THE GROWTH OF TRANSPORT OPTIONS
Abstract ID: 308
Pre-Organized Session: Planning in a Brave New World: Data and New Mobilities

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Transportation supply has been undergoing a period of diversification. New software technology has combined with the familiar hardware of vehicles (from bicycles to buses) to produce new behaviors, new services, and new patterns of usage. Real-time transit, car share, bike share, and ride-sourcing are all dependent on this combination of new software and existing hardware. While these services are the result of a convergence of existing and emerging technology, there is evidence that they represent a shift greater than the sum of their parts. Though real-time systems may start as appendages to existing services, evidence suggests that they evolve into integral components that ultimately shape the usage and design of the system that they are embedded in. An example of this is the meteoric rise of TNCs such as Uber and Lyft, which have had measurable effects on cities with long-static taxi markets. Underlying this transformation aren’t just the devices and technology – long understood to be a form of infrastructure, but the data being generated, transferred, and analyzed in ‘real-time’. Since data can be ephemeral – it represents a recorded observation - it has not been considered a basic piece of civic infrastructure. Yet without data transmitted through information communication technology, there wouldn’t be the disruption currently experienced in the mobility sector (an area usually synonymous with infrastructure), and the social change that accompanies it.
Building upon quantitative studies on how ICT is used to accomplish mobility, the argument is made that when used to determine actions in real-time, data should be considered a foundational infrastructure for the 21st century. This distinction is important because it provides a lens towards policy mechanisms that can safeguard public interests while adapting to changes in transportation specifically and civic infrastructure generally.

References


Key Words:
Information Communication Technology, Transportation Network Company, shared mobility, infrastructure, autonomous mobility

WHO OWNS THE DATA: PRIVATIZATION AND SECRECY IN SHARED MOBILITY AND VEHICLE AUTOMATION

Abstract ID: 309
Pre-Organized Session: Planning in a Brave New World: Data and New Mobilities

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Transportation data is undergoing a seismic shift. Not only is the amount of data created and demanded by various transportation services is exploding, but the types of data, the ways that is collected, and its ownership are changing as well. Traffic and ridership counts, household travel surveys, four-step travel demand models and the like are the transportation data with which planners are most comfortable: [usually] publicly accessible and typically government-collected and managed. Newer forms of data are often user generated and are owned and managed by private companies: cell phone GPS traces, Google maps searches, Uber requests, etc. Two areas of emerging transportation services that heavily rely on such data are vehicle automation and shared mobility (e.g. ride-hailing). This paper shows how these new mobilities how they both demand and create and huge amounts of data, considers the data demand and creation separately and together, and discusses the implications.

For vehicle automation on the data demand side, detailed prior maps are required for effective operation. These 2D or 3D maps have ultra-high resolutions (i.e. under 1 inch), and the automated vehicles use these as references to ensure they are on the appropriate place on the roadway. On the data creation side, automated vehicles also require some form of a “virtual driver system,” which takes in data -- from the prior maps, sensors, and more – and converts these inputs into driving behavior (i.e. acceleration and steering). For shared mobility on the data demand side, services typically require or at least benefit from access to maps, congestion patterns, public transit schedules, and more. The data creation side is humbling in its detail; services can create highly specific travel traces, including who took the service,
when and where they started and concluded the trip, how much they were willing to pay, what they were rated by the driver, and more.

The sheer amount of data is itself notable, and planners can and should play a more active role in managing the data and ensuring public access where appropriate. A “wait-and-see approach” is not enough; reticence is itself a form of planning, and data collection and use is already occurring in force, so doing nothing now is ceding both responsibility and rights. Privatization of data is not a new phenomenon in the tech world (e.g. with Apple and Amazon), but it is somewhat unique here in that the new transportation data so deeply interacts with public data and services. For example, any ride-hailing-public transit partnership will be hampered and one-sided if the transit agencies share their ridership with the ride-hailing companies but not vice-versa. The paper will address this and other challenges and opportunities for these new data including: the potential for intelligent pricing and taxing of shared mobility services (i.e. to mitigate congestion and improve accessibility), the ramifications of who owns the rights to the prior maps, the already seen risk of racial discrimination in shared mobility services that are linked to Facebook pictures, and varying levels of openness that may be required of the virtual driving system algorithms to ensure safe and reasonable operation on public roadways.

References

Key Words:
Automation, Shared Mobility, Data, Uber, Privatization

WORKING AT HOME AND OUT AND ABOUT IN THE CITY: REMOTE WORK AND DAILY TRANSPORTATION PRACTICE
Abstract ID: 310
Pre-Organized Session: Planning in a Brave New World: Data and New Mobilities

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This paper uses survey and interview data to describe how evolving forms of remote and nomadic working enabled by information and communication technologies affect local travel practice in a multimodal context. Terms such as telecommuting, telework, and nomadicty describe the use of information technologies such as desktop computers, laptops, and smartphones to conduct work
activities from locations other than a traditional office on a regular or occasional basis. In 1976, the person who coined the term "telecommuting" offered it as an alternative to the problems of traffic congestion derived from the daily commute (Nilles 1976). A 1988 experiment with California state workers enrolled in a telecommuting program showed an expected reduction in weekly work trips due to the substitution of home-based work for work trips (Kitamura et al. 1990), a finding in line with other subsequent studies. Recent research distinguishes full day telecommuting from part day telecommuting--defined as working from home in addition to attending work (Habbad et al. 2009). Yet in light of the growing adoption of social and wireless technologies, a dichotomy of home and office may be inadequate to capture work location routines. For example, nomadic knowledge workers may structure their work lives around projects, using and reshaping digital infrastructure as they traverse multiple work spaces (Erickson et al. 2014).

Our research question is: how does the adoption of forms of remote and nomadic working among knowledge workers affect their local travel practice in a multimodal context? To address this, we triangulate national secondary data with primary regional data collected in the New York metropolitan area. Our national data comes from the American Time Use Survey, a probability survey that asks respondents about activities during the 24 hours prior to a telephone interview. We create a nominal work location variable accounting for single and multiple location workers, and locations beyond home and work, such as cafes and vehicles. Our findings show working from home is the most prevalent form of remote work and is growing, but the concept of work location in the digital age is complex, with over 25 percent of American workers conducting some work from locations outside of a traditional workplace. We also model the relationship of work location with travel, finding remote work associated with reduced travel time and peak-hour travel. Our regional data consists of a non-probability survey of workers, and a set of in-depth interviews, both conducted within the New York metropolitan area. These findings describe the relationship of remote work with travel decision-making in a multimodal context including consideration of transit and shared mobility.

This research is relevant to planning because of the importance of the daily commute to problems such as peak-hour traffic congestion and travel-related emissions contributing to climate change. In addition to a role for our findings in demand modeling, we argue that the place of remote work as a policy tool for confronting these problems needs to reexamined and reinvigorated in how travel demand management (TDM) and peak-hour avoidance programs partner with employers. Telecommuting has long been considered a strategy for the elimination of trips, however TDM implementations have in practice focused on work schedule shifts-- temporal flexibility, and neglected work location shifts-- spatial flexibility (Ferguson 1990). Based on our findings, the message to employers should be one of permitting flexibility of both schedule and location.

References
40 YEARS OF TRENDS IN TODS ACROSS THE UNITED STATES
Abstract ID: 326
Individual Paper Submission

RENNE, John [Florida Atlantic University] jrenne@fau.edu, presenting author

While Peter Calthrope coined the term Transit Oriented Development (TOD) in his 1993 book the Next American Metropolis, the concept of compact, walkable and mixed-use development around train stations dates back to Ebenezer Howard’s Garden Cities from the late-1800s in England. In the United States, the concept of TOD began with streetcar suburbs and included many commuter and urban rail systems across the country. However, despite a long history of TOD in the United States, most of the published research on the topic is cross-sectional with data from the 21st century. A national study by Cervero et al. published in 2004 by the Transit Cooperative Research Program of the Transportation Research Board identified 103 TODs across 12 metropolitan regions. This paper examines trends across these locations beginning in 1970 to 2010, providing a range of 40 years in trends that allow a comparison of changes in station areas to changes in the metropolitan region that the station is located. The paper focuses on topics including commuting patterns, vehicle ownership, property value (data being in 1996), demographics and socioeconomics. This paper will help reinforce other studies and provide new insights on the debates about long-term benefits of TODs, including travel behavior and land values. Moreover, this paper will shed new light on gentrification in TODs, which is a hotly debated topic.

References

Key Words:
- transit oriented development, commuting, vehicle ownership, gentrification, transportation planning

EXPLORING TRAVEL AFFINITY ASSOCIATED WITH TRAVEL MODES AND MULTITASKING
Abstract ID: 339
Traditionally, it has been assumed that people make trips as a means to participate in activities -- a concept known as ‘derived demand.’ Travel thus has been considered onerous and having a negative utility. Based on the travel time budget theory, reducing travel time and reallocating this amount of time to other activities would increase traveler’s satisfaction and well-being.

However, studies (Mokhtarian & Salomon, 2001) have suggested that the act of travel itself may generate positive utility and satisfaction. The few studies that have empirically explored this effect were limited to specific geographic areas and trip purposes -- mainly commuting to work (Smith, 2016; Páez & Whalen, 2010). These studies typically relied on web surveys to record self-report characteristics of individual, trips, and, if applicable, built environment. Trip experiences were typically measured on the most recent trips based on the respondent’s memory, which generates unreliable and biased self-reports. To our knowledge, no studies employed a trip diary for understanding trip experiences throughout the day.

Our study addresses these shortcomings and expands on the existing literature by employing a mobile app with GPS capability to instantaneously measure respondents’ mood and perceptions after each trip taken. We collected data during two periods (Fall 2016 and Spring 2017). Respondents were mainly students, faculty, or staff of Virginia Tech (collected in Blacksburg, VA and Washington, DC) and the University of Minnesota (data collected in Minneapolis, MN). Respondents were asked to track their trips with our app for one to two weeks. An entry survey recorded personal characteristics and general travel patterns. For each trip, the app tracked travel time, distance, modes, routes, origins and destinations. Respondents answered a short survey with mood and satisfaction for each trip. We applied the “teleport test” proposed by Mokhtarian and Salomon (2001) to measure travel affinity by asking respondents whether they wished to forgo a trip if they had the option to arrive at the destination immediately.

Our study attempts to explore the factors associated with the affinity for daily travel. Our preliminary results from the multinomial logit model show that bike trips were found to be more enjoyable than trips made by other modes, all else being equal. Talking with passengers and looking at the landscape were associated with higher likelihood for ‘liking’ the trip. We also found significant demographic factors associated with travel affinity. A majority of respondents agreed that they enjoy traveling and did not perceive commute time as wasted time. Our results provide further evidence of the positive utility of travel and lend support to previous studies on the relationship between multitasking and the value of time (Lyon & Urry, 2005; Ory & Mokhtarian, 2005).

Although this study is limited to a convenience sample, its results enrich the literature on the positive utility of travel, satisfaction, and well-being. As transport users may enjoy their trips and wish to retain their daily travel, planners and practitioners should be cautious in evaluating the benefits of transportation investments and travel demand management strategies aimed to reduce travel time. In some cases, increasing travel time may increase satisfaction and well-being for transport users, thus...
improve mental health and strengthen social interaction. Additionally, since active travel was found to be enjoyable, planners could devise strategies to encourage active travel and physical activity.

References


Key Words:
active transportation, satisfaction, positive utility of travel, multitasking, travel behavior

INHERITING INEQUALITY: AUTOMOBILE ACCESS ON THE PATHWAY TO ADULTHOOD
Abstract ID: 354
Individual Paper Submission

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A growing body of travel behavior research explores themes of inequality, specifically how transportation resources are unequally distributed and how those resources—or a lack thereof—affect life outcomes like employment (Blumenberg and Pierce 2016) or access to health (Syed, Gerber et al. 2013). Much of this work focuses on adults and some (but notably not all) of this work relies on cross-sectional data. This paper draws on the Panel Study of Income Dynamics to explore how access to automobiles during childhood and adolescence shapes one’s life outcomes as a young adult. This work will shed light on the role that transportation disadvantage (i.e. limited access to automobiles) plays in transmitting inequality from one generation to the next.

Specifically, this work sheds light on three questions:

- How does automobile access (or a lack thereof) during childhood and adolescence shape life outcomes at age 23-27?
- Are there particular periods during childhood and adolescence when automobile access is relatively more important for shaping life outcomes?
- Has the link between automobile access and subsequent life outcomes become stronger, weaker, or stayed the same over time?

The Panel Study of Income Dynamics (PSID) began in 1968 (McGonagle et al. 2012). In that first wave, roughly 5,000 families (or 18,000 individuals) participated. As children grow up and form households of
their own, those households remain part of the PSID sample. Today roughly 9,000 families (or 22,000 individuals) complete the PSID each year. Over time, Latino and immigrant subsamples were added to better reflect the composition of the United States.

In this study “life outcomes” are measured by one’s pathway to adulthood at age 23 to 27. These pathways are based on five markers of adulthood: 1) complete education, 2) move out of the parental nest, 3) secure employment, 4) marry, and 5) have a child. The various orderings and groupings of these five markers form eight distinct pathways to adulthood. For example, on some pathways young people invest considerable time into educational attainment (Educated Singles and Educated Partners). On other pathways, young people enter work and/or start families immediately (Fast Starters and Working Singles). Meanwhile, some young people have not taken on education, employment, or family formation (Slow Starters).

The PSID collects data on automobile access every two years. The repeated nature of this data allows me to compare life outcomes at age 23 to 27 to automobile access at multiple time points during childhood and adolescence.

I hypothesize that transportation disadvantage (i.e. limited access to automobiles) is an important mechanism through which inequality is transmitted from one generation to the next. Specifically, I expect that young people with limited automobile access will be more likely, everything else equal, to be Slow Starters.

References

Key Words:
Automobile access, Transportation disadvantage, Adolescence, Life Stages, Inequality

LINKING PLANNING WITH BUDGETING: EXAMINING LINKAGES BETWEEN GENERAL PLANS AND CAPITAL IMPROVEMENT PLANS
Abstract ID: 390
Individual Paper Submission

MATHUR, Shishir [San Jose State University] shishir.mathur@sjsu.edu, presenting author

Central theme or hypothesis
Both the municipal finance and the urban planning professions have paid significant attention to the need for consistency between planning documents. For example, in identifying best practices for government management, the Government Finance Officers Association (GFOA) notes that general plans (GPs) should provide the vision for capital planning and investment and that capital projects and investments should be aligned with GPs (GFOA 2008). Similarly, Torma (2015) notes in Planning magazine that capital improvement plans (CIPs) are key to linking a jurisdiction’s GP with its capital budget and that the planning commission should review CIPs in the context of the GP.

The consistency between GPs and CIPs has received little scholarly attention, however. The extant literature primarily highlights the need to strengthen the consistency between GPs and CIPs and provides broad guidelines for achieving this consistency. However, there has been no comprehensive synthesis of specific strategies to strengthen this, GP-CIP, consistency. Such strategies might include improving a) the quality of GP and CIP documents by, for example, identifying the specific GP vision or policy implemented by each capital project included in the CIP and by including consistency with the GP as one of the selection criteria for capital projects or b) the institutional processes of developing and approving CIPs by requiring that a planning commission or similar entity certify consistency between a CIP and a GP. This paper seeks to fill this research gap.

Approach and methodology
This paper first reviews the academic and professional literature to identify strategies that local governments might use to ensure strong GP-CIP consistency. A compilation of such practice-ready “best practices” should be of significant help to jurisdictions across the country. Finally, the paper reviews the GPs and CIPs of four case study cities to present a framework for evaluating whether, how, and how well local governments are implementing strategies to enhance GP-CIP consistency. Specific methodology is outlined below.

Methodology
1. Review the relevant literature to identify key strategies to enhance GP-CIP consistency.

2. Select case study cities to demonstrate how an evaluative framework can be operationalized to determine whether, how, and how well the strategies identified in Step 1 are being implemented to enhance consistency.

3. Assess whether, how, and how well the case study cities are implementing the strategies identified in step 1. Summarize the key findings.

Relevance of work to planning education, practice, or scholarship
Academic and professional literature has identified a lack of linkage between GPs and CIPs as an endemic problem in the field of urban planning and development. This paper, through a study of several California cities, begins to address this problem by synthesizing ways in which cities typically ensure strong linkages between a GP and a CIP. The paper highlights the need for professional planners to be actively involved in the CIP preparation process and calls on the degree-granting urban planning programs to teach the skills necessary to read and understand budgets, including CIPs. Absence of such academic instruction deepens the lack of consistency between GPs and CIPs because planners do not have the skills to read or understand budgets and CIP documents, let alone to play an active role in strengthening GP-CIP consistency.

References
IMMIGRANTS, IMMIGRANT NEIGHBORHOODS, AND TRAVEL BY ALTERNATIVE MODES
Abstract ID: 395
Individual Paper Submission

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With their mix of ethnic residents and ethnic-specific businesses, services, and community institutions, immigrant neighborhoods can function as cities-within-cities. For some residents, a significant share of their daily activities may require only short trips within the neighborhood. Because such trips are conducive to travel by modes other than automobile, we hypothesize that residents of immigrant neighborhoods are more likely to walk or take public transit than residents of other neighborhoods. To test this proposition, we construct a set of models drawing on census-tract level data from the 2010-2014 American Community Survey and microdata from the 2012 California Household Travel Survey (CHTS) for Southern California.

In terms of transit, we find a positive relationship between immigrant neighborhoods and the percentage of residents who commute by public transportation. The microdata reveal a similar pattern, as those living in heavily immigrant neighborhoods are significantly more likely to make a transit trip than residents of predominantly U.S.-born communities. The walking models, on the other hand, suggest the opposite association: both the proportion of residents commuting on foot and the likelihood of an individual taking a walk trip decline as the percentage of foreign-born residents in a neighborhood increases.

One notable exception to this negative relationship is the walking behavior of immigrants living in immigrant neighborhoods. Analysis of the microdata reveals that for immigrants, living in a neighborhood with a high percentage of foreign-born residents is associated with an increased likelihood of making a walk trip—a relationship that is particularly strong among Hispanic immigrants in heavily Hispanic neighborhoods. This suggests that immigrants are more likely than their native-born counterparts to walk to various local amenities, and indicates that the match between immigrants and the character of local opportunities is an important factor in shaping travel patterns.
These findings have implications for the relationship between land use and transportation—particularly among Hispanic immigrants and in Hispanic neighborhoods. Moreover, with respect to walking, the results suggest the importance of carefully matching neighborhood opportunities with the specific needs and interests of local residents.

References


Key Words:
Immigration, Ethnic enclaves, travel behavior, travel demographics

GOING ON A ROAD DIET: THE BEFORE-AND-AFTER EFFECTS OF A 4-LANE TO 3-LANE CONVERSION IN SAN JOSÉ, CALIFORNIA

Abstract ID: 399
Individual Paper Submission

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This report analyzes traffic impacts from the 2015 implementation of a pilot “road diet” on Lincoln Avenue, in the City of San Jose, California, comparing data from before and after the road diet was implemented.

The Federal Highway Administration has recommended “road diets” as a low-cost measure to improve safety and create a more community-focused street environment. Road diets reduce the number of travel lanes in a street, most often converting a four-lane, undivided roadway to a three-lane roadway with two through-travel lanes and a two-way center left-turn lane.

These so-called road diets have been shown to result in a number of benefits, including slower speeds and improved safety, reduced delay at intersections due to separate left turn lanes, and easier roadway crossings for pedestrians.

Road diets are not without concerns, however. Travel times may increase along the slimmed road itself. Also, depending on the configuration of side streets, some traffic may switch to nearby side roads, thus increasing traffic congestion on roads less suited to higher traffic volumes.

Despite growing interest in road diets among transportation planners, there is limited empirical evidence on the effects of these roadway conversions. We contribute to that small but growing body of literature.
by analyzing the traffic effects of a road diet in San José, California. Our research questions are as follows:

1. How did traffic volume change along Lincoln Ave. and the surrounding major and neighborhood streets after the implementation of the road diet?
2. How did the count and percent of vehicles travelling 10+ mph over the posted speed limit change along Lincoln Ave. and the surrounding major and neighborhood streets after the implementation of the road diet?
3. How did the 85th percentile speed change along Lincoln Ave. and the surrounding major and neighborhood streets after the implementation of the road diet? (The 85th percentile speed is the speed that 85% of vehicles do not exceed.)

To answer these questions, we analyze data from the Lincoln Avenue road diet pilot. The City of San Jose collected traffic volume and speed data using portable, pneumatic road tubes placed at 45 locations in the neighborhood.

Preliminary analysis indicates that 24-hour ADT volumes declined modestly throughout the entire study area (-1% to -6%), although volumes within the road diet implementation zone decreased the most.

The impact on traffic speed was another major focus of the analysis. There was a decline in the number of vehicles travelling at least 10 mph over the speed limit within the road diet zone, but all other road types (Lincoln non-road-diet, major, neighborhood) saw an increase in vehicles traveling 10 mph+ over the speed limit. Looking at 85th percentile speeds, there were very only small overall changes.

These summary results do not tell the entire story, however. While the speed and volume changes in the road diet implementation zone and surrounding streets were mostly as expected, there were individual locations, particularly within the neighborhood streets, that saw noticeable negative impacts. Additional research to explore these individual impacts is forthcoming.

References


Key Words:
road diet, land conversion, traffic, traffic calming, complete streets

FROM PEAK-HOUR TO TIME-OF-DAY: A CASE STUDY OF A NOVEL PARKING OCCUPANCY MEASURE
Abstract ID: 400
Poster

THIGPEN, Calvin [University of California, Davis] cgthigpen@ucdavis.edu, presenting author

The metric of peak-period parking occupancy has historically been used to determine zoning codes’ minimum parking requirements for a given land use. This process has resulted in the over-provision of parking in both large cities (Willson, 1995) and small towns (Schlossberg & Amos, 2015), with indirect economic costs to adjacent land owners as well as environmental costs associated with an inherent encouragement of driving (Guo, 2013). Given these externalities, considering alternative metrics, such as time-of-day parking occupancy, may prove fruitful. This study features two research questions: “How do patterns of parking occupancy vary over the course of a day?” and “What common behavioral patterns do households display?” In addition to answering these questions, I also propose policy recommendations with respect to parking provision and its intersection with shared and autonomous vehicle technologies as well as housing.

I conducted systematic observations of parking occupancy in a Davis, CA apartment complex by counting parked cars on multiple distinct occasions within a day. I repeated this protocol over the course of 33 days in January and February 2017 to provide more accurate assessments of average occupancy rates. To assess the difference between peak and off-peak parking demand, I generated aggregate temporal patterns of occupancy. And because each apartment is assigned a pair of parking spots with identical, painted labels (e.g. both labeled “60”), I could categorize households into parking styles based on common patterns of use across a day through the application of latent class transition analysis.

I find that at peak hours for residential parking (in the early morning and late evening) an average of 55% of the available spaces in the apartment complex are occupied (with an interquartile range (IQR) of 53% to 56%). That occupancy rate dips to an average of 35% (IQR of 33% to 36%) occupancy during off-peak hours. Through the latent class transition analysis, I find that distinct clusters of household parking patterns emerge, including commuter households, zero-car households, and infrequent car users.

This study demonstrates how adopting time-of-day parking occupancy as a metric re-frames the challenge of parking in a new manner that implicitly promotes more sustainable outcomes. Considering temporal fluctuations in parking demand encourages planners to consider options in mixed use developments to share parking across the complementary uses and compatible (i.e. opposite) temporal parking patterns (e.g. residential and office). Additionally, accounting for different household typologies of parking utilization could inform shared vehicle (e.g. Zipcar) and autonomous vehicle operations and policy, with potential synergies with suburban housing retrofit to repurpose the underutilized land currently occupied by parking lots. This study’s simple methodology could also be easily applied by researchers or cities at a broader scale, using existing data sets as well as systematic observation to inform parking policy revision.

References

Key Words: parking occupancy, time of day, peak hour, latent class analysis, parking management

WE COUNT WHAT WE CARE ABOUT: THE LIMITATIONS AND BIASES IN EXISTING METRICS FOR BICYCLE AND PEDESTRIAN INVESTMENTS

Abstract ID: 404
Poster

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Transportation investments, regardless of mode, have traditionally been evaluated based on metrics such as mode share, level of service, and travel time. These metrics are founded in evaluating the need for, and success of, automobile-centered infrastructure investments aimed at enhancing mobility. As Urban Designer Jan Gehl said: “You count what you care about” and these metrics reflect a concern for automobility (Sorenson & Dalsgaard, 2014). Mobility oriented metrics have in turn been used to validate a transportation planning paradigm that has been widely discredited for fostering unsustainable urban development. The legacy of these flawed and limited metrics continues with their increasing application to bicycling and walking. That is, the number of bicyclists using a bike lane, or pedestrians in a cross walk misses the point of bicycle and pedestrian infrastructure investments. The point being that the amount of walking and bicycling occurring in a community is not the outcome of interest; walking and bicycling is an indicator of a vibrant community, not a goal.

Advocates for walking and bicycling understand this implicitly, estimating the value of these modes in terms of economic, environmental, and health outcomes. Yet the pressure to quantify traffic volume persists, despite their flaws. Bicycle and pedestrian counts, for example, systematically ignore the myriad benefits to a community that result in, among other things, a few additional people walking or bicycling through a particular intersection. Benefits of investing in active travel can include creating a transportation system that is more equitable, sustainable, and resilient as well as extending to fostering more livable and economically-viable communities. We as transportation professionals do care about all of these potential benefits of active travel investments, but neglect to count them.

This paper presents a framework for valuing investments in walking and bicycling from a holistic perspective, rather than a mobility-centric one. We first examine the limitations of traditional demand-based approaches to valuing travel when applied to active modes. In tracing the history of our existing, auto-centered transportation system, we demonstrate that quantifying existing rates of walking and bicycling is at best unhelpful, and at worst antithetical to the goal of fostering such modes. This is largely due to the fact that obtaining reliable bicycle and pedestrian counts is extremely difficult and requires greater resources than most communities possess (Nordback, et al., 2013). Additionally, the actual information obtained bicycle and pedestrian counts is extremely limited; for example, even totally reliable counts cannot provide valid estimates of walking and bicycling at the city-scale.

We then review more holistic attempts to better account for the benefits of such modes (e.g., quantifying environmental impacts and individual health outcomes (see: Gotschi, 2011; Rissel, et al., 2013)).
evaluate where more holistic accounting techniques fall short of accurately valuing active transportation investments. For example, existing approaches to quantifying the downstream impacts of walking and bicycling investments focus only on positive impacts, tending to ignore negative ones. Specifically, we find an inadequate accounting for the relationship between bicycle and pedestrian investments and gentrification.

Based on our review of existing approaches to valuing investments in walking and bicycling, this paper proposes an alternative framework for valuing these modes. The hallmark of this framework is to no longer treat bicycle and pedestrian volume as the outcome of interest. Rather, the number and distance of trips on foot or bike is considered an indicator of more meaningful community impacts, such as personal and environmental health, increased resilience, and economic growth. We offer recommendations for robust, pragmatic metrics and accompanying methods to apply this framework in practice.

References

Key Words:
Walking and Bicycling, Transportation, Metrics

THE EFFECTIVENESS OF GRASSROOTS ACTIVISM IN ADDRESSING TRANSPORTATION'S PUBLIC HEALTH IMPACTS
Abstract ID: 406
Individual Paper Submission

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This paper presents a study of grassroots activism organized around the public health impacts of transportation facilities and the responses such activism has generated in the US. Case studies from Madison, Wisconsin, Denver, Colorado and San Francisco, California illustrate the transportation impacts that have generated public health concern, the organizing that has taken place to negotiate changes, and the actions taken by local, regional, and state agencies in response. We found that responses are typically local and project-specific and while they are "wins" for the local community, they have not resulted in larger, systemic changes in decision-making processes and criteria. However, we also question whether this evaluation framework is appropriate for interpreting the effectiveness of grassroots activism in transportation. By contrasting “local” wins and “systemic” changes, are we misunderstanding the effects of organized activism and resistance? Drawing from political science,
sociology, and planning literatures, we discuss alternate framings of grassroots activism and resistance in transportation and their implications for understanding both the activism and the larger system of policy and decision-making. In turn, we use this framework to discuss ideas for working in contexts that combine health considerations, transportation planning and design, and grassroots resistance.

References

Key Words:
Transportation, Public health, Policy, Grassroots activism, Feminism

IMPACTS ON TRAVEL BEHAVIOR, THE VALUE OF TRAVEL TIME AND MODE CHOICE, AND THE NEED FOR TRANSPORTATION POLICY TO REGULATE AN AUTONOMOUS VEHICLE FUTURE
Abstract ID: 415
Pre-Organized Session: Urbanism Next II: Autonomous Vehicles, Effects on Policy and Behavior

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Transportation is changing at an unprecedented pace. When autonomous vehicles (AVs) will become available to the mass market, subject to regulatory approval and/or any restrictions from federal, state and local agencies, they will likely disrupt travel patterns and individuals behaviors in a number of ways. Among other effects, AVs may lead to safer roads, reduced congestion, increased network capacity, improved travel comfort, and reduced parking requirements. AVs will reduce the fatigue associated with driving, and increase the ability to perform activities while traveling. They will further change the way individuals organize their schedule and activity participation, and the concept of travel as a transition between different activities conducted at the origin and destination of a trip. They are expected to increase the utility of using a car, as travelers can combine the scheduling flexibility of being a driver with the comfort of riding as a passenger.

In terms of transportation supply, the deployment of full self-driving vehicles (Level 4, according to the U.S. Department of Transportation's NHTSA) will lead to increased capacity through platooning vehicles at higher speeds. The resulting capacity gains will be accompanied by modifications in transportation demand: AVs will likely lead to increased flexibility in scheduling trips, reduced effort and stress associated with driving, ability to use time productively while traveling, increased availability of personal vehicles for the mobility-limited (including the temporarily impaired, e.g. due to drinking), repositioning trips undertaken with no passengers (“zero-occupancy vehicles”), induced demand associated with the increased supply and higher attractiveness of private vehicles.
This paper concludes the pre-organized session, discussing the potential changes in travel behavior associated with the introduction of AVs, how planners and modelers can prepare to a future dominated by AVs and the research gaps in this area. Vehicle automation will prompt major changes in activity and travel scheduling, the value of travel time, mode choice, the use of private vehicles vs. other transportation modes, and other components of travel behavior, which are not well understood yet. Some of these changes may diverge from the goals of environmental sustainability. Driverless vehicles can increase the car dependency of society. As just one of the potential impacts of AVs, driverless technology will likely lower the value of travel time for car users. This can affect mode choice by favoring the adoption of private vehicles for a larger number of trips at the expenses of other modes. Through the analysis of data collected in California and the estimation of a mode choice model that accounts for the impacts of travel multitasking on mode choice and the value of travel time, we found that the ability to conduct activities while traveling accounts for a significant portion of the mode share for rail and public transit. If users could enjoy a similar ability also when traveling by car, this could lead to a non-trivial increase in the popularity of private vehicles and would wipe out most of the current mode share for public transportation (intercity trains, in particular) (Malokin et al, 2015). The adoption of AVs will likely result in higher per-capita VMT (and greenhouse gas emissions), unless demand-management strategies are thoughtfully implemented (Fagnant and Kockelman 2015, Circella et al., 2017).

The role of policy is fundamental. The introduction of AVs can become part of policies for sustainability of transportation, for example if forms of shared ownership and shared use of autonomous vehicles prevail, leading to a lower number of vehicles on the road. However, massive adoption of a shared-ownership and shared-ride operation model for driverless vehicles is not likely to happen without a strong policy framework or system of incentives that encourages it. The overall effects of autonomous vehicles on passenger travel will depend on the policies and regulations that are implemented, including, but not limited to, eventual restrictions in some portions of the road network, regulations for specific categories of users, ownership models, taxes and incentives, traffic regulations and parking requirements.

References


Key Words:
Autonomous vehicles, Travel behavior, Travel time value, Mode choice, Transportation policy

PLANNERS AND DRIVERLESS CARS: PERSPECTIVES ON TECHNOLOGY, TIMING, EFFICIENCY AND EQUITY
Abstract ID: 416
The world of driverless cars seems around the corner, if one believes the popular media. This simply is not so. Planners have time, though not much, to anticipate the implications of driverless cars in ways that advance efficiency and equity. This paper begin by asserting that the brave new world of driverless cars is more complex than the pundits let on. There are actually two different sets of technologies, each with their planning implications. Most immediately, there is the connected vehicle (CV) technology which is comprised of vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) elements. The National Highway Transportation Safety Administration (NHTSA) estimates that V2V technology may add about $350 per vehicle by 2020 and that it would be required of all new vehicles about that time. Thousands of lives may be saved and hundreds of billions of dollars in medical and damage expenses could be saved each year through universal use of this technology. Though it is important for them to know, planners need do nothing about V2V advances. V2I technology includes public infrastructure elements such traffic signals and guard rails communicating with vehicles. Either the driver or the vehicle itself can respond before an incident occurs but these cars still need drivers. For perhaps less than $2 billion per year, this technology can saving $200 billion in losses. Again, planners have very little to do with V2I. Connected vehicle technologies can be widespread by the end of the 2020s but depend on drivers. Truly driverless cars are designed to perform all safety-critical driving functions and monitor roadway conditions for an entire trip. Such a design anticipates that the driver will provide destination or navigation input, but is not expected to be available for control at any time during the trip. Widespread use of driverless cars are not expected until after 2040. Driverless cars will requiring rethinking and rebuilding highways, and rethinking land use regulations. While some aspects of a driverless car work can lead to unbridled sprawl others may create more compact urban forms. Much of the outcome depends on how the driverless car infrastructure is financed, and how land use systems can be redesigned to make their use more efficient and equitable.

References

Key Words:
Driverless cars, Automated vehicles, Connected vehicles

AUTONOMOUS VEHICLES, UNCERTAINTY AND THE PLANNING POLICY RESPONSE
Abstract ID: 417
Pre-Organized Session: Urbanism Next II: Autonomous Vehicles, Effects on Policy and Behavior

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Over the past year there have been many technological revelations that have made it clear that autonomous vehicle technology will become increasingly prevalent in our communities. Yet despite this there is a high degree of uncertainty about how this new technology will outlay in urban environs. While there has ample discussion over the anticipated pros and cons of this technology (Fagnant & Kockelman, 2014; Litman, 2014; Thrun, 2010), very little work has been given to decision-making in this high uncertainty environment--especially given that land use and transportation actions have long inertial properties (Riggs & Boswell, 2016; Riggs & Boswell, 2016). In terms of urban policy, research has indicated that only 2 of the 25 largest metropolitan areas mention autonomous or connected vehicles their planning documents (Guerra, 2015). And despite some wide level policy suggestions from organizations such as the Rand Corporation and consultants like Parsons, planning policy appears to be lagging technological growth.

In this environment where the pace of technology appears to be exceeding the pace of empirical planning, we evaluate the local planning policy response to autonomous vehicle technology. We review the theories of decision-making under uncertainty (e.g., precautionary principle and the incremental approach of those such as Lindblom (1959). We then develop cases that tier-off of past work and map them to theory. In doing this we propose multiple policy alternatives, with the primary assumption that neither a ‘do-nothing’ or a ‘business-as-usual’ approach are appropriate in such a time of certain uncertainty. We conclude by making recommendations for how local governments can take action on autonomous vehicles given the various theories. The goal of this contribution, is to offer planners a framework to appropriately respond to the uncertainty of autonomous vehicles: appropriately designing roadway capacity and lesson the risk of ‘stranded assets’ and considering the role of multimodal planning actions in light of autonomy.

References


Key Words:
SHARED AUTONOMOUS VEHICLES AND EMPLOYMENT AGGLOMERATION: AN AGENT-BASED SIMULATION MODEL

Abstract ID: 418
Pre-Organized Session: Urbanism Next II: Autonomous Vehicles, Effects on Policy and Behavior

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Shared Autonomous Vehicles (SAVs) is a promising future travel mode, as it significantly improves accessibility while reduces transportation costs. Based on the theory of urban development, employment agglomeration is closely associated with accessibility and transportation costs (von Thünen, 1826; Christaller, 1966; Waddell & Ulfarsson, 2003). Therefore, SAVs would unarguably lead to disruptive changes in urban employment location choices. The variations in employment location decision will, in turn, alter the spatial distribution of opportunities to incubate new business and expand existing services, providing implications for new economic structure and competitiveness of the region. However, little knowledge has been gained so far to understand changes in employment location choices after the introduction of SAVs. Most of the SAV related studies are limited to examine the feasibility (Kornhauser, 2013), affordability (Burns, Jordan, & Scarborough, 2013), and environmental impact of the system (Fagnant & Kockelman, 2014). Despite some SAV studies have already assessed the influence of the system on urban land use, such as parking and residential location choices (Zhang & Guhathakurta, 2017), almost no study, to date, has explored how SAVs would influence commercial and industrial land uses. Hence, there is a pressing need to join the current employment location choice model with the SAV simulation model to examine employment agglomeration scenarios to guide future economic development. This study develops employment location choice models by industry sector to understand existing employment agglomeration patterns in Atlanta Metropolitan Area. An agent-based simulation model is developed using Atlanta travel survey to evaluate the accessibility and transportation cost in the age of SAVs. The outputs from the SAV simulation model would then be used to update the employment location choice model. New agglomeration patterns by industry would then be determined using the Monte Carlo simulation process. The model results will add new knowledge to the impact of SAV on urban forms and can help inform policies that will lead to smart, sustainable, and resilient economic development in the era of SAV.

References

Key Words:
Shared Autonomous Vehicles, Employment Location Choice, Urban Form, Sprawl, Agent Based Model

MODELING THE PRESENCE OF OLDER ADULTS WITHIN US TRANSIT STATION AREAS
Abstract ID: 424
Individual Paper Submission

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Research Question:
The general question this research seeks to address is whether transit station areas might be planned in a way that is more attractive to older adults. The more specific question being examined is whether there are built environment and demographic characteristics of station areas across the US that correlate with higher percentages of older adults within the station area population.

Methodology:
The above described research question will be tested using a regression model where the percentage of older adults within a station area (defined as the area within a quarter mile of the station) will serve as the dependent variable. Station area characteristics such as the number of commercial activities, presence of medical facilities, the connectivity of the street network, and the types of housing will serve as the primary independent variables. Other controls will also be introduced as independent variables, such as the percentage of older adults in larger community, the type of transit system, and the age of the transit system. The analysis will focus on all major transit stations in the US as defined by the National TOD database produced by the Center for Transit Oriented Development. The demographic data will be based on the 2010 US census. Data for station area activities will come from NAVTEQ’s HERE database, which is a national collection of the locations of a variety of goods and services.

Relevance:
By 2030, one in five people in the U.S. is projected to be 65 or over. Fulfilling daily needs of older adults portends many challenges, particularly as their driving skills deteriorate. A possible solution to this issue, for at least some older adults, could be transit-oriented development (TOD). TOD is defined as a “walkable, compact, and mixed-use development within walking distance of a transit facility. The combination of good transit and pedestrian access found in TOD has the potential to provide older adults with access to basic, everyday activities (e.g. shopping, dining, and personal services) without needing to drive. By examining the correlates of older adult populations in station areas, this research contributes to our understanding of how we can plan station areas that make moving to a TOD an attractive option for this important demographic.

References
School absenteeism is associated with multiple negative public health, social, and educational outcomes. Prior work has uncovered relationships between absence and health effects including asthma, mental illness, suicide risk, and HIV. Risky behaviors such as drinking and driving, violence, and substance abuse, as well as negative social outcomes including school drop/push out, unemployment, and incarceration are also associated with absenteeism. This work has emphasized the importance of contextual factors that increase the risk of these outcomes, including poverty and homelessness, teenage pregnancy, poor parental health, and involvement in the foster care system, among others. One contextual factor that is sometimes identified in the literature, but rarely studied in depth, is caregiver and student access to reliable and affordable transportation. An alarming number of California school districts have recently reduced or eliminated school bus service. Without a school bus, affordable and convenient public transportation, adequate and safe pedestrian networks, or a reliable automobile, students may be unable to get to school despite their best intentions. Their participation in after school activities may also be curtailed.

A related but distinct issue is school choice. As school districts across the country are increasing their charter school offerings and the national conversation increasingly includes talk of vouchers, supporters of public schools are justifiably concerned. There remain substantial unanswered questions about precisely which student populations benefit from increasing school “choice.” If choice is available, but reliable transportation is not, then the availability of additional educational options means little. This paper reports on the results of a community-engaged research effort to assess the extent to which the combined pedestrian and public transit network in two California school districts—San Diego Unified and Sacramento Unified—functions to connect students to schools. In other words, does it adequately provide the connectivity needed to mitigate against absence and to provide real opportunities to choose a school? The research questions emerged from direct collaboration with nonprofit advocacy organizations, school districts, and transit agencies in each study area. Specifically, we address three broad sets of questions related to: 1) the spatial equity of travel time to neighborhood public schools, considering race/ethnicity and automobile availability, 2) the student populations served by open-enrollment, magnet, and charter schools, and 3) the effect of distance on student attendance and...
achievement.

The work required assembling multiple different datasets describing individual student location and performance, school locations, the pedestrian street network, census demographics, and public transit routes and schedules. The results are relevant from both an academic and school planning perspective. Results from Sacramento Unified, for example, show relatively few disparities in terms of transit accessibility to neighborhood public schools across the district and the relationship between travel time/distance and student achievement is weak. In San Diego Unified, on the other hand, important disparities emerge, especially when considering the district’s recent push to expand its charter schools program. These schools are often sited in suburban or more remote locations to reduce upfront costs. But our analysis shows that the students able to access these locations are more likely to be from higher income families, who are better able to manage the demands of longer trips. This result provides evidence that improving accessibility for lower socioeconomic status students must be pursued alongside policies to increase school choice. If it is not, then the benefits of that choice will not be equitably distributed.

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Key Words:
accessibility, equity, justice, transit, school choice

NON-WHITE OLDER ADULTS AND BIKE SHARE: IS THERE POTENTIAL?
Abstract ID: 464
Individual Paper Submission

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The Better Bike Share Partnership has spearheaded an effort to improve equity in bike share systems across the United States. While the effort has highlighted many strategies around improving participation in bike share by low-income populations and people of color, we cannot forget about another equity population: older-adults. Older-adults typically have a harder time getting around, particularly if they are without a car, and the difficulties increase once intersected with income, race, and
disability (Webber, Porter, & Menec, 2010). While there are many barriers to bicycling among the general populous, health related barriers among older-adults add to the list (Zander, Passmore, Mason, & Rissel, 2013). Evidence from a study on active commuting does suggest that older-adults use bicycles to commute at a lower rate than younger adults (Bopp, Der Ananian, & Campbell, 2014), so what potential is there for older-adults in using bike share?

Using responses from non-white adults 55 years of age and older (n=532) from a survey of adults in majority low-income and non-white neighborhoods in Chicago, Philadelphia, and Brooklyn on the topic of bike share, we explored what the potential is for older-adults to use bike share. We found that while older-adults do use bicycles and bike share at a lower rate than younger populations, there is potential with 25% of older-adults in our sample stating they expect to ride a bike share bike in the next 6 months. Although we do not know how many of those 25% will actually ride a bike share bike in the near future, we use evidence from our survey to examine what barriers may need to be overcome and what changes to bike share would get them to a greater likelihood of riding along with how those barriers and motivators differ from younger respondents.

References

Key Words:
Bike Share, Equity, Gerontology, Transportation

EXPLORING THE RELATIONSHIP BETWEEN URBAN TRANSPORTATION, LAND USE AND AIR POLLUTION BASED ON DRONE SURVEILLANCE
Abstract ID: 471
Individual Paper Submission

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Traditional studies of the relationship between transportation, land use and air pollution are typically a three-step process, i.e., first using emission models to estimate emissions from different pollution sources like different transportation modes and land use types, then use dispersion models to model the dispersion patterns of pollutants in the air, and finally estimate the spatial distributions of air pollutants in different geographic scale. A big problem of this approach is the lack of validation due to limited field air pollution monitors. This study tries to address this problem by using a drone with micro-sensors attached. The drone will fly at different altitudes (e.g., 50, 100, 200m), recording the concentration levels of different air pollutants (e.g., PM2.5, O3, Blank Carbon, CO, NOx) every second, and at the same time, recording land use and transportation conditions on the ground, as well as meteorological conditions (e.g., temperature, related humidity, wind directions and wind speed).

A fine-scale and high-resolution spatial distribution of different air pollutants is first observed and mapped. Then a set of models will be used to explain the spatial distribution of air pollutants. First, a
spatial cluster analysis will be conducted to identify if hotspot of air pollution exists in the city, and if exist, what neighborhood or land uses are associated with the hotspot? Second, a spatial association or land use regression models will be used to model the association between land use types and intensity, and transportation condition (e.g., traffic volumes and network density), and air pollution distribution. Third, an integrated urban modelling system coupled to the weather research and forecasting (WRF) model (e.g., WRF/Urban) will be used to investigate impacts of different land uses and transportation system and regional meteorological conditions on air quality. Minhang District in Shanghai, China is used as a case study area. Currently, most data collection have been done, and models are being developed. Final modelling results will be complete by August 2016 at the latest.

This novel research approach will provide an important means for planners to address environmental justice issues. It will also help use better understand the impacts of location and intensity of land use and transportation networks on air quality at the fine scale, which will shed light on future land use and transportation planning and urban design.

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Key Words:
transportation and environment, air quality, environment justice, drone, emission

BICYCLE PARKING SECURITY AND BUILT ENVIRONMENTS
Abstract ID: 484
Poster

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The lack of secure bicycle parking is a serious but neglected issue that discourages the growth of bicycling. Bicyclists have been encouraged to strengthen locks and register bicycles to enhance security, but the environmental design has rarely been considered as a strategy to prevent bicycle theft. The strategic choice of bike rack locations improves bicycle carrier access and the visibility of bicycles to the
This study examines the association between built environment factors and bicycle theft using macro and micro analyses of data from Seattle, Washington. The methods employed are Poisson lognormal random effects models using hierarchical Bayesian estimation and a hurdle model capturing the truncation of censored count data. The assembled dataset provides variables pertaining to the road network, land use, travel demand, and socio-demographics. The key findings are as follows: (1) Bicycle theft is more likely to occur in densely developed areas and commercial areas. (2) Encouraging bicycling may result in more bicycle theft but contributes to a lower risk of bicycle theft per trip. (3) The risk of losing a bicycle per trip is lower in areas with more employment. (4) Bicycle theft is more likely to happen at mid-blocks than at intersections. With regard to policy implications, governments and transport planners should continually promote bicycling, place bike racks in areas where more people will see them, and improve natural guardianship among bicyclists in densely developed areas, such as by placing bike racks of appropriate sizes at intersections.

References

Key Words:
bicycle theft, environment criminology, built environment

EXAMINING THE IMPACT OF METROPOLITAN GROWTH PATTERNS ON JOBS-HOUSING MISMATCH AND EXCESS COMMUTING BY DEMOGRAPHIC AND SOCIOECONOMIC GROUPS IN U.S. METROPOLITAN AREAS (2000-2010)
Abstract ID: 486
Poster

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This study aims to examine the impact of metropolitan growth patterns on jobs-housing mismatch and excess commuting by demographic and socioeconomic groups in the 350 U.S. Metropolitan Statistical Areas (MSAs). This study uses the 2000 and 2010 Census Transportation Planning Packages (CTPP) data, which provides the origin-destination flow of commuting by demographic and socioeconomic groups including race, gender, age, income, and education. We use network-based travel distance as a commuting cost which is calculated by ArcGIS.

In recent decades, the relationship between jobs-housing balance and commuting efficiency has been a major concern in the urban and transportation planning. As a result, various measures have been developed to assess jobs-housing balance and commuting efficiency, including the benchmarks and indices for excess commuting (Kanaroglou et al., 2015). For the concept of excess commuting, the
minimum commute proposed by White (1988) has been widely used for understanding the jobs-housing balance and excess commuting. On the other hand, the jobs-housing balance issue is closely related with the metropolitan growth patterns. For example, the excessive suburban development in a metropolitan area indicates that the outermost area will be consistently unbalanced in the distribution of jobs and housing (Giuliano, 1991). In addition, such metropolitan growth pattern would have different effects on jobs-housing balance and commuting patterns by demographic and socioeconomic groups.

The results of our study reveal the differences in jobs-housing mismatch and excess commuting by demographic and socioeconomic groups in the context of metropolitan growth patterns. This study also identifies susceptible groups in commuting when a metropolitan growth pattern changes. With recent CTPP data and concrete method, this study contributes to the academic issues of jobs-housing mismatch, excess commuting and metropolitan growth patterns, and provides policy implications to reduce excess commuting for the disadvantaged population groups in the U.S. metropolitan areas.

References

Key Words:
Jobs-housing balance, Excess commuting, Metropolitan growth pattern, CTPP

ARE LONG COMMUTES SHORT ON BENEFITS? COMMUTE DURATION AND WELL-BEING.
Abstract ID: 490
Individual Paper Submission

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A number of popular land use and transportation strategies, such as promoting jobs-housing balance or increasing densities, seek to reduce the duration of the commute to work. The assumption is that long commutes are detrimental to well-being because they waste time, impose monetary costs, and cause psychological distress, along with imposing other costs on society. However, as a group, Americans choose much longer commutes than would be the case if minimizing the distance to work was a very high priority; crime, schools, housing affordability, proximity to a spouse’s job, neighborhood familiarity, inertia, aesthetics, and proximity to family and friends often loom larger in location selection. Thus it is worth asking whether it is desirable to pursue costly public policies to shorten commutes.
This paper adds to a small but growing body of literature on the links between commute duration and well-being. We employ data from the American Time Use Survey, a product of the Census Bureau and Bureau of Labor Statistics. The ATUS has collected nationwide data from roughly 13,500 respondents each year since 2003 on how people spend their time, including the duration of their commutes. Moreover, in certain years the study asked about respondents’ well-being, including their overall life satisfaction and their moods, including six different emotions, during selected activities. The ATUS also collects sociodemographic information including wages and the wages of the respondent’s spouse. Using OLS and ordered logit regression, we examine several aspects of well-being and their relationship to commute time. First, that we find no significant link between a respondent’s life satisfaction and her commute duration. This runs counter to the findings of some, though not all, prior researchers. We do, however, find that longer commutes are associated with significantly poorer mood during the trips. We also search for a compensating differential for long commutes, based on the theory that workers should only be willing to accept a long commute if there are other benefits offsetting the costs. We find one: there is a significant and positive link between commute duration and wages, with 60 extra daily commute minutes being associated with roughly 7 percent higher wages. However, we do not find that those with long commutes report their work activities to be more meaningful, and we actually find that those with a longer commute are in a significantly, though modestly, worse mood at work, perhaps because poor mood from the morning commute spills over into the work day. One important and overlooked issue that may explain why some prior literature finds a paradox in which people accept long commutes that may be detrimental for their well-being is that long commutes may have important benefits for other household members, such as better schools for the children or a more appealing home or neighborhood enjoyed by the spouse as well as the worker; thus the commuter may accept a trip that makes him unhappy for the benefit of others in the household. Our data allows us to test this in some respects. We do not find evidence that marital status or the presence of children under 18 in the household lead to longer commutes, which might be expected if workers with families tend to accept longer commutes for the benefit of family members. We also do not find evidence that long commutes are allowing spouses to find more remunerative work. We do not, however, believe that these findings mean that benefits to other household members do not exist, which is an important topic for further research. In sum, we find that long commutes may involve a trade-off of higher wages for a transitory emotional toll during and possibly after the commute, with little net change in overall life satisfaction or welfare.

References

Key Words:
Commuting, Well-being, Life satisfaction, Travel duration, Happiness
This project explores factors influencing travel choices of university students who have recently relocated into newly-constructed, high density, mixed-use/residential apartment complexes within walking distance of two university campuses in North Carolina. Using a two-wave panel survey, we address two research questions: (1) What role do location, built environment characteristics, and parking supply play in students’ relocation decisions? (2) How do previous travel patterns, motivations for relocation, and pre-move expectations about post-move travel behavior influence the day-to-day travel patterns students ultimately establish after relocation?

University campuses pose interesting planning challenges, especially for jurisdictions seeking to balance inclusion and quality of life for long-term residents with students’ housing and mobility needs. Students have unconventional travel patterns, and they tend to relocate frequently, which gives them more opportunities to exercise location preferences than the general population. However, little empirical knowledge exists on (a) how students choose their residential locations or (b) whether individuals whose location decisions are based on travel-relevant environment characteristics (e.g., proximity to key destinations, mixed land uses) travel differently than those who relocate for other reasons. This research will generate new knowledge on how travel patterns develop and evolve among highly mobile populations, and the roles location preferences and anticipated travel patterns play in shaping new travel behaviors.

In collaboration with property managers, we distributed an online survey to incoming residents of a new, student-targeted complex in Boone, NC shortly before move-in (January 2017). This survey queried students about their motivations for relocation, their previous travel habits, and their expected mode choices for on- and off-campus destinations after relocation, along with basic socio-demographic information. A follow-up survey asked about travel patterns and mode choices established 2-3 months after move-in. Surveys will be conducted at the second site (in Chapel Hill, NC) in summer 2017. Between the two sites, we anticipate an overall sample size of ~250 (30% response rate).

We will analyze the survey data using discrete choice models of reported established (post-move) primary mode to on- and off-campus destinations, and ordered logit models of reported established weekly tour generation by mode. Explanatory variables include self-reported pre-move travel habits, pre-move expectations on future travel behavior, and primary motivations for relocation.

Preliminary analyses suggest accessibility to campus is the primary driver of students’ relocation decisions, regardless of socio-demographics or characteristics of students’ previous residences. This finding is consistent with previous research that found that when given information on location vis-à-vis campus, university students in an urban setting chose residences with better access to campus more frequently than those without the same information. Roughly half of the surveyed students expect their primary mode to campus destinations to change; the majority of those previously accessed campus primarily by car, and most anticipated shifting to non-motorized modes upon relocation.

This research provides new information on the travel-related drivers of residential location decisions, and enables exploration of possible disconnects between individuals’ anticipated travel patterns and their actual, sustained travel behavior. Traffic impact assessments can be both challenging and instructive in college towns, which have seasonal variation in resident population and travel and housing demand, along with heavier reliance on non-car travel modes than found in non-college towns. Understanding how location and built environment factors shape student travel decisions will aid both
planners and developers in setting realistic expectations for the impacts of new development or redevelopment on a city’s travel environment. Moreover, understanding student travel in a small university city experiencing growth pressures such as rising housing costs, scarce parking, and traffic congestion has implications for all residents of the municipality and region. Finally, our experience collaborating with property managers suggests the pre-move survey approach, which minimizes the risk of bias and/or recall errors due to relocation shock, is replicable, and can readily be adapted to support research on relationships among residential relocation and changing travel behavior for non-student-targeted residential developments as well.

References

Key Words:
travel behavior, university campuses, anticipated travel decisions, residential relocation

SYSTEMIC ANALYSIS FOR IDENTIFYING HIGH RISK TRAFFIC CRASH LOCATIONS IN SMALL AND RURAL COMMUNITIES IN FLORIDA
Abstract ID: 549
Individual Paper Submission

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Background:
Reducing crashes and improving traffic safety is an important objective of transportation planning. Meeting this objective is particularly challenging for small and rural communities due to limited data availability and limited resources. While spot analysis is an effective way to address traffic safety issues based on crash history, in many instances the spot analysis is insufficient, especially when there are no clear “hot spots” in the crash history, a condition which is common in rural areas. Therefore, a broad risk-based analysis, referred to as systemic analysis, is used to identify roadway segments or
intersections that may be prone to future crashes. This research is looking at a systemic approach to identify common safety issues across a larger geography such as a county or a group of counties or an entire state, and develop treatments, especially low cost, that may be applied to several locations throughout the system. Systemic approach can identify places that need improvements even in locations that do not have any observed crash history.

Existing research:
The Federal Highway Administration (FHWA) has established a framework for conducting systemic safety analysis. However, the application of the FHWA systemic process for small and rural counties will require adjustments in order to utilize the local data. Also, FHWA framework does not make use of GIS. This research customizes the FHWA systemic safety process for Florida, by using the available data and by integrating the process into a GIS-based framework to develop systemic analysis for safety improvements in small and rural counties.

Method:
The data used for the customized systemic analysis in this research includes crashes, roadway characteristics, traffic volumes, network curve locations, intersection location and their characteristics, distance from curves to intersections on any approach and distance between intersections. Curve locations and various distances above are identified by methods developed as part of this research. Once all the above data is prepared, negative-binomial regression models are applied to predict crashes. In general, traffic volume (AADT), functional classification, speed limit, intersection type and intersection angle, distance of intersection to other connected intersections and curves, are all found to be statistically significant risk factors in predicting the number of several types of crashes at intersections. AADT, curve length, radius, angle, functional classification, speed limit, and the spatial relationship of curves to intersections, are found to be statistically significant risk factors in predicting the number of several types of crashes on curves. These models can be further improved by adding more risk factors such as the distance to bridges and consideration of vertical curves to name a few. These models along with the GIS tools developed to calculate the measures described above are utilized to screen the network for high-risk locations.

Preliminary results:
The systemic analysis and the prediction models were tested on Gadsden County, Florida. Field visits were conducted to validate the predicted high-risk locations. The field visits confirmed that the systemic safety tool is in general predicting correctly the high risk locations based on roadway characteristics and some of the hot spot locations based on historical crash data. A small number of locations were missed, which indicates the need for further adjustments of the model in the future.

Contribution:
This research provides an efficient method for identifying high risk locations and an approach to customize safety performance functions to local areas. Application of this methodology will contribute to better understanding of roadway safety performance and inform transportation planners to select the proper countermeasures and to target the resources more effectively.

References
Transit-oriented development (TOD) can potentially align with two overarching sustainability goals for cities across California: (i) reducing greenhouse gas (GhG) emissions by reducing household vehicle-miles travelled (VMT); and (ii) increasing the supply of affordable housing through denser development. However, research has shown that these two policy goals may be at odds with each other—in a recent study of the Los Angeles metropolitan area, VMT reductions for households living inside a TOD vs. outside a TOD were larger for those with higher incomes (Bostic et al.; 2016). Our research therefore seeks to understand: which policy frameworks maximize welfare gains tied to sustainable transportation behaviors and affordable housing supply within TODs?

Building on our previous study in the Los Angeles metropolitan area, we first use a regression analysis of household travel diary data to estimate households’ GhG emissions as a function of distance from rail transit stations. We use travel behavior data from the California Household Travel Survey (CHTS) for households in the Los Angeles, San Francisco, San Diego, and Sacramento metropolitan areas. Our major contribution consists in including households’ vehicle characteristics in our model for more accurate estimates of GhG, instead of using VMT as a proxy. We hypothesize that, based on VMT, decreases in GhG emissions may be underestimated for lower-income households as they are more likely to drive older and therefore more polluting cars. If our hypothesis is confirmed, we may find that reductions of GhG emissions from lower-income households living in TOD areas approach or even exceed that of higher-income households, although they do not reduce their VMT as much. We are interested in investigating how changes in vehicles’ GhG emission technology relate to households’ VMT by income group and how that modifies notions of sustainability within TODs. We control for the potential of residential self-selection bias, wherein households align their travel consumption preferences with neighborhood type, using a propensity score match method (Cao, Xu, and Fan; 2010).
After conducting this regression analysis, we construct a scenario planning model that explores various levels of density and inclusionary zoning in TODs; we do so to understand how estimated levels of household vehicle GhG emissions are impacted by different affordable housing regulations. Quantifying these interrelated effects allows us to develop a set of policy recommendations for TOD planners. The results of the aforementioned, previous study of Los Angeles show that increases in density are the most effective way to increase affordable housing supply while also reducing VMT; alternatives, such as building at lower densities while requiring a larger fraction of units that are affordable, are less effective at achieving combined affordability and VMT goals.

Existing literature has explored the extent to which TOD can promote environmentally sustainable travel behaviors through lower GhG emissions, especially via the reduction of household VMT (Center for Transit Oriented Development; 2010); our research furthers this field by accounting for how specific car emissions technology may vary across households. Our research also extends a second strand of literature concerning affordable housing development in TODs (Boarnet et al; 2015) by considering how affordable housing goals and environmental sustainability goals for TODs may have a complicated relationship. We then synthesize these two pieces of research by providing a scenario model for use by practitioners.

References


Key Words:
Transit-oriented development, Vehicle miles traveled, Greenhouse gas emissions, Affordable housing

EQUITABLE ACCESS: MEASURING TRANSPORTATION INEQUALITY USING COMPOSITE INDICES OF ACCESSIBILITY

Abstract ID: 557
Individual Paper Submission

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Historically transportation planning in the United States has focused on promoting mobility as its central principle. Extensive investment in highways and roads and promoting car as the centerpiece of the American Dream have created hypermobile communities. Benefits of mobility have environmental costs as well as social costs. High mobility levels cause disadvantaged individuals who are financially, culturally or physically restrained in increasing their mobility patterns to become even more disadvantaged (Handy, 2005). Transportation systems can provide some with high levels of mobility and freedom while preventing others from accessing essential activities to fully engage in society. Therefore transportation planners need to not only focus on mobility but also take into consideration the social context of transportation. There are currently not adequate measures to address social issues including transportation inequality. The FHWA is developing guidance on new performance measures to evaluate the impact of transportation funding given to the states, and among this will be measures of social disparity. The main objective of this study is to develop a set of measures and indices that assist in evaluating and studying transportation inequality with an application in Los Angeles County. Transportation inequality is a concept with many components. It can refer to the unfair distribution of costs and benefits of transportation systems including but not limited to governmental subsidies in favor of private vehicles versus transit; unfair burden of transportation projects on low income and minority communities through discriminatory the disparate distribution of traffic externalities; and, unequal participation of communities in decision making processes, among others etc. Unequal access is also an important part of the inequality problem mainly because how it can exacerbate social exclusion. Transport related social exclusion is defined as the process by which people are prevented from participating in the economic, political and social life of the community because of reduced accessibility to opportunities, services and social networks. In the United States, concerns about providing equal access to social and economic opportunities has mostly centered on the issue of access to employment, health care, and food (Hansen, 1959; Blumenberg & Ong, 2001; Guagliardo et al., 2004; Walker et al., 2010). The main gap in the existing literature, however, is the lack of multidimensional indicators of accessibility from a social exclusion point of view and indices to measure unequal distribution of these indicators across communities. This paper is organized in 2 sections. The first section is dedicated to developing a set of indices of transportation inequality. Statistical correlation studies and GIS tools are utilized in this step to develop alternative composite indices to measure access and how it is distributed across different population groups’ unequal distribution of it. An essential part of developing the composite indices of accessibility is weighting different aspects of access which is done through expert interviews and utilizing Analytical Hierarchy Process (AHP) with transportation professionals in County of Los Angeles. The alternative indices are then compared with regards to feasibility of calculation and providing meaningful results. The second section tests developed indices in evaluating policies. To do so LA County is selected as the case study before and after implementation of Measure R projects. I expect to have a set of inequality indices at the end of this research that can expose strengths and weaknesses of a policy such as Measure R in alleviating transportation inequality and social exclusion. These multidimensional indices can highlight which areas of the county do not have sufficient access or which services are not accessible enough yet. This will help planners and policy makers to recognize areas in need of further attention and guide funding.

References
Abu Dhabi, capital city of United Arab Emirates, is an emerging global city. As part of its identity, the city aims to provide world class facilities and service in the region, including a good network of public transportation. The city introduced bus service with future plans to add rail system to their network of public transit. The most prevalent transit service, at present, in Abu Dhabi is the bus transit service. The “first mile” that describes the distance traveled before boarding and “last mile” described as distance traveled after alighting has received attention for its influence on transit ridership (Chong et al, 2011; Lesh 2013; Flamm & Rivasplata, 2014).

The Surface Transport Master Plan 2030 (STMP) for Abu Dhabi was drafted by the Abu Dhabi Department of Transportation in 2008. One of the objectives is to implement a sustainable transportation plan that is consistent with the urban and economic growth of the city (STMP, 2009). This plan aims to reduce the reliance on automobile and improve the pedestrian environment, by encouraging the Transit Oriented Development (TOD) and considering the safety and accessibility as a foundation of an accessible city. The master plan provides an integrated transportation plan with coordination of land use mixture, to create a quality places with various transport choices.

However, little information is available about the patterns of transit use by individuals in City of Abu Dhabi. Especially, the characteristics and purposes of trips made at the origin and destination areas (characterized as quarter-mile distance), the modes of access to and from these stops, influence of service quality of transit and influence of mixed land-uses on the time taken for the respondents from their origin to the stop (first-mile) and from the stop to their destination (last-mile). Therefore, using a sample of 502 public transit users we surveyed in Abu Dhabi, this research tries to understand people’s preferences for using public transit in Abu Dhabi. We use a Poisson model to estimate the transit ridership impact on travel time and distance used for “first mile” and “last mile” for commuter trips. Transit ridership is measured by the number of days in a week the respondent uses public transit. The model also takes into account the trip purposes, distances to various non-work destinations, satisfaction indices of public transit service, social network of respondent, as well as personal demographics and socioeconomic status, such as car ownership, age, gender, marriage status, income, etc.

The study provides valuable insights into the characteristics, travel behavior and preferences of survey respondents and permitted estimations of the distances traveled when travelers combine various modes such as walking, biking and others with public transit. The specific research inquires includes the variations of first-mile and last-mile for summer and winter weather, and for day and night commuting.
trips. The analysis of respondents provides insights into the housing development, transit service enhancement and creating transit-oriented development within walkable distance of transit stops. Understanding the “First-Mile- Last-Mile” connection by transit can provide insights for the Abu Dhabi Urban Planning Council and the Department of Municipal Affairs and Transportation to efficiently plan and manage the current and planned transit services for the city of Abu Dhabi.

References
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Key Words:
Sustainable transportation, Public transit ridership, Abu Dhabi, First Mile, Last Mile

THE IMPACT OF HEALTH CONDITIONS ON SENIOR DRIVING: A NATIONAL-LEVEL LONGITUDINAL STUDY USING THE HEALTH AND RETIREMENT STUDY (HRS)
Abstract ID: 576
Individual Paper Submission

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Central theme or hypothesis
The study examines whether and how the health conditions could impact senior driving. By 2030, one in every five Americans will be 65 or older. In order to better prepare for such a more aged customer base of our transportation system. Closer inquiries on the determinants of senior driving are needed. The current literature from transportation planning focus more on temporal trends rather than the determinants. This study tries to fill this gap by examining the impacts of health conditions on senior driving using a national representative sample in the United States.

Approach and methodology
We construct datasets using the health and mobility information in the most recent five waves (2006, 2008, 2010, 2012 and 2014) of the Health and Retirement Study (HRS), a national-level longitudinal dataset. We use fixed effects logit regressions to control for personal attitudes towards driving and show that general self-rated health conditions, physical conditions, cognitive conditions and vision conditions impact senior driving. Specifically, senior citizens who are in only “fair” or “poor” health are less likely to drive than are those who are in “excellent”, “very good” or “good” health, with a magnitude larger than poverty status, family structure and residential patterns.

Relevance to planning education, practice or scholarship
The study shows that with the current dominance of private automobiles, the current American transportation system could not fulfill the mobility needs for the elderly who start to drive less because
of declining health. Transportation policy makers and planners should be aware of this challenge and be proactive about potential solutions.

References

Key Words:
elderly, driving, health, longitudinal studies, aging

DEBATING EQUITY AT THE BALLOT BOX: BALLOT ARGUMENTS FOR LOCAL OPTION SALES TAX MEASURES FOR TRANSPORTATION
Abstract ID: 579
Individual Paper Submission

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Financial responsibility for transportation infrastructure and services has increasingly shifted to local governments as state and federal fuel tax revenues continue to decline. In California, 24 counties have Local Option Sales Taxes (LOSTs) to fund transportation projects. LOSTs must be approved by voters, and the proposed measures typically contain an expenditure list of projects to be funded over the life of the measure, including funding for highways, transit, and local roads. While LOSTs enable county residents to approve funding for potential local projects, they raise significant equity concerns. Sales taxes are considered “regressive” because lower income households tend to pay comparatively larger shares of their incomes. In addition, sales tax finance for transportation is divorced from transportation usage, and some residents may be paying for projects that do not benefit them.

Equity is a critically important concept in public policy, but often what is ultimately considered fair or just is highly subjective. Because equity can be assessed from multiple paradigms, the same policy may be viewed as equitable from one standpoint but not from another. Researchers have considered transportation finance equity across a variety of funding mechanisms, employing often contrasting definitions and methods. The majority of research on LOSTs focuses on factors influencing the passage or failure of LOST ballot measures. A small number of studies evaluate the equity implications of transportation LOSTs, finding that measures are intentionally crafted to geographically distribute projects throughout the county in accordance with collected sales tax revenues, and that a balanced mix of highway and transit projects increased the likelihood of voter approval.

This research explores how equity issues are discussed in the political debate surrounding LOST measures. Though not required to do so, counties frequent publish arguments and rebuttals written by supporters and opponents of each measure in voter guides mailed to each voter in the county. The ballot arguments can help us understand how equity is conceptualized, if at all, in discussions about
LOSTs. Our research asks how often equity issues are raised in ballot arguments, and by whom? How can we classify the types of equity arguments that are raised (for example, geographic or income equity)? What are common funding expenditure decisions that raise objections over equity issues? What can we learn from the language used by supporters and opponents of measures to discuss equity issues?

We performed textual analysis to identify equity concerns in the ballot arguments for over 30 proposed LOST measures in California, including measures that passed and measures that failed. We first identified statements in ballot arguments that raised equity issues related to different dimensions of equity, including income, modal, geographic and temporal. For each type of equity concern, we then catalogued recurring arguments (for example, some modal equity arguments debate funding transit at the expense of highway widening, while others discuss the benefits of rails compared to bus transit).

Our analysis finds that supporters and opponents raise different equity concerns. We also find that measure opponents are more likely to directly address equity issues, while supporters often imply the need for equity through the repeated use of certain key phrases (for example, “affordable fares”). We lastly find that large projects or expenditures can often raise concern across differing equity paradigms.

This research aims to contribute to the literature on transportation finance and transportation equity. The goal of this analysis is to understand the role of equity issues in the public discourse surrounding local transportation funding. The findings of this research will aid planners in understanding and responding to equity concerns of the public. This research can also inform the language that planners use to improve communication with the public about the impacts of transportation finance mechanisms and project choices.

References

Key Words:
Transportation, equity, public finance, local politics

MODELING THE MODE CHOICE OF ON-DEMAND RIDE SERVICE AND ITS IMPACT ON ACCESSIBILITY
Abstract ID: 583
Individual Paper Submission

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On-demand ride service (ODRS) has existed for decades but has not received much attention in academia, mainly due to its small mode share. The recent technology innovation in passenger
transportation like ride-sourcing and autonomous vehicles have attracted great interest. Referring to the point-to-point and request-based ride service, ODRS shares similarities and differences with both private and public mobility options and foresees a growing market share driven by technology advances (TRB Special Report 319, 2016). Among the limited existing literature on ODRS, some have demonstrated that ODRS has an important role in serving low-income people, elderly, and disabled population (King, Peters, & Daus, 2012; Schmöcker, Quddus, Noland, & Bell, 2005; Smart et al., 2015). Given the unique characteristics of ODRS and its potential to grow, understanding its impact and how to incorporate it into the transportation planning process is important.

This research aims to model the travel mode choice of ODRS and explore its impact on accessibility. The research addresses two questions: (1) what factors affect people’s mode choice of ODRS and how to incorporate its mode choice into a travel demand forecasting process; and (2) what is the potential impact of ODRS on accessibility? The research will consider only the conventional taxi and ride-sourcing because they are the two primary ODRS modes for everyday trips.

The methodology has two analytical steps corresponding to the two questions. First, we apply three model structures to exploring people’s choice of ODRS, including the multinomial logit model, the tree-based classification model, and the neural network model. Recent studies have shown data mining models’ merits for modeling people’s travel behavior (Karlaftis & Vlahogianni, 2011), so we will compare the performance of the three model structures of modeling the choice of ODRS. We mainly employ the regional household travel survey data of New York, Seattle, and Philadelphia. These are the only three regions whose household travel survey data contains sufficient number of people choosing ODRS. In the second step, we develop nine scenarios based on different assumptions of the fleet size and operation cost of future ODRS in the metropolitan area of Seattle to forecast people’s mode choice of ODRS and its potential impact on accessibility. We use the developed mode choice model of Seattle from the first step and the region’s travel demand profile to forecast people’s mode choice of ODRS at the traffic analysis zone (TAZ) level and develop assumptions about the spatial distribution of ODRS’s supply based on the forecasted demand. Then we will estimate the average wait time and cost of ODRS at the TAZ level to estimate the change of accessibility under those scenarios. We will also examine the distribution of accessibility change across various population groups to derive implications of ODRS’s impact on transportation equity.

The expected findings of this research include: (1) a set of socio-demographic, economic, built environment, and trip factors that associate with people’s mode choice of ODRS; (2) analyses of the modeling structure ODRS should embrace for incorporation into the travel demand forecasting process; (3) analyses of the impact ODRS is likely to have on accessibility and transportation equity and how sensitive it is to different fleet size and operation cost of the ODRS system in Seattle.

The research contributes to increased understanding of people’s choice of ODRS and the potential impact of this rapidly growing travel mode. With regard to planning practice, the research fills in the gap of incorporating ODRS into transportation planning and forecasting activities by developing a methodological framework of ODRS’s mode choice modeling. ODRS has an interrelationship with a plethora of factors that associate with people’s travel behaviors and performance of the transportation system. The results of the research will point to several important under-studied directions where planning and policy can intervene to improve the performance of our transportation systems via this new travel mode with implications for the impending shift in people’s travel behavior.

References
WHAT CONTRIBUTES TO SUCCESSFUL COMMUTE TRIP REDUCTION IN THE STATE OF WASHINGTON? A FOCUS ON TRANSIT ACCESSIBILITY

Abstract ID: 594
Individual Paper Submission

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Washington State passed the first version of the Commute Trip Reduction (CTR) Law in 1991 and the resulting CTR program has been run by the Washington State Department of Transportation (WSDOT). The primary goal of the program was to reduce congestion by promoting the use of alternative commuting modes to SOV. That intention has remained the same today, although much of the implementation has shifted from the state to city level. Rather than setting state-wide goals for all work sites, WSDOT now primarily serves as an advisor to local jurisdictions in charge of creating their own CTR plans. Existing data shows a concentration of sites in downtown Seattle meeting their state-wide CTR goals while work sites in suburban jurisdictions struggle to meet the same goal. The purpose of this research is to determine the primary contributors to a site’s ability to reduce SOV mode split and meet its CTR goal—including the effect of transit accessibility. Specifically, this research attempts to answer two questions: 1) Do the factors for which WSDOT currently collects data significantly contribute to a site’s success to reduce its SOV mode split and meet its CTR goal? and 2) How can transit accessibility be factored into these CTR goals? A transit accessibility indicator was developed by summing the number of transit stops within a quarter-mile radial buffer of a work site. WSDOT’s 2015/2016 employee CTR survey data as well as King County Metro transit data were used as the basis for this research. Each site’s transit accessibility score was compared to its SOV mode split, and an exponential regression resulted in an R-squared value of 0.71 for a sample of 295 CTR work sites. The transit accessibility indicator, along with other variables identified in WSDOT’s employee CTR survey, were then incorporated into logit and multivariable regression models that explain, respectively, whether a site has achieved an 18% reduction in calculated VMT set by WSDOT in 2007/2008, and its SOV mode share. The results of the analysis show the transit accessibility indicator having a significant association..
with both a work site’s ability to meet its VMT goal and its SOV mode split. Preliminary discussions with WSDOT indicate the analysis will inform future policymaking and be useful for TDM plan evaluation. The analysis may also alleviate some concerns from suburban jurisdictions and employers who feel that alternative modes to SOV are not as widely available in areas with lower population and employment densities compared to central business districts. This research demonstrates that an “expected” SOV percentage can be identified for each work site depending on the level of transit accessibility, which could then be used as a benchmark for evaluation within the CTR program.

References

Key Words:
Commute Trip Reduction (CTR), Transportation Demand Management (TDM), Transit Accessibility, Complementary Plans and Policies, State of Washington

BRIDGING THE GAP BETWEEN THE MOBILITY HAVES AND HAVE-NOTS WITH THE RISE IN SHARED MOBILITY
Abstract ID: 595
Pre-Organized Session: Equity in Transportation Policy

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Mobility disparities vary systematically by income, race, ethnicity, physical ability, and location, all of which raise troubling questions about the gap between mobility haves and have-nots. Public policies to address these mobility inequities have met with only limited success and have often not been a high priority for public officials. This is at least in part because of uncertainty and occasional disagreement about the best ways to increase mobility equity, particularly for low-income households. This uncertainty is waxing with the rise of new shared mobility services.

Those with access to cars in the U.S. generally enjoy very high levels of mobility. While some transit users, particularly those in dense city centers, also enjoy good access to jobs, school, health care, and education, many others do not. With the advent of new mobility services, such as Lyft, Uber, and Zipcar, those with credit cards and smartphones have an expanding array of travel choices, but those without are increasingly left behind. While these new services, along with looming vehicle automation, offer the promise of expanding mobility and accessibility, the also present the possible peril of exacerbating access inequities. We are, in other words, at a crossroads where new mobility systems could be a plus or a minus in addressing the accessibility gap – depending on how public policies shape the evolution and use of these new services.
This paper will present some original data and will review the emerging shared mobility literature to consider the potential to widen, or narrow, the access equity gap with the rise of shared and autonomous mobility. It will, in addition, consider how existing and possible policies and programs might be employed to narrow the shared mobility equity gap in the years ahead.

References


Key Words:
Shared mobility, Access equity, Transportation Network Companies, Transportation Policy

POVERTY, POLICY, AND ACCESS TO AUTOMOBILES

Pre-Organized Session: Equity in Transportation Policy

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A growing body of evidence suggests that access to automobiles has a positive effect on the economic outcomes of low-income households. Cars can facilitate access to opportunities within a reasonable travel time, the need to make multiple stops in a single day or on a single tour, trips with large packages or multiple passengers, and—under some circumstances—safety when traveling through dangerous neighborhoods. Despite their many benefits, cars are expensive and can be out of reach for many low-income households. Moreover, among low-income households with cars, transportation expenditures (e.g. down payment, interest, gas, registration and other fees, maintenance) can be financially onerous.

Policy efforts to aid low-income individuals largely have centered on the role of public transit in meeting the work-related transportation needs of the poor and, in particular, the importance of strengthening public transit connections from center cities to suburbs. However, public transportation has had difficulty meeting the needs of the growing number of low-income households who live in the suburbs. Public transit functions most effectively in the inner city, where both employment and residents are clustered and where employment is frequently located adjacent to transit stops.

A few policy efforts have attempted to expand automobile use and ownership among the poor. In this paper, I review the literature on these programs, focusing on their potential impact on low-income households as well as on air quality, the principal political obstacle to these types of programs. The results highlight the strengths and weaknesses of various policy strategies. Particularly promising are
programs to provide the poor with more reliable automobile access while, at the same time, reducing use of old, gross-polluting vehicles, a major contributor to air pollution. The findings from this study highlight promising policies and programs and suggest further areas for research.

References


Key Words:
access to opportunities, automobile ownership, equity, low-income households

ACCESS, OPPORTUNITY AND ISOLATION: A NATIONAL ASSESSMENT OF TRANSPORTATION EQUITY AND ITS POLICY IMPLICATIONS
Abstract ID: 597
Pre-Organized Session: Equity in Transportation Policy

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Transportation is a necessary ingredient for meaningful participation in urban activities. Yet, many residents lack access to a full range of viable transportation options. Young and low-income groups require modes of access to opportunities that are affordable and dependable. Elderly and disabled groups require access via modes that are also affordable in addition to modes that can accommodate reduced physical abilities. In this study, we report findings from the implementation a one-of-a-kind national open source tool (OPBEUM) that calculates the population of transportation vulnerable people within 300-meter grid cells across the entire United States using highly detailed open source data. Accessibility to essential urban services (grocery stores, hospitals, social services, etc.) via a range of suitable transportation modes is measured. These measures of accessibility are compared against accessibility via personal automobile. Our findings indicate that there are large disparities between accessibility to opportunities utilizing active and public transportation verses accessibility with a personal automobile. In several locations, transportation vulnerable populations are completely isolated from essential services. Though intuitive that these accessibility gaps exist, we extend the analysis to measure the impact of this accessibility gap for transportation vulnerable populations with results that are spatially explicit. The differences in transportation need verses demand are analyzed against the backdrop of federal transportation policy to determine the extent to which existing policies can bridge this gap and new policies should better target accessibility for the most vulnerable in order to provide a more equitable outcome.

References


Key Words:
transportation equity, vulnerability, transport policy

STREET INTERSECTION CHARACTERISTICS AND THEIR IMPACTS ON PERCEIVED BICYCLING SAFETY
Abstract ID: 601
Individual Paper Submission

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Encouraging the use of bicycles is increasingly regarded as an effective strategy to benefit our living environments, reduce fuel consumption and promote public health. Safety concern is one of the core issues that deter people from bicycling in the US (e.g., Pucher & Buehler, 2008; Akar & Clifton, 2009). The National Highway Traffic Safety Administration (NHTSA) 2014 reports that the number of deaths in bicycle crashes makes up 2 percent of all traffic fatalities in 2012, however, only 1 percent of all trips are bicycle trips (National Household Travel Survey (NHTS) 2009). NHTSA 2014 claims that 30 percent of all bicyclist fatalities occurred at intersections. One plausible interpretation of this result is the high level of interactions between automobiles and bicycles at intersections. Earlier studies have identified the effects of built environment factors on cyclist injury severity in automobile-involved bicycle crashes (e.g., Chen & Shen, 2016). Previous research also explores the associations between detailed intersection design characteristics and bicyclists’ safety perceptions. Carter et al. (2006) develop a comprehensive bicycling safety-rating model for intersections. Their model investigates the contributions of intersection attributes, such as traffic volumes, number of lanes, speed limits and presence of bicycle lanes, parking and traffic control devices to bicyclists’ safety perceptions at intersections. Their model accounts for both subjective user ratings and objective data, such as evasive actions that are taken by bicyclists to avoid collisions. However, their model does not control for individuals’ socio-demographic characteristics and attitudes that are known to affect bicycling decisions. In this study, we conduct an online visual survey on the main campus of The Ohio State University. We receive over 1000 responses from undergraduate and graduate students as well as faculty and staff members. We collect information on respondents’ safety perceptions at various intersections using a visual preference survey. We also collect data on other factors that are known to affect bicycling decisions such as socio-demographic characteristics, attitudes towards bicycling and general travel characteristics. Then, we estimate a series of ordered logistic models to demonstrate the extent to which certain street intersection characteristics (such as traffic volume, intersection configuration, posted road crossings, bike lanes, bicycle boxes, green space, road surface conditions, surrounding neighborhood types and other features) affect bicycling safety perceptions while controlling for socio-demographics and attitudes. Our outcomes reveal that the presence of stop signs, two-stage turn queue boxes, and off-road cycle tracks are positively associated with respondents’ preferences. The presence of vehicle turning lanes, higher vehicle traffic, on-road bike lanes, and tree density increase people’s safety concerns. Based on the estimated coefficients, we calculate the perceived safety scores at various intersections, and investigate the relationship between safety perceptions and actual crashes. We determine that visual surveys are effective in capturing information about bicycling preferences. Our methodology can be applied elsewhere to test the effects of different intersection and street features. We
conclude with recommendations for infrastructure decisions and suggestions for future research. The results of this study can help planners design street intersections that bicyclists prefer.

References

Key Words:
perceived bicycling safety, intersection design characteristics, visual preference survey

EQUITY ISSUES IN COMMUTER BENEFIT PROGRAMS: A CASE STUDY FROM THE SEATTLE METROPOLITAN REGION
Abstract ID: 606
Individual Paper Submission

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One of the most remarkable changes in U.S. transportation policy over the last several decades has been the shift of focus from transportation supply management to managing transportation demand, in response to increasing traffic congestion and environmental concerns. While conventional commuter benefit programs concentrated on employer-paid parking, these have diversified to offer benefits for workers who currently use alternative modes of transportation or wish to do so. Despite previous efforts to understand the impact of commuter benefit programs, equity issues in this context remain understudied. Past studies have focused only on how the availability of commuter benefit programs may affect workers’ commuting mode choices. However, as many U.S. regional transportation demand management programs tend to mandate actions to motivate employees to shift to alternative modes of transportation only among large employers in dense urban areas, workers who are offered non-parking-related commuter benefits and those who are not are likely to differ systematically in the first place. This potentially raises serious equity issues, as commuter benefit programs provide economic benefits for those who use them. A further neglected issue concerns who actually participates in such programs among employees who qualify or are invited to do so.

To bridge these gaps, the present study reports a case study of the Seattle metropolitan area. Using the 2014 Puget Sound Regional Council household travel survey, the study investigates who is more likely to be offered transit or vanpool/bike benefits, and who is more likely to actually use such benefits. The results show that workers who are or are not offered non-parking commuter benefit programs differ significantly in terms of socio-economic characteristics that include age and income. Across employee groups, the likelihood that workers will utilize such benefits also differs significantly. These findings will be of interest to planners and policymakers seeking to maximize the effects of commuter benefit programs in reducing auto trips while lessening disparities in available benefits across population groups.
Over the past two decades bus rapid transit has become increasingly popular in both the developed and developing world. In developing cities, BRT roll-out has often been accompanied by a restructuring of loosely regulated or unregulated privately provided transport services (Munoz and Paget-Seekins, 2016). Many argue for widescale public transportation service restructuring, but due to financial, political, and logistical constraints, most cities have been able to manage only a fraction of the investment required for planning and full implementation, and are left with “de facto hybrid” systems where BRT and other pre-existing technologies coexist (Salazar Ferro, Behrens, and Wilkinson, 2013).

This is the case in Barranquilla, Colombia. In 2010, in response demand pressures, the city opened Transmetro, a trunk-feeder BRT. Prior to the introduction of the BRT in Barranquilla, residents could choose from a variety of transportation modes including privately-run licensed, but loosely regulated, buses and minibuses; unlicensed and usually illegal motorcycle-taxis, pedicabs and communal taxis; and licensed taxis. As part of the design of the BRT system, authorities removed several of the pre-existing bus and minibus routes, and strengthened their enforcement mechanisms to restrict non-formalized transport services, with the intention of reducing expected competition with Transmetro (Ortegon-Sanchez and Tyler, 2016).

An important body of the literature suggest that, in average, BRT has contributed to reductions in GHG emissions, congestion and number of traffic fatalities (Ernst, 2005; Hidalgo et al. 2013). Yet, little is known about how its introduction has affected social welfare or how current “de facto” hybrid system
serve people’s travel needs. To examine these phenomena, we conducted dozens of interviews at 15 locations in the city. Many interviewees were pleased about reductions in travel time, particularly when referring to the trunk line services; the air conditioning on BRT vehicles; and an increased sense of safety from crime. Most identified significant drawbacks of the system as well, most notably overcrowding, especially at peak hours; the insufficiency and complexity of feeder routes; and the elimination of several bus routes. The free transfer between Transmetro’s trunk and feeder routes reduced some users’ out-of-pocket costs. Yet some interviewees, mostly low income, expressed disappointment at losing the ability to bargain over bus fares.

Finally, our interviews reveal a complex interaction between the BRT, private licensed buses, and largely non-formalized transit services, in which these services complement one another through feeder relationships, and under different circumstances, compete with one another for riders. Transmetro operators intend to expand and improve service. Our results suggest that this process will require focusing on improving Transmetro’s service quality and better integrating it with other transit options.

Key words: BRT, informal transportation, public transport, user perception, qualitative research

References


Key Words:
Bus Rapid Transit (BRT), informal transportation, public transportation, qualitative research, Barranquilla

MOVING WITH TRANSIT PASS: THE IMPACTS OF TRANSIT PASS OWNERSHIP ON ACCESSIBILITY IN PORTLAND, OREGON

Abstract ID: 639
Poster

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There is an extensive literature on measuring accessibility by incorporating travel cost (combing the travel time and out-of-pocket cost). The affordability of daily travel as one of the key dimensions of accessibility is strongly related to the social equity in transportation planning and policy. As to the different modes’ affordability, even though many studies investigate the impacts of unaffordable public transit, especially on transit-dependent population, not many studies focus on incorporating transit fare into accessibility measures (El-Geneidy, 2016). Also, studies incorporating travel cost into accessibility do not include the physical interpretation of these findings. Transit fare structure can be a critical factor in changing people’s travel pattern and behaviors, such as mode choice (McElroy, 2009).
Many cities have adopted transit pass programs in their transit systems with various types of transit pass (daily, weekly, monthly pass, etc.), which help to increase affordability for frequent transit riders. Few studies have looked into who are the transit pass ownership and their impact of using transit pass on travel behaviors (Badoe & Yendeti, 2007; Lachapelle & Frank, 2009; Meyer & Beimborn; 1998).

Transit pass has multi-dimensional impacts on the accessibility regarding the time and the extent of destinations based on different transit pass programs. The ownership of transit pass remains an equity concern in terms of questions on who benefit from the transit pass most. Thus, how to optimize transit pass program to achieve the accessibility equity and revenue generation needs more attentions and studies.

TriMet in Portland offers various types of transit pass for any combination of buses, MAX Light Rail, WES Commuter Rail and Streetcar according to different population. This paper aims to investigate the usage of transit pass based on demographics in Portland and look into differences in travel pattern and behaviors between riders with transit pass and riders without transit pass. I analyze two disaggregate dataset—Oregon Household Activity Survey (2011) and TriMet On-board Origin-Destination Survey or TriMet Fare Survey (2016)—and map out the difference accessibility level between riders with pass and those without pass. Findings answer the questions about transit pass ownership among different demographics (population characteristics), the significantly influence transit-pass owners’ travel behaviors and the impacts’ direction and magnitude. Also, findings reveal how the transit pass has different effects on their work and non-work trips between transit riders with pass and those without pass. The results have implications on the reconstructing the transit fare system and public transit planning at the aspect of transit accessibility equity among various types populations.

References


Key Words:
Transit Pass, Travel Behaviors, Payment Methods, Public Transit Policy, Transportation Planning

CITIZEN PERCEPTIONS OF LIVABILITY IN OREGON: WHAT IS THE ROLE OF TRANSPORTATION AND LAND USE?

Abstract ID: 654
Individual Paper Submission
Despite the widespread use of the term livability in policy and planning, the concept remains loosely-defined and relatively unmeasured. There seems to be a general consensus that livable communities are ones where people want to live. But what are the characteristics of land use, urban design, and transportation that make a place livable? While planners advocate for certain characteristics like bicycle networks, density, and mixed-use, as a discipline, we have little knowledge about how those characteristics are reflected in perceptions of livability.

Livability has emerged as a key focus for integrating transportation and land use planning throughout the United States. Livability principles were the backbone of the federal Partnership for Sustainable Communities Program, which highlighted six principles including: providing transportation choices, expanding housing location, improving economic competitiveness, improving existing communities, aligning federal policy, and enhancing unique characteristics of communities.

Few studies have asked citizens about their understanding of, or preferences for, livability. A 2014 AARP study examined what livability means to people ages 50 and older by conducting focus groups, administering surveys, and conducting in-depth interviews (Harrell et al., 2014a). The survey included basic demographics and questions about aging in place, personal safety, social interactions, desired proximity to amenities and disamenities, and desirable policy responses. Another recent study focused on preferences for livability and transportation among various age groups through a nationwide phone survey. (Dill & Morris, 2015) Clifton et al. (2015) asked Oregon citizens about neighborhood and housing preferences shaping the residential location process using a visualization of neighborhood typologies to understand citizen preferences for neighborhoods, housing, and transportation.

In Oregon, the state’s long range transportation plan (Oregon Transportation Plan) identifies “enhancing livability” as a key outcome. Regional transportation plans and local comprehensive plans reflect this practice too. Further, efficiency and livability are cornerstones of Oregon’s Statewide Planning Program, which relies on Urban Growth Boundaries to increase land use efficiency while conserving farm and forestland.

As government and academic research have not yet tackled citizen perceptions of how these planning efforts contribute to livability, we examine: “how do citizens understand the connection between transportation and land use planning, and its association with livability?”

This study relies on a survey administered to registered voters, living in neighborhoods of various housing densities within three MPOs in Oregon. Using the survey results, we use multilevel modeling to understand how residents perceive livability at the individual, neighborhood, and city scale. The Portland Metropolitan region was excluded from this analysis as this study focuses on smaller communities—areas that have mostly been overlooked in previous studies. A recently constructed statewide parcel database and spatial data on transportation investments are overlaid with survey responses, and we compare citizen definitions of livability to existing neighborhoods. This information provides valuable insight into how cities and state agencies justify investments in transportation infrastructure, which have long-term benefits of creating livable communities.

References
THE EQUITY DIMENSIONS OF MASS TRANSIT FUNDING SOURCES

Abstract ID: 655
Individual Paper Submission

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Federal evaluations for funding major mass transit investments increasingly emphasize local matching contributions. Meanwhile, amidst tight budgets, localities and regions are searching for mechanisms to support transportation spending. These mechanisms include increased sales taxes, development fees, public-private partnerships, and property value capture, like tax increment financing districts. To understand the equity implications of these mechanisms, coupled with the federal emphasis on local matching funds, this research considers local funding sources used for mass transit projects partially funded through two competitive federal programs—the capital investment grant program (“New Starts”) and the Transportation Investment Generating Economic Recovery (TIGER) program. It covers a 10 year period for the New Starts program and the TIGER program since its genesis during the Great Recession. Analysis is based on document review of New Starts evaluations and application materials submitted to the TIGER program. Findings show heavy reliance on sales taxes, which perform weakly along both the user pays principle and equity criteria. Findings also show adoption of new tools that link development and transit, with potential challenges to equitable accessibility in the long term. Despite the federal stated interest in increased local match, findings show limited federal retreat in investment till 2016. However, a more dramatic shift in coming years seems likely with a pivot towards funding mechanisms that perform weakly along equity criteria and shift regional planning away from the needs of transit dependent riders.

References


Key Words:
mass transit, funding
EXPLORING ON-DEMAND TRIP CHAINS FOR RESTAURANT FOOD DELIVERY: PLANNING IMPLICATIONS AND CASE STUDIES IN CHICAGO

Abstract ID: 679
Individual Paper Submission

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Rush hour traffic congestion is a transportation planning challenge for most metropolitan regions. In addition to commutes, personal errands and shipping also contribute to peak flows. The adoption of urban delivery services, which have been boosted by the ubiquitous penetration of smart technology (e.g., real-time applications), can further increase pressure on the transportation system (Rodrigue et al., 2013). While urban delivery services better connect customers with local stores, the high frequency and low volume of last-mile delivery trips could exacerbate rush hour inefficiencies (Macharis and Melo, 2011). Restaurant food delivery, which often overlaps evening rush hours, is a regular example of such inefficiencies.

Logistics management of urban freight transportation has been evolving to improve delivery efficiency while generating social benefits, such as traffic congestion alleviation and greenhouse gas (GHG) emission reductions (Allen, 2012; Jones, 2007; Kawamura and Lu, 2007; Lin et al., 2016; Quak, 2008). For example, the on-demand delivery model employs part-time local couriers to fill last-mile distribution gaps (Asper, 2017). The delivery chain model schedules multiple deliveries using fewer vehicles, thereby resulting in less traffic and fewer vehicle miles of travel (VMT) (Langevin et al., 1996). Although such models have been increasingly adopted by urban delivery services, few studies have assessed their impacts on urban neighborhoods from the perspective of transportation planning.

This study aims to explore solutions for rush hour congestion in urban areas, with a focus on restaurant food delivery trips. First, it provides a background review of emerging delivery business models from companies like GrubHub, UberEats, and Chowbus. In reference to the existing business models, numerical studies are undertaken to simulate four specific models of restaurant food delivery: (1) one driver/vehicle delivers from one restaurant to one customer only (as the baseline scenario); (2) one driver delivers from one restaurant to multiple customers; (3) one driver serves multiple restaurants; and (4) both restaurants and consumers are grouped based on proximity as well as the time of meal order, which may require customers to pick up food at a specific location instead of providing door-to-door services as the other models. Stratified sample data of restaurant food deliveries are extracted from existing commercial websites in various urban neighborhoods in Chicago. Then the four scenarios are compared against their traffic impact and environmental emissions while maintaining the same level of delivery service (e.g., delivering three orders around the same time). The result shows that the on-demand delivery chain model can reduce VMT and GHG emissions up to 66%, but the impacts may vary by neighborhood (due to variances in restaurant and housing density). The advantages of on-demand delivery chain models in high density neighborhoods, where the average delivery trip distance is relatively short, can be particularly evident. This study concludes by suggesting community-specific planning intervention strategies that promote system innovation for better environmental and social outcomes from restaurant food delivery services. The planning strategies can be applicable for other urban delivery services that share similar characteristics (e.g., last-mile distribution challenge, business-to-customer commerce, relative predictability, high frequency, and low volume).

References
CHANGES IN WORKERS’ RESIDENTIAL DISTRIBUTION AROUND GROWING RAPID TRANSIT SYSTEMS
Abstract ID: 688
Individual Paper Submission

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Problem and method:
Many metropolitan regions in the U.S. have recently expanded their rapid transit systems – using rapid modes such as Light Rail Transit (LRT) and/or Bus Rapid Transit (BRT). Using the Longitudinal Employer and Household Dynamics data from U.S. Census from 2002 to 2014, this study examines the impact of newly opened transit lines on workers’ residential distribution in the transit station areas in 15 large metropolitan areas. The impact is compared among six worker groups, which are classified by sector and wage level, while controlling for socio-demographics and locational characteristics of the station areas.

Results and conclusions:
The results show that station areas of newly opened rapid transit corridors experienced significant gentrification—high-wage and professional workers increased significantly in the areas while low-wage, production, and service workers decreased significantly starting from the third year of station opening. The pulling effect on high-wage and professional workers is a long-run phenomenon that continued to the 11th year of station opening—the end of our panel data. The pushing effect on low-wage, production, and service workers is relatively short, which became generally insignificant from the 7th year of station opening. When comparing between LRT and BRT, the results show that LRT station areas tend to have lower baseline population before station opening and yet significantly higher residential growth after station opening. This population pattern is especially evident when examining professional and high-wage workers.

Take away for practice:
Our results verified the positive impact of rapid transit lines, especially LRT, on residential growth in transit corridors in large metropolitan area. Transit modes matter for promoting transit-oriented development. LRT is more effective than BRT in densifying areas near transit. Apart from the overall positive impact, there is an evident gentrification and displacement impact, i.e., influx of high-wage, professional workers and displacement of low-wage, production and service workers. The gentrification impact raises social equity concerns and calls for effective mitigation strategies in newly opened rapid transit corridors that can preserve residents of low socio-economic status. The findings on the timings of the gentrification and displacement impact suggest that early interventions before the 7th year of station opening are important for preventing the displacement of low-wage, production and service workers.

References


Key Words:
Rapid Transit, Residential Distribution, Longitudinal, Gentrification, Equity

DO TRANSIT-ORIENTED DEVELOPMENTS INDUCE RESIDENTS TO BE MORE MULTIMODAL?

Abstract ID: 718
Individual Paper Submission

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Transit-Oriented Development (TOD) is a planning approach for areas around transit stations that promotes higher densities and a mix of land uses together with walkable streets to incentivize non-motorized travel and the use of transit. As discussed extensively in the literature on land use and transportation interaction, a variety of land-use characteristics, such as the 5D’s (density, diversity, design, distance to transit, and destination accessibility) generate synergistic effects on travel behavior. TODs are a perfect example of the integration of various land-use and transportation characteristics that encourage residents’ to be less reliant on private automobiles (Renne, Hamidi, & Ewing, 2017). Unfortunately, not all transit areas are developed along TOD principles. Therefore, previous studies have not shown consistent effects of different transit areas on transportation outcomes such as car ownership, VMT, and travel mode share. Although several studies have shown that residents near TODs use more non-motorized travel modes, these studies often fail to control for residential self-selection and
the variation in TOD types (Higgins & Kanaroglou, 2016; Renne, Hamidi, & Ewing, 2017). Also, no study to our knowledge covers transit areas of the entire US and presents separate effects of TOD types in a rigorous way.

In this paper, we attempt to estimate the effects of different types of TODs on its residents’ multimodal travel. The multimodal travel pattern, or multimodality, refers to individuals using multiple travel modes for a certain time period (Buehler & Hamre, 2015). Researchers are especially interested in multimodality because incentives and regulations for popularizing a particular mode of travel tend to be most effective for multimodal travelers. Thus, identifying multimodal travelers and the drivers of their multimodality is a critical first step (Ralph et al., 2016). Given that living in TOD increases the probability of diversifying travel modes due to easy access to transit, better walkability, and proximity to shops, restaurants, and offices, it is likely that residents in TODs would be multimodal.

Our study of the impact of different TODs on residents’ multimodal behavior follows three analytical steps. First, we use factor- and cluster-analysis techniques to classify areas within a half mile radius from the 4,278 fixed-guideway transit facilities in the US that were open before 2009. This classification scheme generated six distinctive TOD types, which are downtown, inner-city walkable residential, medium-density mixed-use, low-density residential, suburban job-oriented, and sprawled. Second, we classify all individuals in the 2009 NHTS into three traveler types based on the framework presented in Buehler & Hamre (2015), which are monomodal driver, multimodal driver, and multimodal non-driver. For classification, we extract trip data for three time period; travel mode in the past week, on the survey day, and for work and non-work tours on the survey day. Finally, we develop a series of multinomial logit and ordered logit models to explain the traveler type with the help of data about sociodemographics of individuals, the type of TOD where these individuals lived, and other selection variables. The selection variables are the probability of individuals living the other types of TOD except one’s own, and we use them as a control for residential self-selection. In sum, this paper will shed light on how much difference in multimodal travel behavior planners can expect by supporting to convert a transit area from one TOD type to another.

References

Key Words:
transit-oriented development, TOD typology, multimodal travel, multimodality, travel behavior

HIDDEN COSTS OF CARPOOLING IN THE FAMILY LIFE OF HISPANIC IMMIGRANTS
Abstract ID: 731
Carpooling is an important travel option for Hispanic immigrant families but it may come with costs. In the U.S., immigrants are less likely to drive around by themselves when they are immigrated, but they eventually increase their auto usage, particularly after the arrival of children to their household (Tala and Handy, 2009; Chatman and Klein, 2013). Hispanic immigrants who have low access to private vehicles typically depend on carpooling more than taking transit (Blumenberg and Smart, 2010). Within the Hispanic immigrant households, males are the primary (or the only) drivers, while females delay becoming drivers and depend on others’ mobility even if they have children (Bohon, Stamps, and Atiles, 2008; Matsuo, 2016). These findings leave a question how they manage their family’s travel needs with limited numbers of drivers and vehicles. If Hispanic immigrant families choose to depend heavily on carpooling, it may cost drivers longer time for transporting household members. Dependence on carpooling may also cost non-drivers because carpooling would require more complex schedule adjustments and longer travel time, particularly if the number of available drivers and vehicles are limited. The higher travel cost may even discourage non-drivers to make unnecessary trips.

This paper quantitatively examines the household-level mobility choice of Hispanic immigrants, the time costs of transporting children, and children’s travel behavior in relation to the household-level mobility choice. First, I examine the household-level mobility choice of Hispanic immigrant households; whether they have fewer drivers and/or vehicles in their household, even after controlling for observable socioeconomic and neighborhood characteristics. Second, I examine who is paying the costs of limited driver/vehicle availability, particularly in satisfying children’s travel needs. Generally, female adults are known to take major roles in transporting children but low probability of Hispanic immigrant females being (primary) drivers may mean exemption of transporting duties. Thus, I examine whether gender difference is observed in the adult members’ travel time spent for transporting children, and whether the gender differences are different across the race/ethnicity groups. Third, I examine whether the children’s active trip frequency and total travel time are different by the availability of household drivers and vehicles. Less mobility option may discourage children making unnecessary trip, which may result in shorter total daily travel time. If they do not give up trips, their total travel time can be longer due to carpooling or the use of transit. Each analysis compares Hispanic immigrants with Hispanic natives, non-Hispanic White immigrants, and non-Hispanic White natives, using multivariate analysis with controls of socioeconomic and neighborhood characteristics.

The analyses confirm that Hispanic immigrant households choose to limit the number of drivers and vehicles, even after ten years of stay in the U.S. The stagnation is mainly explained by females’ low probability of being a driver. The gender gap in the driver status is wider and more persistent for Hispanic immigrants than for non-Hispanic White immigrants. The costs associated with carpooling seem to be unevenly distributed to females and children. Hispanic female immigrants are less likely to be (primary) drivers, yet, they still face strong expectation to take the role of transporting children. When they are just immigrated to the U.S., Hispanic female immigrants are exempted from the role of transporting children; however, they start transporting children five years after their immigration despite the persistently-low probability of being drivers. When Hispanic female immigrants become drivers, they spend particularly long time for transporting children. Last, children’s active trip frequency seems to be unaffected by the lower mobility level of the household but carpooling appears to make Hispanic immigrant children’s total travel time longer.

References


Key Words:
Carpooling, Immigrants, Hispanics, Children, National Household Travel Survey

DETECTING ENVIRONMENTAL JUSTICE IMPACTS OF HUB AIRPORT EXPANSION: AN EVALUATION OF AIRPORT PLANNING PRACTICE
Abstract ID: 767
Individual Paper Submission

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Through their Operational Evolution Plan (OEP) released in 2001, the Federal Aviation Administration (FAA) concentrated major infrastructure investments at the busiest 35 airports. Collectively, these 35 airports accounted for about 70% of the nearly 700 million passengers who boarded a plane in the US during the 2009 calendar year. As a consequence of the OEP expansion program, more than a dozen new runways opened at US hub airports since 2001, along with other significant airfield, gate, and terminal projects intended to increase capacity. For each of these major expansions, the FAA and airport owners were required to complete Environmental Impact Statements (EIS) and Records of Decision (ROD) to document the extent of the expansion project’s impacts on the environment. As required by various federal laws and regulations, consideration of environmental impacts ranges from the natural environment (air quality, endangered species, wildlife habitat, etc) to the human environment (cultural resources, environmental justice, noise, etc).

This research takes a closer look at the environmental planning process associated with the various expansion projects, asking ‘How did the Federal Aviation Administration and airport owners frame and evaluate environmental justice in the planning process for OEP airport expansion projects?’ To answer this question, I assessed how the FAA and airport owners framed and analyzed environmental justice within the EIS and ROD planning documentation for 19 airport expansion projects. These projects represent the 19 airfield expansion projects that completed EIS and ROD documents subject to Executive Order 12898, which was issued in 1994 and established protocols for evaluating environmental justice impacts for all federal actions.

In performing the document review, the goal was to characterize how the FAA and airport owner framed the environmental justice analysis and the frequency that they detected environmental justice impacts. Thus, I screened the EIS and ROD for the following information related to their methodology (comparison geography, population groups of interest, and impacts of interest) and findings (environmental justice conclusion, mitigation strategies). The document screening involved using key
word searches to locate the ‘environmental justice’ subsections of the multi-volume EIS and ROD documents, and then performing a thematic content analysis to analyze how ‘environmental justice’ methods and findings were framed and evaluated.

After investigating the methodological framing of environmental justice in EIS and ROD documentation, I found that the methodological variation in comparison geography prevented the FAA and airport owners from recognizing and mitigating disproportionate impacts at two of the three airports with the most obvious and egregious levels of environmental justice concern. For example, throughout the sample there were frequent uses of the ‘airport environs’ as a comparison geography, which compared those who resided within noise contour lines to those who lived immediately adjacent to the airport, but were just outside the contour. In contrast, county-level geographic comparisons led to environmental justice findings and mitigation. Methodologically, there was also more of an emphasis on the noise contour line for one specific forecasted use of the airport, rather than critical evaluations of the noise metric or possible noise contour scenarios. Broader evaluations of disproportional health impacts were also frequently absent. Frequently, the methods in the EIS and ROD obfuscated disparate impacts. I argue that if there are considerable minority and low-income groups near the airport in comparison to the region, this fact should raise environmental justice concerns, not diminish it.

Broadly, this work contributes to a body of work that evaluates modern airport expansion in an urban context to provide insight on how the next century of airport development can sustainably integrate with urban regions. The research findings also offer insight into the effectiveness of the National Environmental Policy Act and other social and environmental laws that inform the airport planning process, particularly from the perspective of environmental justice impacts. Further, this work offers a basis for inquiries into the relationship between airport infrastructure, airport-adjacent communities, and airport-centric activity centers.

References


Key Words:
Airport, Environmental justice, NEPA, Environmental impact assessment

WHY PEOPLE TRAVEL FAR FOR WORK WHEN COMMUTING COULD BE SHORTER?
Abstract ID: 774

Poster

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With housing commercialization and the rapid urban expansion, the surging commuting distance and the separation of workplace and residence have inevitably appeared in China. Many new residential area and Industrial park have been established in peripheral area. Many cities are now transforming in spatial structure to a poly-centric pattern. In the newly established area, there are two commuting patterns: one is short distance travel around local employment center, the other situation is travel randomly with longer distance. Together with the shortage of public transport supply and the extensive separation of jobs and housing, the commuting distance will be very high and a series of problems like congestion will be raised in urban areas, if without adequate policy.

To examine impacts of planning and transport strategies such as jobs-housing balance on urban expansion and suburbanization, in this paper, we conducted a survey in Jinqiao Development Zone of Shanghai and the data was divided into two groups according to whether employees of Jinqiao lived within 3km range from their job locations, or not. Then statistical methods were used to examine and compare characteristics between the two groups. Regression models were established to identify factors that influence whether employees to live in nearby and commuting distance for people staying over 3km away from their job locations. The models included home-end jobs-housing balance, land use mixture, road density, access to public transport service, availability of company bus and other demographic characteristics as explanatory variables. Our results indicated that, individual and housing characteristics such as occupation and housing tenure, are strongly related to whether living in nearby location or commuting longer. And the impact of balance in jobs to housing is significant while the land use mixture is not. Furthermore, the availability of company bus is also related to longer commuting distances.

Our primary conclusion is that lower income manufacture workers who rent house are more likely to live in nearby. Those who with better occupation and higher income are more likely to stay far away. It indicates that jobs-housing balance policy is not enough to reduce commuting distance with economic growth. We need also to develop a package of sustainable urban transport strategies to adapt the dynamics of urban transforming.

References
Key Words:
longer commuting distance, jobs-housing balancing strategy, new employment center, Shanghai

IMPACTS OF THE BUILT ENVIRONMENT ON ACTIVE TRAVEL: EVIDENCE FROM 20 US METROPOLITAN AREAS
Abstract ID: 775
Individual Paper Submission

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Many cities in the U.S. have the goal to increase walking and cycling for daily trips, because active travel can help improve public health, reduce emissions, and increase livability (Hankey et al., 2016; Jackson et al., 2013). Information about the built environment’s effect on walking and cycling levels can help cities plan for active transport facilities and target infrastructure investments.

Previous studies have used city-specific traffic counts to assess correlates of active travel and the built environment (Hankey & Lindsey, 2016; Tabeshian & Kattan, 2014; Miranda-Moreno & Fernandes, 2011). Lack of spatial and temporal coverage of traffic counts on a national scale have precluded generalizability from these city-level studies. Our work aims to address this limitation by modelling the relationship between the built environment and active travel at a national scale.

We sourced and aggregated pedestrian and bicycle traffic counts for 20 US metropolitan areas and collected over a span of 15 years (n=6,342 count locations). The count data were obtained from the National Bicycle and Pedestrian Documentation Project database or requested from each city. We selected and aggregated counts during morning and afternoon peak periods (two hours each). For each count location, we tabulated surrounding land use, traffic, street network, destination accessibility, and socio-demographic variables at 12 buffer sizes (100-3,000m). Weather data were also included as control variables. We used forward stepwise linear regression to develop four base-case models predicting morning and afternoon peak-hour bicycle and pedestrian traffic volumes.

Our models demonstrate reasonable goodness-of-fit for both bicyclists (adj-R²: 0.36-0.47) and pedestrians (adj-R²: 0.70-0.73). Built environment features were significant across all four models. In general, areas with easy access to water bodies, high rates of active commuting, as well as industrial, retail, and service land uses were associated with higher bicycle and pedestrian volumes (household density was associated with pedestrian volumes only); precipitation was associated with lower volumes. These results align with those from the previous studies from individual cities. Cross-validation of our models (via a Monte Carlo 10% hold-out) showed a modest (~0.01) drop in adj-R² across models.

To our knowledge, this is the first study that utilizes pedestrian and bicycle count data across multiple metropolitan areas over time to model the impact of the built environment on active travel. Our models could be used to inform decisions on location of non-motorized transport facilities. Our count data have good spatial and temporal coverage across a variety of cities and regions in the US. As such, our models could be used to generate generalized predictions of pedestrian and bicycle traffic in cities where counts are inadequate (or unavailable) and estimating city-specific models is not possible.
Furthermore, our models could be used to inform the design of health-promoting cities. For example, our models could be used to estimate cyclist and pedestrian exposure to hazards such as crashes or air pollution. By incorporating bicycle and pedestrian counts across many cities, our models provide more generalized estimates of the magnitude of the impact of land use on zero-emissions travel behavior to improve air quality and increase physical activity.

References

Key Words:
built environment, active travel, traffic count, public health

BIKE SHARE IN A CO- EVOLUTIONARY FRAMEWORK: IT S ROLE IN A TRANSITION TO A SUSTAINABLE ECONOMY
Abstract ID: 783
Individual Paper Submission

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Cycling historically has been marginalized within transport policy (Aldred 2012). Bike share programs may help make bicycling visible in urban transportation system (Goodman. et al., 2014). In addition, bike share programs have the potential to offer transport, environmental, and health benefits. Thus, a growing number of cities across the world have established bike share programs. Existing studies (e.g. Fishman et al., 2015) have found, however, that most bike share trips are replacing public transit and walking trips (rather than vehicular trips) and that bike share trips only account for a small amount (lower than 1%) of bicycling trips (Bauman et al., 2017). Many challenges remain to integrating bike share programs into our urban transportation systems and increasing the importance of bike share as a sustainable transportation mode.

This study explores critical issues in the evolution of bike share programs that affect their potential to be a more important sustainable transportation mode. We adopt the co-evolutionary framework developed by Foxon (2011) to analyze the role of bike share in a transition to a sustainable, low carbon economy. We explore each of the five main themes within Foxon’s framework: technology, institutions, business strategies, ecosystem, and user practices. For technology, we focus on to answer what special technologies of bike share programs need. For ecosystem, we review previous studies and present
demand models that show how characteristics of the built environment promote bike share uses. We summarize the range of institutional collaborations that support bike share and examine the policies around technology, service provision, and liability could promote bike share programs. For business strategies, we focus on reviewing and evaluating different business models and financial plans of different bike share programs. For user practices, we look at the demographic characteristics of current users of different bike share programs. We conclude with an examination of barriers associated with technology, business strategies, ecosystem and institutions, including equity of access, that impede the development of bike share programs and limit its role in the transition to a low carbon economy.

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Key Words:
Bike Share, Bicycling, Sustainability, Co-evolution

USING MOBILE SENSING OF AIR QUALITY TO DESIGN LOW-EXPOSURE BICYCLE ROUTES

Abstract ID: 784
Poster

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Increasing rates of active transportation is a commonly cited strategy to improve public health by increasing physical activity (Giles-Corti et al., 2016; Jackson et al., 2013). However, participation in active travel may lead to increased exposure to other hazards such as air pollution (Frank, 2005; Hankey et al., 2012). We developed an approach to use mobile, bicycle-based sensing of air quality to assess exposure to air pollution across a transportation network in a small, college town. Our approach is based on a method called Land Use Regression (LUR) which has been primarily used to develop long-term (i.e., annual-average) concentration estimates from fixed-site measurements. Adding temporal (e.g., hourly) information to LUR may allow for more reliable exposure assessment. We test the feasibility of using mobile monitoring data to develop hourly LURs of Particle Number (PN) and Black Carbon (BC) concentrations for use in exposure assessment.

We used a bicycle-based, mobile monitoring platform to collect ~130 hours of PN (CPC 3007, TSI Inc.) and BC (AE51, Aethlabs) measurements in Blacksburg, VA. We repeatedly cycled two routes (~12 miles per route) during the summer and fall of 2016; each route was cycled 5 times per hour-of-day (i.e.,
12 daylight hours; 7am-7pm). We deployed a reference site located at the beginning of each route to adjust for day-to-day differences in background concentrations. All mobile measurements were adjusted for known artifacts of sampling and aggregated at 100m intervals along the sampling routes to obtain concentration estimates for data analysis. We focused on primarily three uses of the mobile measurements: (1) assessing how time-of-day patterns vary by land use and road type, (2) for use as an input to LUR models to generate spatial estimates of air quality, and (3) comparing to estimates of bicycle and pedestrian traffic levels to assess exposure.

Based on the mobile measurements we developed 12 separate hourly LUR models for PN and BC using stepwise regression. Model adj-$R^2$ ranged from ~0.2-0.8 among hours and pollutants. Generally, adj-$R^2$ was highest for the morning and evening models; model fit was worst during early- to mid-afternoon hours (1-4pm). When pooling measurements across all hours, we observed relatively high adj-$R^2$ (PN: 0.81; BC: 0.58). During model development, we offered 22 variables at 15 buffer sizes; variables that were significant across models included those related to traffic (heavy-duty vehicle volume, functional class), land use (industrial or retail area, employment density), and land cover (tree cover, water). We observed consistent time-of-day patterns by street functional class. We found that hotspots of exposure (i.e., high rates of active travel and high concentrations) could be avoided by small spatial shifts in active travel routes. We also found that these hotspots shifted by time-of-day. Our results are consistent with previous literature (Hankey et al., 2016) and extend previous work by assessing time-of-day patterns.

Our work shows how prescribed mobile monitoring campaigns can be used to develop temporally-resolved (e.g., hourly) LUR models. Our approach may be useful in refining exposure assessment (i.e., matching concentrations with time-activity patterns) or developing cost-effective monitoring campaigns for pollutants that are traditionally cost-prohibitive. Our results may be of interest to planners and policymakers interested in designing walkable neighborhoods that also protect against exposure to air pollution.

References


Key Words:
built environment, active travel, air pollution, exposure assessment

RISK OF OBESITY: DO TRANSIT-ORIENTED NEIGHBORHOODS MATTER MUCH?
Abstract ID: 785
Individual Paper Submission

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This paper investigates the linkages between access to high-quality public transportation, walkability, and the risk of obesity. While many researchers have investigated this topic, few have used a panel data approach. Most previous studies have thus been unable to answer an important causal question: do those who move to more walkable, transit-oriented neighborhoods actually lose weight, or are the patterns we observe in cross-sectional data sets the result of residential sorting?

In recent years, many have speculated that the transportation environment in which one lives is an important determinant of health outcomes, and a growing body of research suggests that this is so, though the effects may be modest. Additionally, while walking and cycling have received considerable scholarly attention, the relationship between public transportation and health is under-explored. In a recent review paper, Rissel et al (2012) find that transit use increases walking by eight to thirty-three minutes per day. However, the connection to health outcomes is less established, and analyses of long-term health impacts are rare (cf. Webb et al, 2012, concerning older adults in England). The few studies that have focused on transit and health have typically employed either cross-sectional analyses (e.g., Rundle et al., 2007) or have examined only short-term changes (e.g., Hong et al., 2016).

Using panel data from the Panel Study of Income Dynamics (PSID), as well as data on transit service quality and transit fare structures, I examine how individuals’ Body Mass Indexes (a measure of weight relative to height) change as they relocate from neighborhoods with poor transit service to places with excellent public transportation service. The PSID is uniquely suited to this study, as it follows the same individuals over many decades (since 1968) and throughout their life course.

This paper fills several research gaps. First, by using the PSID, I construct long-term residential histories of thousands of individuals in the United States, significantly longer than in existing studies. Second, by combining these residential histories with data on transit service quality, measures of walkability, and historical records of transit fare policies in metropolitan areas, this paper assesses not just whether transit use leads to better health outcomes, but which policies lead to greater use and better health outcomes. In particular, I examine whether free or reduced-price transit passes for younger and older travelers lead to better outcomes for those populations.

Using fixed-effects panel logistic regression and structural equation modeling techniques, I find that moving to a transit-rich neighborhood is associated with lower risk of obesity and lower Body Mass Index, though the effects are quite small. The structural equation analysis suggests that high-quality transit service influences health outcomes primarily when it leads to lower levels of, or no, car ownership. This suggests that improving transit service may have only small impacts on health outcomes in places where—despite better transit service—having and using a car remains attractive.

References


Key Words:
Public transportation, Health, Obesity, Built environment

DO NEIGHBORHOOD ROAD NETWORKS AFFECT THE SEVERITY OF PEDESTRIAN TRAFFIC ACCIDENTS? EVIDENCE FROM THE TRAFFIC ACCIDENT ANALYSIS SYSTEM (TAAS) DATA IN SEOUL, KOREA.
Abstract ID: 797
Poster

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This study examines the relationship between neighborhood road networks and the severity of pedestrian traffic accidents. Focusing on the capital city of Seoul in Korea, this study uses the dataset of pedestrian traffic accidents (2012-2014) from the Traffic Accident Analysis System (TAAS) of Korea Road Traffic Authority. TAAS dataset provides the exact spots of accidents as well as detailed properties of the accident and specific attributes of drivers and pedestrians.

Transportation infrastructure and automobile has provided convenience and efficiency for urban mobility during the past several decades. However, automobile-oriented lifestyle also produces substantial side effects such as traffic congestion, energy consumption, air pollution, or traffic accidents including pedestrian casualty. Therefore, many researchers are interested in promoting non-motorized transportation modes such as walking and biking. Related with those issues, transportation safety for pedestrians is perceived as a critical matter in urban planning and transportation policies.

In this context, we empirically identify the relationships between the types of neighborhood road network and the severity of pedestrian traffic accidents controlling for demographic attributes and the exposure factors of pedestrian traffic accidents. The strength of this study is as follows. First, since TAAS provided detailed locations of the pedestrian traffic accidents, we analyzed physical environment variables in pedestrian traffic accident. Second, this study analyzed the determinants of pedestrian traffic accident severity by establishing independent variables including properties of drivers and pedestrian, weather condition, road characteristics, neighborhood environment, and so on. Lastly, this study also analyzed the relationship between road network structure and the severity of pedestrian traffic accident. The road network characteristics including shape, connectivity, and continuity affect driver’s behaviors as well as pedestrian’s walking behaviors.

This study confirms that the neighborhood road network characteristics are the one of major determinants on the severity of pedestrian traffic accident. This study also suggests policy implications to mitigate severe pedestrian traffic accidents at the neighborhood level.
References


Key Words:
Pedestrian Safety, Traffic Accident, Neighborhood Road Network, Urban Design

ASSESSMENT OF DIRECT RIDERSHIP MODELS (DRMS) FOR RAIL TRANSIT IN MARYLAND
Abstract ID: 806
Individual Paper Submission
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As part of the Maryland’s Smart, Green and Growing Initiative which aims to achieve a more sustainable future, the State establishes Transit Oriented Development (TOD) to strengthen coordination between land use and transportation planning. By encouraging more planned, dense, and mixed-use development around existing and planned transit stations, the State aims to maximize the value of its investment in transit, reduce congestion, greenhouse gas emission and pollution, and provide alternative to sprawl (MDOT, 2015). More specifically, the State aims to double its transit ridership by the end of 2020, continuously setting the ridership growth as a major goal to be achieved by Maryland Transit Administration (MTA) (MTA, 2012).

However, challenges exist, including higher upfront infrastructure costs, difficulty to induce private investment, and complex community related issues (NCSG, 2012). In order to address these challenges of TOD initiatives, it is critical for MTA to gauge the magnitude of impacts on ridership that they can accrue from investing in certain areas within TOD projects, such as more train service, more feeder bus service, housing development, job creation, conversion of park and ride lots. In such efforts, Direct Ridership Models (DRMs) have gained popularity because of their ease and cost-effectiveness in development and application. DRMs estimate transit ridership as a function of transit service level, bus connection, parking, and station level land use and sociodemographic characteristics and aim to explain how these elements, at the station level, can influence ridership.

Most of the current practices employ Ordinary Lease Square (OLS) regressions (Cervero, 2006; Chu, 2004; Kuby,2003). There is a little discussion in the current practice comparing different modeling approaches, identifying which statistical models are more appropriate for estimating transit ridership, and which models can easily facilitate discussion on planning policy implications. DRMs use ridership at the station level as the dependent variable. Since ridership data are count data and some initial descriptive statistics of Maryland ridership data indicate skewed distributions. Also, in order to capture the dynamic interactions between land use and transit usage, ridership of four time periods throughout
the day are collected (AM, PM, midday, and other). The distributions of ridership in nonpeak periods are even more skewed. Therefore, count models may be more appropriate for modeling in this case. A range of count model approaches will be applied, namely Poisson, Negative Binomial, and Zero-Inflated models, to test the robustness of the models. This research also attempts to address the questions on how to translate modeling results into policy. OLS-based log-log models (i.e. transforming both ridership data and all the independent variables into natural logs) will also be tested as they can express the relationships between, for example, number of households and ridership as a percentage change in one affecting percent change in the other. Model results will be compared in terms of the level of rigor of the models, model performance, and results transferability to policy.

The main expected results are two-fold: statistical modeling approaches implementations and empirical results for policy implications. More specifically, expected results will include: (1) which modeling approach can perform better to predict transit ridership; (2) whether count model can provide better model fit than model using OLS-based logarithm transformation; (3) which modeling approach can be used easily for transit agencies to test TOD policy scenarios; (4) the variance in the sets of variable affect ridership and their magnitudes of effects among different time periods, and (5) the variance in the impacts of the built environment on ridership among different rail systems. The results of the model are used to formulate policy guidance including identifying underperformed stations, prioritizing investment on certain areas, and long-range service planning.

References

- Maryland Department of Transportation. 2015 Maryland Transportation Plan. 2015

Key Words:
Direct Ridership Models, rail transit, modeling, Maryland

EXAMINING THE INFLUENCE OF THE ENVIRONMENTAL AND SOCIO-ECONOMIC FACTORS ON BICYCLE COMMUTING PATTERNS IN CHARLOTTESVILLE, VA

Abstract ID: 812
Individual Paper Submission

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1. Objective

There is an increasing number of metropolitan planning organizations producing and implementing the Bicycle Master Plan over the past decade. The benefits of cycling as a mode of transportation are well known: cutting greenhouse gas emissions, reducing congestion, and improving cardiovascular health. Previous studies have shown that the physical environment (topography, cycling infrastructure presence,
land-use mix, etc.) and the socio-economic characteristics (income, education level, etc.) of home and work have significant impacts on bicycling for transportation. However, there are still some controversies about the determinants influencing bicycle commuting. Specifically, studies have been hampered by limitations of available commute route data to investigate the “along-the-biking-route” experience of cyclists, including the ride distance, the time cost, the percentage of bike lane in commute trips, the road speed limit, the ease of cycling, and perceived safety. The City of Charlottesville was named one of the country's "Bicycle Friendly Communities" by the League of American Bicyclists in 2008, with a rapidly growing bike culture extending from the city to the metropolitan area. Taking Charlottesville metropolitan area as the study area, this study examines the influence of the physical environments and socio-economic characteristics of home-and-work Traffic Analysis Zones (TAZs), and “along-the-biking-route” factors on the percentage of bicycle commuters between the home-and-work TAZs.

2. Data and Methodology

First, appropriate metrics are used to determine the home-and-work locations from the latest Census Transportation Planning Products (CTPP 2006-2010) data collected at TAZ level. And we estimate the bicycle commuting route by extracting the first recommended route from Google Bicycle Maps. Then we calculate the along-the-route factors for each commute trip, including the distance, the time cost, the percentage of bike lane, the road speed limit, the ease of cycling, and safety. The share of the cycle commuting trips between the origin and destination TAZs from the CTPP data is set as a dependent variable in this study. The independent variables include physical and social characteristics of the origin and destination TAZs, such as land use mix, cycling infrastructure presence, median income, educational levels, car ownership rates, etc., as well as factors along the route to work, including the ride distance, the time cost, the percentage of bike lane, the road speed limit, the ease of cycling, and perceived safety. A series of multiple regression analysis is applied for quantifying the impacts from the physical environment, socio-economic factors, and along-the-route factors on the spatial variations of commuting by bike.

3. Results and Implications

The findings suggest that planners and policymakers should pay more attention to the provision of safe biking environments, and more people would opt to commute by bicycle if land use planning and transit environment design improved. Since bicycle ridership is a result of a collective impact from multiple factors at different locations, this study also suggests that planners and policymakers need to take a system thinking approach to evaluate their local bicycle facility networks and set more targeted investment priorities on bicycling infrastructure for supporting non-motorized commuting behavior in daily transportation.

References


Key Words:
bicycle planning, travel behavior, commuting, GIS

EXAMINING THE FACTORS THAT WILL INFLUENCE FLORIDA CONSUMERS TRANSPORTATION CHOICES: THE MILLENNIAL PERSPECTIVE

Abstract ID: 818
Individual Paper Submission

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Millennials, those born between 1982 and 2000, are the largest and most diverse generation in American history. The outlooks and activity patterns of this generation have been influenced by contemporary socioeconomic circumstances, including the prolonged recession and rapid spread of information and communication technologies, and differ significantly when compared to preceding cohorts. Many contend these differences have significant bearing for future transportation and residential location needs. The prevailing narrative has focused on Millennials’ apparent preference for alternative transportation and urban lifestyles. However, recent studies have called some of the underlying assumptions of this viewpoint into question, arguing that many of the observed effects are linked to economic circumstances and accompanying lifecycle delays rather than representing a departure from prevailing transportation and housing paradigms. In order to understand the degree and nature to which Florida’s future transportation and residential location needs would be impacted, an extensive literature review on millennial transportation and residential location choice was conducted and key questions were identified. From these questions, an online survey was developed and distributed to a stratified sample of Millennials and Baby Boomers who reside in Florida, as well as state visitors from the same age cohorts. Results (n = 601 completed surveys) indicate a high probability that automobiles will predominate. However, Millennials are more receptive toward non-motorized transport and expect the role of public transportation to grow. Research findings indicate Millennials’ unique outlooks and behaviors will have a more modest impact on future transportation and residential location needs than is often anticipated.

References

Key Words:
Millennial travel, sharing economy, information and communication technology, residential location choice, Baby Boomers

CAUGHT IN THE SERVICE GAP: UNDERSTANDING THE LINK BETWEEN TRANSPORTATION EQUITY AND METROPOLITAN FRAGMENTATION

Abstract ID: 821
Pre-Organized Session: Equity in Transportation Policy

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Do metropolitan regions with higher levels of local autonomy have more inequitable metropolitan transportation systems? A system that is more equitable should afford greater access to the assets of the metropolitan region, such as employment, education, health care, and other services. While such access can be beneficial for all metropolitan residents, it is especially critical for transit dependents, such as low-income individuals, the elderly, and those with disabilities. Metropolitan transportation systems must be built atop a regional political geography that tends to be highly fragmented: the 15 largest metropolitan statistical areas have, in total, more than 3,000 general-purpose local jurisdictions, such as counties, cities, towns, and villages. These jurisdictions vary in the degree of local autonomy they enjoy under state law along five dimensions: legislative initiatory powers, level of immunity from state interference, fiscal and technical capacity, and the ability to maintain territorial integrity. We would expect high levels of local autonomy to adversely affect system outcomes, both because of the greater potential for local jurisdictions to opt out of participation in the broader system, and because of the more generalized difficulty coordinating and cooperating across local boundaries. To test this hypothesis, we study a cross-section of the metropolitan statistical areas in the United States. We create an index of local autonomy that draws from coding of state statutes and regulations. We operationalize metropolitan transportation system equity through three measures: connectivity (the extent to which local jurisdictional boundaries within the metropolitan area require transfers), coverage (the extent to which a system serves, within reasonable walking distance, the extent of the urbanized area), and accessibility (the extent to which the system connects residents to the resources they actually need, especially employment). And we examine how autonomy and transit system equity are connected.

This research advances the scholarship on both metropolitan transportation systems and metropolitan governance in general. First, studies linking variation in transportation outcomes to variation in governance remain rare, and those that exist do not use a large enough sample of places to allow adequate institutional variation across regions and states. This study overcomes those challenges by working with a large cross section of metropolitan areas. Second, we use a measure of governance that does not conflate polycentrism with localism. In other words, we view the number of local governments in a region as problematic only to the extent those units use their autonomy to opt out of participation in regional efforts. We also do not measure autonomy through a single dimension, such as the presence or absence of home rule, because we recognize the concept as much more complex than that. Third, we examine metropolitan areas as a whole. While previous research has explored the efficiency and equity
of multiple transit agencies, or a single agency over time, this provides limited insight because many U.S. regions have multiple transit agencies providing service. For example, a large central city might have one agency while a major suburban county has another, and many residents might rely on both for a single commute or other journey. Finally, and most importantly, the research provides direct evidence about how local autonomy can hinder both the development and the performance of metropolitan transportation systems, and a set of policy recommendations for overcoming this obstacle to creating more equitable systems.

References


Key Words:
transportation governance, local autonomy, regional planning, transportation equity, transportation finance

“HERE WE DO EVERYTHING BY WALKING.” ARE OLD COLONIAS POPULARES IN CENTRAL MEXICO CITY SUSTAINABLE FORMS OF URBANIZATION?
Abstract ID: 823
Individual Paper Submission

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In Mexico City, the transportation energy use of people in consolidated informal settlements, known as old colonias populares, is relatively small. Many of the old colonias populares, which emerged in the 1960s-1970s are now concentrated in the innerburbs of Mexico City, offer good access to high-capacity transportation systems (Connolly, 2009; Eibenschutz and Benlliure, 2009). Also, many old colonias populares are well-connected to job-rich areas of the city and state services such as educational and health institutions (Ward, 1990; Graizbord, 2008). In addition, people in these communities have developed a local retail economy that allows them to work in small local businesses and to access affordable food and commodities. The central research question of this article is, to what extent do old colonias populares located in the innerburbs of Mexico City represent sustainable forms of urbanization? Specifically, what are the impacts of transportation access and local retail economies on the transportation energy use of people in these settlements?

To address these research questions, the author completed a transportation energy assessment with low-income families living in self-help dwelling units in the consolidated informal settlement of Isidro Fabela. Isidro Fabela has a strong local retail economy; good transportation access to Bus Rapid Transit
Systems, a commuter rail system; and is located close to Anillo Periferico, the major freeway of Mexico City. Transportation energy use was determined by randomly carrying out 110 origin-destination surveys in Isidro Fabela, from February to April 2017. Origin-destination questionnaires explored the variety of means of transportation; the time that household members use to commute to jobs, education, shopping, health, and recreational locations; and families’ car ownership and monthly gasoline expenditure. The author also compared transportation energy findings with her previous transportation energy assessment of housing developments located on the urban fringe of Mexico City that she developed in 2015 (Reyes, 2015).

The transportation energy comparison suggests that low-income families in old colonias populares use comparatively less transportation energy than residents in government-financed housing developments located on the urban fringe. However, car ownership does not differ dramatically in colonias populares and government-financed housing units (Guerra, 2014; Monkkonen, 2011). The driving factor that influences transportation energy use in old colonias populares is access to various means of transportation, including the BRT systems, low-capacity buses, the rail system, the subway, and even biking and walking (Graizbord, 2008; Guerra, 2014; Monkkonen, 2011). The author found that Isidro Fabela’s strong local retail economy, which is characterized by various adaptations of self-help buildings to house small local businesses, such as small grocery stores and car repair shops, allows people to work near their homes and avoid long commutes. Also, the author found that almost all residents do their food shopping by walking between five to ten minutes to small grocery stores located within Isidro Fabela. As one participant expressed in her interview, “Here, in Isidro Fabela, we do everything by walking.” In short, people in Isidro Fabela are not only sustainable workers but consumers of affordable food and commodities, in terms of transportation energy use. The author concludes that fostering sustainable forms of urbanization such as Isidro Fabela in Mexico City is one possible way to reduce transportation energy use and mitigate GHG emissions in major cities of the Global South.

References

Key Words: transportation energy use, sustainable forms of urbanization, urban location, local retail economy, Mexico City

POLYCENTRIC URBAN FORM AND NON-WORK TRAVEL PATTERN: A STUDY OF SINGAPOREAN RESIDENTS WITH A FOCUS ON SENIORS
Abstract ID: 829
Individual Paper Submission
Central theme and hypothesis:

While many empirical studies examined whether polycentric urban spatial structure lead to less commuting (e.g. Gordon et al., 1989), there is limited evidence on the impacts of polycentricity on non-commuting travels (Naess, 2011). On the other hand, studies on the non-work travel patterns mostly focus on the influence of neighborhood-scale built-environment characteristics (Boarnet and Crane, 2001), while only a few studies included metropolitan-level spatial structure variables (e.g. Naess, 2011). This study examines the impacts of “planned” polycentric urban form in Singapore on local residents’ travel for non-work purposes (i.e. shopping, social/personal, and leisure purposes). The central hypothesis is that better access to the city center and other planned commercial subcenters leads to an increase of non-work travel and a decrease of travel distance. We also expect that the travel impacts of access to different levels of commercial centers vary between the elderly (55 and over) and other adults (21-54) and among subgroups of the elderly (e.g. 55-64, 65-74, 75 and over), due to the differences in their health conditions and associated mobility constraints (Giuliano et al., 2003). By focusing on non-work travel, the difference in the urban form-travel behavior relationship among age groups may not be overestimated by their differences in employment status.

Approach and methodology:

This study develops a disaggregate model to examine the urban form correlates of people’s total daily travel distance and time for all non-work purposes and for shopping, social/personal, and leisure purposes, respectively. To deal with the issue of selectivity bias, we apply Heckman’s (1979) two-step estimator to include the probability of traveling in the analysis.

The key variable of urban spatial structure is constructed as the road network distance from individual’s residence to the nearest commercial centers of four different levels, including the downtown core, regional centers, sub-regional centers and fringe centers. The definition of commercial center hierarchy follows Singapore’s Concept Plan 1991 that mostly shaped the spatial pattern of the city-state today. Individual and households’ socio-demographic characteristics and neighborhood-scale built environment factors, including residential density, land use diversity, street connectivity, and distance to transit, are controlled as background variables in this study. To explore how the urban form-travel relationship differs with advancing age, we estimate models for each age group and test for differences between estimated coefficients across the models.

The travel data used for this study are drawn from the Household Interview Travel Survey (HITS) of Singapore. The transportation network data and land use data are obtained from Singapore’s Land Transport Authority (LTA).

Relevance to planning education, practice or scholarship:

This study aims to add to studies on the urban form-travel links by investigating the influences of urban form measures at both metropolitan-level and neighborhood-level on non-work travels in the Singapore context. The result of this study would imply about the success or failure of the polycentric development strategy and land use policies of Singapore in terms of facilitating local residents’ daily mobility. Moreover, given the rapidly population aging and increasing importance of non-work trips in Singapore, the results of this study would also be useful for Singapore’s future transportation and land use planning to meet the travel demands of its senior citizens.

References
FORECAST TO GROW: EVALUATION OF STRATEGIC MISREPRESENTATION IN AVIATION DEMAND FORECASTS

Abstract ID: 836
Individual Paper Submission

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Airport planners, through the master planning process mandated by the Federal Aviation Administration (FAA), build a case for runway expansion based on aviation demand forecasts. Yet, aviation demand forecasts – and transportation demand forecasts in general – are unreliable at best and biased at worst. It is so accepted that demand forecasts in transportation planning in general are inaccurate that the debate has shifted towards the contribution of bias, both cognitive and manipulative (Pickrell, 1992). While there is no systematic research on bias in aviation demand forecasts, literature on transportation demand forecasts in general as well as the economic development rhetoric surrounding airport expansions suggest a likely presence of strategic misrepresentation (manipulative bias) in aviation demand forecasts. Local sponsors pushing for airport runway expansions that typically cost hundreds of millions of dollars (sometimes upwards of $1 billion) never fail to tout their investment as an economic boost to their region. At the same time, the FAA allocates federal grants to airports based on local sponsors’ aviation demand forecasts. As a critical tool for planning process for such significant infrastructures, there is a need for baseline understanding of forecast accuracy and presence of strategic misrepresentation in aviation demand forecasts. In this research, I develop a methodology to detect and remove bias in aviation demand forecasts and fill the knowledge gap.

For this research, I apply the overarching framework of reference class forecasting introduced in Flyvbjerg, Skamris Holm, & Buhl (2005). Reference class forecasting improves forecast accuracy by incorporating an “outside view”; that is, it evaluates forecast outcomes of similar projects and uses the information for the forecast at hand. I evaluate forecast accuracies for aviation demand forecasts used in airport master plans for more than a dozen runway expansions from 2000 to 2011 by systematically comparing them to those for comparable airports that did not expand runways during the same period. These are more than 60 large and medium hub airports together (defined by the FAA based on the number of passengers) in the top 50 MSAs that play significant roles in both air transportation and regional economies. Following Suh and Ryerson (2017) that show clustering based on dynamic variables, i.e., variables that track change over time, result in more comparable airport peers in the era of
volatilities, I collect time-series data for both airport-specific and MSA-specific variables from 1990 to 2016 for each of these airports/MSAs and cluster them using k-means clustering algorithm.

I expect the outcome of this research to add much needed knowledge on the state of aviation demand forecast accuracy as well as the presence (or absence) of strategic misrepresentation in aviation demand forecasts. Airport planners and city planners can use the methodology developed in this research to make better informed airport planning decisions based on improved aviation demand forecasts.

References


Key Words:
airport planning, aviation demand forecast, strategic misrepresentation, reference class forecasting

VEHICLE QUOTA SYSTEM AND VEHICLE USAGE: EVIDENCE FROM SINGAPORE

Abstract ID: 839
Individual Paper Submission

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Transport pricing strategies to restrain vehicle ownership and vehicle usage are increasingly seen as essential elements in policy packages that aim to reduce vehicle dependence. A substantial body of research has examined the effects of fiscal tools on travel behavior. However, there are still gaps in the literature that need to be filled. First, existing studies on transport pricing often rely on stated preference surveys, largely due to the political barrier in increasing the cost of driving. However, research based on stated preference data is subject to response bias since respondents’ verbal accounts may not correspond to their actual behavior. Second, most of the empirical studies examining the impact of transport policies are cross-sectional in nature, which makes it difficult to construct causality and control for unobserved individual heterogeneity, such as travel attitude and life style preference. As argued by many researchers, longitudinal analysis examining travel behavior change in response to the changes in transport polices is crucial to understand the causal effect of transport policies. Nevertheless, panel data, which allow for longitudinal investigations, are rarely available in the transportation field.

In this research, we investigate the impact of vehicle ownership restraints on vehicle miles travelled (VMT) using Singapore’s vehicle quota system (VQS) as an empirical setting with a pseudo panel
approach. Under the VQS, an individual who plans to buy a private car has to obtain a Certificates of Entitlement (COE) through a bidding process. The government set the number of COEs available for bidding according to the allowable growth rate of vehicle population. In 2009, the Singapore government reduced the annual growth rate of vehicle population from 3% to 1.5% to align more closely with the pace of road network expansion, and to even lower levels in the subsequent years. Along with the reduction in available COEs for bidding is the hiking of the COE price premiums from approximately 10,000 S$ (approximately US$7,500) level to over 60,000 S$ (approximately US$45,000).

Unlike previous studies that rely on cross-sectional data, we create a pseudo panel dataset to conduct a before-and-after study on vehicle usage to reveal the causal relationship between vehicle quota and vehicle usage. We group individuals from repeated cross-sectional data into cohorts based on specific time-invariant characteristics. A cohort is then treated as a single observation and traced over time, with the mean values of individuals in each cohort representing each observation. Based on the pseudo panel, we employ a structural equation modelling (SEM) to investigate the complicated interactions among transport pricing, transport supply, the built environment, sociodemographic characteristics and VMT. We find that the car-ownership-control measures adopted by the Singapore government has a substantial influence on VMT reduction. However, the effectiveness of the high COE in reducing VMT is subject to the “sunk cost effect” – once individuals have spent a large amount of money in the COE, they tend to overuse their cars to make more out of their investments, thus offsetting the effect of car population decrease in VMT reduction. In this respect, car ownership charges should be carefully designed at a proper level in order to achieve the ultimate goal of reducing car usage. Our study offers some new evidences that support the effectiveness of fiscal measures in reducing the levels of car dependency.

References

Key Words:
Vehicle quota system, Vehicle miles travelled, Pseudo panel approach

ELECTRONIC RETAIL EFFECTS ON AIRPORTS AND THE GEOGRAPHY OF AIR CARGO
Abstract ID: 852
Individual Paper Submission

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Electronic retail (e-retail) today encompasses about 10% of U.S. retail sales, and it is still in early stages of an exponential growth curve. The field of urban and regional planning has examined e-retail’s implications for urban form and passenger travel while overlooking how e-retail’s effect on distribution networks fundamentally transforms surface and air freight patterns (Rotem-Mindali and Weltevreden 2013). Freight patterns matter for planners because they drive demand for roads, airports, and industrial land, and they influence the location of jobs and property tax revenue. E-retail tends to cause the logistics facilities that provide blue-collar jobs and anchor truck origin/destination patterns to locate differently than traditional brick-and-mortar (B&M) retail facilities because e-retail needs to provide faster delivery of smaller and less predictable shipments to many more destinations (Golicic et al. 2002). There is increasing need for research about e-retail’s effects on transportation geography and infrastructure. Currently, planners and policymakers have little guidance on e-retail’s effects on infrastructure and regional economies.

This study asks whether e-retailers seek out regions with different transportation or economic characteristics for logistics facilities compared with B&M logistics retailers. It addresses several regional characteristics hypothesized to matter more to e-retailers than brick-and-mortar (B&M) retailers, and highlights the airports’ potentially disproportionate role in shaping e-retail logistics geography. Airports are of particular interest because a fraction of high-value, time-sensitive goods travels by air, as evidenced by Amazon’s dedicated cargo airline and a recognized link between airports and e-retail (Maynard et al. 2015). In exploring the relationship between e-retail and airport regions, it is hypothesized that e-retailers will be more likely to locate logistics facilities in more central, better connected regions with responsive growth capacity.

The research method has two main thrusts. The first is an analysis of e-retail logistics facility locations for a sample of the 500 largest retailers as a function of regional and airport characteristics. The spatial analysis draws correlations that point to potential causes of e-retail locations, but it cannot confirm causal direction. Consequently, the second component enlists qualitative feedback from e-retail supply chain managers about the regional and airport characteristics that matter for their operations and why (Jakubicek and Woudsma 2011). The two analyses are linked to support explanations for the observed spatial patterns. Airports’ and air cargo’s roles are highlighted to test if e-retail logistics is more amenable to airport-driven development models than B&M retail (Appold and Kasarda 2013). E-retail is shown to cluster around highly connected air cargo airports and to be directly influenced—at least in some circumstances—by airports’ facilities and operations.

Together these two analyses outline the airport – e-retail relationship. The results matter for research and practice. On the research side, they shed light on new, firm-centric ways in which e-retail can influence regional development. These mechanisms move beyond replacing passenger travel and center on supply chain nodes anchoring freight trips. The results can also help practitioners identify strategies to make their regions more attractive to e-retail logistics in hopes of gaining associated jobs and property tax revenue.

References
AUTONOMOUS TRANSIT FOR AMERICA: WHAT WE CAN LEARN FROM THE EUROPEAN CITIES?
Abstract ID: 855
Individual Paper Submission

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The advent of autonomous vehicles is described as a revolution in transportation, and it is compared with the emergence of the automobile regarding the influences on urban spaces and lifestyle of residents. Fagnant & Kockelman (2014), as an example, estimate over $37.7 billion saving in U.S. economy caused by deployment of autonomous vehicles from safety, mobility and parking improvements at the 10% market penetration level and over $447.1 billion with 90% market penetration. Moreover, up to 1,000 lives could be saved annually by just 10% market share. Meanwhile, Connected Autonomous Vehicles have the potential to dramatically reduce 90% of all crashes that result from driver error (NHTSA, 2008). Giving these benefits the question is how we can prepare for this revolution.

There are three primary systems of autonomous, privately-owned or shared autonomous vehicles and autonomous transit that is a fleet of driverless buses or shuttles. Autonomous vehicles have distinctive characteristics that encourage transit usage, in comparison with conventional buses. Autonomous transit may be more economical on a per mile basis than non-autonomous transit, decreasing average trip expenses by deleting labour cost as well as giving services 24 hours 7 days a week. Findings of a study by the University of Texas show that for all 20,000 rideshare users in Austin, Texas, Shared AVs could reduce the fleet size to 1,700. On the other word, one SAV could replace 11 conventional rideshare vehicles and consequently reduce congestion (Fagnant & Kockelman, 2015).

Giving various advantages of autonomous transit, the greatest challenge of evolving this technology is how we can adapt American cities to this technology? This research seeks to address this gap by accessing different autonomous transit systems deployed in various European cities. They all done by CITYMOBIL2 which is a funded project by the European Unions. It could successfully transport over 60,000 passengers during three years of operation in seven various sites located in seven European cities (CityMobil2, 2016).

We selected these seven cities firstly because they are all done by the same project, and the analysis data is available for them. Secondly, in the selected autonomous transit systems providing services for all resident while autonomous transit in other cities such as Perth, Australia; Dubai, United Arab Emirates...
and Singapore are just limited to touristic purposes.

We evaluate the characteristic of each city and the challenges that deployment of autonomous transit faced there. The case studies are Oristano in Italy, La Rochelle in France, Lausanne in Switzerland, Vantaa in Finland, Trikala in Greece, CASA in France in Donostia-San Sebastián, in Spain. We review the Local Transport Plans and Automated Road Transport Assessment Report for each city and provide a comprehensive evaluation of each option.

Different aspects of automated transit such as the scale of the network (small, Medium or large scale), time of operation, the number of trips, distance covered the system, and a ratio of the number of passengers that used the services to the city population are considered for each fleet. Meanwhile, we consider characteristic of each city such as population, population density, median income, and education. Finally, the policy issue for each case study and their effect on the autonomous transit is analysed.

Considering the sprawling nature of American cities, developing public transit is expensive and inefficient in the areas with low density. The autonomous transit can be a decent alternative to providing on-demand or ridership services to these regions. The findings of this study can be used to the deployment of autonomous transit in American cities.

References

Key Words:
Automated Vehicles, Transit, On-demand mobility, Urban mobility, Dynamic car sharing

DOES SPRAWL HOLD DOWN UPWARD MOBILITY? A NATIONAL STUDY OF THE ASSOCIATION BETWEEN URBAN SPRAWL AND UPWARD MOBILITY
Abstract ID: 866
Individual Paper Submission

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Income inequality, and associated lack of upward mobility, have emerged as among the most important issues of our time, prompting concern and commentary from Pope Francis, New York columnist and Nobel Laureate Paul Krugman, author Thomas Piketty (Capital in the Twenty-First Century), and many others. While this issue makes the nightly news, upward mobility is barely on the radar of the urban planning profession.
Contrary to the general perception, the United States has a much more class-bound society than other wealthy countries (DeParle, 2012). The chance of upward mobility for Americans is just a half that of the citizens of the Denmark and many other European countries.

In addition to other influences, we ask whether metropolitan sprawl contributes to the low rate of upward mobility for lower-income residents. The most important indicator of sprawl is poor accessibility (Ewing, 1997; Ewing and Hamidi, 2014). Poor accessibility may be a particular problem for certain socioeconomic groups, since low income and automobile ownership make the distances inherent in sprawl harder to overcome. The spatial mismatch of low-income (and often minority) residents in inner cities, and low-skill jobs in the suburbs, is a particularly serious case of inaccessibility. Evidence demonstrates the fact that low-income residents have limited transportation mobility and that inaccessibility of job opportunities can affect their social mobility (Grengs 2010). Still, there is no evidence in the literature on how sprawl itself may affect the upward mobility of youth in disadvantaged families.

In this study, we seek to test hypotheses about the connections between sprawl and upward mobility for metropolitan areas and divisions in the U.S. using the recently released upward mobility data from the Equality of Opportunity Project (Chetty et al., 2014); and the recently released Compactness Indices from Measuring Sprawl 2014 (Hamidi and Ewing; 2015). Using the best available measures of both sprawl and upward mobility, we examined potential pathways through which sprawl may have an effect on mobility. We hypothesize three mediating (intermediate) variables between sprawl and upward mobility: social capital, racial segregation and income segregation. We use structural equation modeling to account for both direct and indirect effects of sprawl on upward mobility. Our examination reveals that sprawl has an effect through some, but not all, of the posited causal pathways. We find that upward mobility is significantly higher in compact areas than sprawling areas. The direct effect, which we attribute to better job accessibility in more compact commuting zones, is stronger than the indirect effects. Of the indirect effects, only one, through the mediating variable income segregation, is significant.

References

Key Words:
Upward mobility, Social mobility, Urban sprawl, Compact development

ASSESSING THE FAIRNES OF TRANSPORT SYSTEMS IN US METROPOLITAN AREAS
Abstract ID: 894
Individual Paper Submission
While transport researchers have studied the disparities created by modern transport systems for decades, systematic inquiry into the fairness of these disparities is of relatively recent date. One important reason why fairness has received limited attention lies in the related need to engage in normative reasoning, a form of academic inquiry that transport researchers have typically preferred to avoid (Páez, Scott and Morency 2012).

In this paper, we take an explicitly normative stance to evaluate the fairness of transport systems in US metropolitan areas. We draw on Martens’ recent work (Martens 2017), in which he developed an elaborate argument in defense of an intuitively appealing standard of justice: a transport system is fair if, and only if, it provides a sufficient level of accessibility to all under virtually all circumstances. The proposed fairness standard is thus a standard of sufficiency, a principle defended in a more general sense by a number of philosophers (e.g., Frankfurt 1987) and also proposed for the domain of transport by studies into transport and social exclusion (e.g. Farrington and Farrington 2005).

This sufficiency principle has been operationalized in a novel index: the Accessibility Fairness Index or AFI. The AFI score of a metropolitan area depends on three components: the height of the sufficiency threshold; the share of the population groups falling below the threshold; and the exact level of accessibility experienced by those population groups. The AFI score denotes the severity of the accessibility deficiency in a region, i.e. the extent of the deviation from a fair transport system.

The AFI has two important properties. First, the AFI score represents the fairness of a transport system in a single number, which enables direct comparison of the fairness of transport systems across metropolitan areas. Second, the AFI makes it possible to determine the contribution of each population group within a region to the overall level of accessibility deficiency. Because the AFI measure is totally decomposable and subgroup consistent (Foster and Sen 2008 [1997]), the contribution of each population group can be expressed as a percentage, with the contributions of all subgroups adding up to exactly 100%. The pattern of these percentage scores, across space and population groups, enable a detailed description and assessment of the fairness of transport systems.

We will use this index to analyze the fairness of transport systems in US metropolitan areas. For this purpose, we have obtained data on car-based and public transport-based accessibility for 30 metropolitan areas from the Accessibility Observatory at the University of Minnesota. We will use this database for two analyses:

- A systematic description of the (spatial) patterns of fairness of transport systems across the selected metropolitan areas. The focal variable is the contribution of population groups to overall accessibility deficiency (defined in a percentage; see above). We compare the patterns across the regions using common (spatial) statistics in an effort to identify groups of regions with distinctly different patterns.
- A preliminary explanatory analysis of the fairness of the transport systems of the selected metropolitan regions, for a number of accessibility measures and sufficiency thresholds. Here, we will analyze (1) whether different accessibility measures and sufficiency thresholds lead to largely comparable or fundamentally different ‘rankings’ of metropolitan regions vis-à-vis each other; (2) whether low or high rankings of metropolitan areas are primarily the result of land use patterns or of the transport network (drawing on work by Levine, Grengs, Shen et al. 2012); and (3) whether the ranking of metropolitan
areas is correlated to basic descriptors of urban regions, such as population size, employment size, surface area, and average income level.

We will present the first results of these analyses at the ACSP Conference in November 2017.

References


Key Words:
accessibility, justice, fairness, transport systems, USA

A MULTI-SCALE ANALYSIS OF BUILT ENVIRONMENT AND TRANSIT SYSTEM CHARACTERISTICS AFFECTING TRANSIT RIDERSHIP
Abstract ID: 899
Poster

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This study extends prior research on transit ridership, to improve the understanding of how the built environment and the transportation system interact to affect travel behavior. This study focuses on how station-level transit ridership is affected by factors at two different scales: The station and the metropolitan area.

Although there have been many studies on transit ridership, literature on the relationship between transit ridership, the built environment, and transit system characteristics has serious limitations: Previous work often focused on journey to work mode share, rather than total transit ridership, omitting non-commute trips. Research on the effect of transit system characteristics fails to control for frequency/headway, the network effect of system scale, and the local accessibility of transit stations. Further, many studies of transit ridership are limited to a single metropolitan area, which limits the generalizability of their results. (Claiming results from Los Angeles or Buffalo are applicable to San Jose or Salt Lake is questionable, for example. The use of a single metropolitan area also makes difficult to determine whether station-level or metropolitan-scale characteristics are more important. This research rectifies these limitations in the literature and expands the available knowledge on the factors which influence transit ridership.

The 'D-variable' framework is used to provide built environment and transportation system variables known to affect travel behavior. Because these variables are often correlated, many recent studies increasingly make use of structural equation modeling, factor analysis, or primary component analysis. This study takes advantage of the rich database of D-variables already developed for the Hamidi & Ewing Compactness/Sprawl index. To discover the influences of variables at different scales,
Hierarchical linear modeling (HLM) will be used, with stations nested within metropolitan areas. This will make it possible to determine the influence of scale-specific variables. Data for station-level ridership for 2010 will be collected for six metropolitan areas with light rail systems. To improve the generalizability to future light rail systems, only systems that began operation since 1980 are considered. Data about transit system characteristics (number of stations, jobs and population accessibly by transit) and station level characteristics (light rail headway, parking prices, bus connections) will be collected. This research will provide a better understanding of what factors, at which scales, influence station-level transit ridership, and deliver a station-level model of transit ridership.

References


Key Words:
Travel Behavior, Transit, Ridership, D Variables

UNJUST RISK: AN ENVIRONMENTAL JUSTICE PERSPECTIVE ON CYCLIST SAFETY
Abstract ID: 906
Individual Paper Submission

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Cycling has caught the attention of researchers and policy makers in diverse fields as a potential solution for a wide range of public health and environmental problems. Debates about types and locations of cycling lanes in urban areas continue as politicians, residents, merchants, and other stakeholders examine the allocation of funds and scarce street space. At the heart of these debates is the issue of safety and comfort for both current and potential cyclists. However, much of the discourse around utilitarian cycling ignores inequalities and discrepancies in terms of access to safe areas to cycle across different socio-demographic groups.

The inequitable distribution of risk in active transportation raises questions of social equity. Residents of socially disadvantaged neighborhoods may not only be at greater risk to physical harm while biking, but their negative experiences may limit their freedom to interact with the larger urban environment. In other words, poor environments for active transportation may perpetuate disadvantage along social and geographic lines. Unlike environmental and economic concerns, social equity – the fair distribution of
benefits and costs among social groups (Martens, Golub, & Robinson, 2012) – has not yet been widely adopted as a consideration in cycling planning (Lee, et al., 2017).

This research examines safety risk to cyclists as a function of socio-demographics, available infrastructure, and environmental factors. We aim to understand the distribution of cyclist risk, hypothesizing that such risk is disproportionately impacting poor and minority communities. Because residents of socially-disadvantaged neighborhoods are less likely to own or commute by personal automobile and are thus compelled to walk or cycle, their collision risk and pollutant exposure denote a “double burden” of socioeconomic and environmental deprivation caused by the redistribution of commuter externalities to inner-city neighborhoods (Yiannakoulos & Scott, 2013).

Our research adds to the literature by examining the social and spatial context of cycling crashes. We examine cyclist/vehicle collisions in the State of Georgia over a ten-year period (N=6008). These data provide the locations, date, and time of each crash as well as demographic information (age and sex), type of vehicle, road and weather conditions, as well as the fault as determined by the responding police. In conjunction with these data, we examine spatial information on air quality and other environmental exposure data from the Environmental Protection Agency’s Smart Location Database as well as Census information. We then conduct a spatial analysis using these three data sources to develop a clearer understanding of the potential “double burden” experienced by marginalized groups.

We find that, while crash frequency is relatively consistent across income quartiles, cyclist are found responsible for crashes more often in lower income areas. We also find that the fatality rate in the highest quartile of income is almost double that of lower income quartiles. Our findings indicate that nearly 85% of crashes occur in daylight on the roadway, and cyclists, particularly male cyclists, are almost twice as likely as drivers to be found at fault in a collision. We also observe a large variance by county in terms of crash frequency. For example, Chatham County (the Savannah region) experiences nearly as many crashes (1,036 crashes and 1,135, respectively) as Fulton County (the Atlanta region), despite Chatham County having a quarter of the residents and one-third the residential density. We discuss the implications of our findings for cycling policy and planning.

References

Key Words:
Cycling, Risk, Environmental Justice, Spatial Analysis

A BIKESHARE STATION AREA TYPOLOGY TO FORECAST THE STATION-LEVEL RIDERSHIP OF SYSTEM EXPANSION
Abstract ID: 914
Individual Paper Submission
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The continued global introduction and expansion of bikeshare systems offering widely available origin-destination data has opened exciting avenues for bikeshare research. In response, a flux of recent bikeshare studies have investigated the sociodemographic determinants and safety or natural environment deterrents of system ridership. This increasing abundance of disaggregate spatial bikeshare data has also spurred recent calls for research aimed at extending the utility of these contextual data to model bikeshare demand and trip patterns. Furthermore, as planners and operators seek to expand systems into previously unserved neighborhoods, a need exists to provide a deeper understanding of the spatial dynamics of bikeshare system use.

This study of the Washington, DC metro region’s Capital Bikeshare (CaBi) program answers this call by adopting a latent class cluster analysis framework (LCCA) to classify station areas based on their variation in the built environment aspects of development pattern, urban design, and transportation infrastructure. As with other cluster strategies, the impetus behind using LCCA is an identification of interrelated groups of observations that are distinct from other relatively homogenous categories. However, within this study, LCCA’s model-based, probabilistic method offered several advantages over traditional clustering approaches, including the estimation of an objective standard for selecting the number of bikeshare station area types and calculation of posterior probabilities from model parameters that permitted the prediction of station sites outside the current CaBi system. Specifically, five station area types were categorized based on the level of activity density, jobs-population balance, housing stock, street connectivity, and rail station access found within one-half mile of the over 400 CaBi stations in spring 2017. This proposed typology was then integrated into the Bikeshare Location and Origin-destination Count (BikeLOC) model to explore a potential expansion of the CaBi system into neighboring jurisdictions and forecast the associated travel patterns between current and modeled stations. BikeLOC is a transportation planning tool designed as a hierarchical recursive model with a series of modules that collect open-source built environment data, predict potential bikeshare station locations, and estimate ridership activity between current and proposed stations.

This study’s introduction of a bikeshare station area typology based on key built environment indicators permits greater insight into what it is about particular contexts that supports their higher station-level activity. Further, as demonstrated, our proposed typology can be integrated into transportation planning models to not only inform planners and agencies of candidate locations for system expansion, but also provide a sense of the station type and associated ridership activity that may result from siting within a certain neighborhood.

References


Key Words:
Bikeshare, Built environment, Latent class cluster analysis, bike ridership forecasting

FRAMEWORKS FOR THE COMPATIBILITY OF TRADITIONAL AND GREEN INFRASTRUCTURES IN URBAN CONTEXTS
Abstract ID: 916
Individual Paper Submission

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A common part of the urban infrastructure landscape is traditional and relatively more recent green infrastructures. These two infrastructure types are referred to in different ways, e.g., as “gray” and “green” infrastructure or “structural” and “non-structural” technologies and each category usually encompasses numerous technologies. The compatibility of these two infrastructure types and their interconnections is a critical goal, since they are often co-located or function together, and consistency and synergy is critical. This perspective is unique given that each type of infrastructure is usually evaluated separately, yet understanding their interaction is needed in particular to support the benefits that green infrastructures provide. Infrastructure interconnectivity is a popular research area and poses challenges for planning. Interconnected infrastructures are typically referred to as dependent or interdependent infrastructures (Rinaldi, Peerenboom and Kelly 2001). They are often portrayed in a network framework exhibiting specific properties that are related to node and link structures and activity flows among them (Zimmerman 2014).

This presentation first provides a foundation for infrastructure interconnections between gray and green infrastructures to achieve compatible, integrated, interconnected infrastructure systems applied to transportation, water management, and energy. An example of simultaneous benefits across these infrastructures is that while green infrastructures involving vegetation manage water to reduce flooding in general, they are connected to transportation to prevent flooding of roadways and rail. In addition, they potentially save energy used for structural drainage controls. Second, a framework is presented to portray gray and green infrastructure interconnections. Although an extensive array of models exists to address interdependencies (Ouyang 2014), frameworks that include both structural and nonstructural systems and their combinations rarely appear. Extending these models into this area enables functional and geographic or spatial conflicts and consistency and synergy to be identified. Third, how gray and green infrastructure synergies promote multiple modes of transportation, e.g., rail and bus transit connections (Zimmerman et al. 2015) and rail and bike share (Griffin 2017) is addressed in terms of energy use and flooding reductions. Finally, the viability of merging these two infrastructures relates to finance. Although traditional infrastructure financing has a long history, mechanisms for green infrastructure have only recently appeared, and combined financing where both types of infrastructure occur is needed. Examples of these mechanisms are identified and the compatibility and synergies between finance for both gray and green systems are emphasized. Most importantly, is the need for equitable financing and financing the integration of gray and green infrastructures will be presented for equity. The approach in this presentation draws on data sets from case-based information and network-based frameworks to portray alternative interconnections between gray and green infrastructures.
This work benefits planning in presenting a set of consistent reinforcing interdependencies for gray and green infrastructures, techniques for identifying and analyzing these, and financing examples to enable both to co-exist and promote green infrastructure benefits. The framework is applied to developing criteria for identifying conflicts among interdependent systems as a tool for planners to make decisions about infrastructure choices, particularly those that affect transportation.

References


Key Words:
infrastructure interconnectivity, infrastructure interdependencies, green infrastructure, gray infrastructure, infrastructure finance

ASSESSING THE EFFECTS OF TRANSPORT INFRASTRUCTURE ON NEW FIRM FORMATION, NEW EVIDENCE FROM THE NATIONAL ESTABLISHMENT TIME SERIES
Abstract ID: 918
Individual Paper Submission

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Based on the assumption of economic agglomeration, many believe that firms will cluster to share information and take advantage of a pooled labor force, to increase communication, as well as to lower transportation costs. Consequently, transport becomes an important factor that influences entrepreneurs’ location decisions. Empirical evidence has confirmed that transport infrastructure can lead to agglomerations of economic activity (Chatman et al., 2016; Holl, 2004a; Maoh & Kanaroglou, 2009). Therefore, it is reasonable that businesses tend to locate close to transit stations to take advantage of the easy access to transportation for their businesses, the agglomeration externalities/competition of co-location, amenities nearby, and policy incentives provided by local governments.

This paper provides in-depth understanding of potential benefits of investments on transportation infrastructure, in particular, rail transit. With the hypothesis that transport infrastructure is a key determinant of new firm birth, the goal of this paper is to investigate the potential influences of changes in the accessibility from the Hudson Bergen Light Rail system on the location patterns of new firms in Hudson County, New Jersey by answering these questions: What are the determinants of firm formation in developed urban areas? Does the impact of rail services on firm birth in New Jersey area similar to those estimated in previous studies?
Considering the lack of attention of previous U.S. studies to the role of transport infrastructure on new firm formation, this paper fills a gap in the literature by providing further analysis of firm locational effects of transport infrastructure improvements on different sectors and at detailed spatial scales. The National Establishment Time-Series (NETS) database, a detailed longitudinal firm-level dataset, will be combined with other socio-economic data using GIS (geographic information system) to create a linked dataset from which econometric models can be estimated and tested at fine spatial scales. The analysis will begin with the description of the spatial patterns of new firms and selected socio-economic variables. This can provide evidence of whether and how firms cluster within the study area over time. All variables will be aggregated to census block level, and negative binomial models will be applied to examine the associations of new firm births with proximity to rail stations. By mapping predicted probabilities for each industry by sizes (based on employment size) and comparing these outcomes with observed spatial patterns over the study period (1991-2013), this paper also examines the extent to which locational preferences of different sectors and firms at different sizes translate into aggregated land use patterns, suggesting how transportation infrastructure influences firm location choices and land use structure in developed urban areas.

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Key Words:
firm formation, economic agglomeration, transit, accessibility, urban economics

MODELING THE LAND USE IMPACTS OF AUTONOMOUS VEHICLES

Over the last three years, the prospect of autonomous and connected vehicles have grabbed the attention of both the public at large and the planning community. Many vehicles on the road already possess low level automation capabilities, such as lane assist, parallel parking, and adaptive cruise control. Though much of the literature up to this point has focused on the engineering, design, and experience of such vehicles, from a planning perspective the broader social, economic, and land use implications deserve more attention. Autonomous vehicles have the potential to dramatically alter long held transportation patterns as time in autonomous vehicles promises to be far more productive and enjoyable than existing commuting options. Along with the proliferation of communication technologies that allow for working from home, autonomous vehicles have the potential to encourage more trips and longer trips, particularly during already congesting commuting hours. With more tolerant attitudes toward long distance commuting, individual household decision might accumulate into more dispersed land use
Existing integrated land use and transportation models will be one of the most important avenues for exploring the implications of autonomous vehicles on land use patterns. Using the Maryland Statewide Transportation Model (MSTM), a four step travel demand model, and the Simple Integrated Land Use Orchestrator (SILO), a microscopic household location model, the researchers examine the potential land use impacts. The SILO model allows for the connection of individual household decision to the overall land household distribution in order to clarify why decision patterns are altered. Realizing that models can never be validated for human behavior in conditions unlike our own, the researchers will establish a baseline autonomous vehicle scenarios, then use sensitivity testing to determine which assumptions have the greatest impact on land use decisions. These assumptions include the value of in vehicle time, cost of auto-mobility, roadway capacity, and the distance that households are willing to travel to work, as well as others. Because SILO allocates households but takes employment as exogenous, the authors will test the autonomous vehicles under different employment distributions. We will not fully understand how autonomous vehicles will change our decisions about where to live and how to travel until the technology has matured and been adopted; however, this paper demonstrates how researchers can examine the possibilities of the new technology using existing tools.

References


Key Words:
Autonomous Vehicles, Land Use, Transportation, Sustainability

WHAT DETERMINES TRAVEL DEMAND BY BUS IN THE UNITED STATES? A NATIONAL STUDY AT METROPOLITAN STATISTICAL AREAS LEVEL

Abstract ID: 964
Individual Paper Submission

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This study investigates the determining factors for transit travel demand by bus mode at US Metropolitan Statistical Areas (MSA) in 2010. It examines the impacts of both internal and external factors on transit travel demand. Broadly, it analyzes the relationships among physical environment, socioeconomic environment, transit systems characteristics, and transit travel demand.

Although the demand for transit travel in the United States has historically been low, it is generally believed that factors like gas price hike in the last decade compelled many auto drivers to switch to ride
transit. It is important for the transit policy makers, planners, managers and operators to understand the contemporary nature of the explanatory factors for transit demand so they can make appropriate policies and take necessary actions to provide efficient transit systems to the tax payers. Hence, there is a need for a study that analyzes transit travel demand in recent years, which this study does.

The authors collected data on all 358 MSAs in the country. However, the final regression model included 273 MSAs and dropped 85 due to missing values. The data for the study mostly comes from two sources: the Census Bureau and Integrated National Transit Database Analysis System. The authors constructed few variables as well from the existing variables. For instance, transit service intensity was constructed by dividing vehicle miles by route miles. The authors also constructed variables like metropolitan sprawling index following Ewing et al (2003). Transit orientation pattern, a dichotomous variable, was estimated by combined methods of surveys and visual inspection.

The paper employed a log-log regression model to address the issues of non-normality, non-linearity, and heteroscedasticity. It used VIF, Tolerance, and correlation coefficients to determine multicollinearity among the explanatory variables. The R2 value for the model is 0.791, which indicates that the independent variables selected for this study explain about 79% of the variability in the dependent variable, passenger miles per capita. The F statistic for the model is 75.582 with a significance level of 0.000, which shows that the model fit was good.

External factors are the ones that transit managers and operators cannot exercise their control over. Unlike the external variables, internal factors are system-specific that the transit managers and operators can adjust and control. The results show that the internal factors are predominantly the significant predictors of transit travel demand by bus mode. In fact, seven out of eight internal factors proved to be significant determinants with the exception of transit orientation pattern. The significant internal predictors are transit fare, transit supply, revenue hours, average headway, transit safety, transit service intensity, and presence of rail transit. Contrarily, the percentage of carless households, percentage college population, and percentage of immigrant population are the external factors that proved to be significant predictors for transit demand by bus.

Because this is a comprehensive study that covers the entire country, the significance of its findings is worth mentioning. Since the internal factors are predominantly the significant predictors of transit travel demand by bus mode, it is probably safe to argue that the transit managers and operators can decide on the quantity and quality of transit services they will be able and willing to supply to the taxpayers without depending on external factors. In other words, they can increase transit ridership by adjusting the significant factors that are specific to their transit systems for which they do not need to depend on the outside world. Keeping this in mind, the transit policy makers and planners may make appropriate and informed plans, policies and decisions that will help transit authorities provide efficient transit systems to its users.

References


Key Words:
Travel Demand by Bus, External Factors, Internal Factors, Log-Log Regression Model, Transit Supply

WHAT MOTIVATES THE DECISION TO GIVE UP A CAR: THE ROLE OF PARKING SCARCITY
Abstract ID: 965
Individual Paper Submission

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Do families give up a car when they move to neighborhoods with high-quality public transportation? Our prior research suggests there is no systematic pattern (Smart and Klein, 2017); some families do, and others do not. In this paper, we seek to explain what motivates some new arrivals in transit-rich neighborhoods to reduce their automobile ownership, focusing on the role of restricted or paid parking. We hypothesize that the lack of a relationship between car ownership and transit supply may be a result of the ease and affordability of retaining a car in most “transit-rich” places in the United States; only 6.5 percent of US families pay anything at all for parking in a typical month (Panel Study of Income Dynamics, 1999-2013). We expect that those families who move to transit-rich places with constrained parking will be more likely to reduce car ownership and related expenditures.

We use data from a confidential version of the Panel Study of Income Dynamics (PSID) to examine the role of parking constraints on families’ car ownership decisions. Our dataset contains information on the transit richness and walkability of families across the United States, as well as their level of car ownership and automobile expenditures for eight waves spanning 1999 to 2013. To this, we add the before-and-after Census block-level parking conditions for over two thousand families who moved between any two waves (for a total of over 16,000 moves). We follow the methodology used by Guo (2013), examining the local parking conditions using online mapping tools (e.g. Google Earth and Google Street View) at the Census block level. We categorize the conditions on a spectrum from unconstrained to very constrained. Examples of the former include typical suburban construction with both off-street parking in driveways and plenty of available on-street parking. Very constrained parking is typified by dense urban areas with limited driveways and on-street parking that is in high demand. For constrained parking environments, we additionally include the cost of parking, obtained online. We expect that those families who move to transit-rich places that also have constrained parking will be more likely to reduce their car ownership levels and related expenditures.

We conduct a series of panel regression models of families’ levels of automobile ownership and expenditures, controlling for a number of covariates known to be associated with car ownership. These include socioeconomic factors as well as family composition, age, and time trends accounting for larger macroeconomic factors. Our findings will help illuminate the effectiveness of parking policy and pricing.
as one of policy levers that might help to reduce automobile use in the United States; previous research has suggested that increasing transit service alone has no systematic effect.

References


Key Words:
Parking, Transit, Car ownership, Location affordability

THE IMPACT OF LAND USE ON VEHICLE TRAVEL BY URBAN STRUCTURE: A CASE STUDY OF CALGARY, CANADA

Abstract ID: 979
Individual Paper Submission

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Calgary, a Canadian city in the Province of Alberta, has grown at an unpredictable rate for several decades. Since 2001, the population of the city has increased by 24% with 103% of the growth experienced in the Greenfield sectors that have fewer services and transportation options (The City of Calgary, 2013a). The lack of services in the suburbs and the uneven distribution of population growth across the city have resulted in automobile dependent travel behavior for its residents. To reduce vehicle travel, the city has implemented various land use policies in a way to promote compact and mixed-use development and support sustainable modes of transportation (The City of Calgary, 2013b). However, there are substantial discrepancies in automobile dependency by the urban structure of the city. While the city center and inner city areas show relatively dramatic decreases in auto travel between 2001 and 2011 due to the increased use of public transit and non-motorized modes, the established areas and Greenfield sectors show either increased or steady trends in the auto mode share for the decade (The City of Calgary, 2014).

While most existing studies demonstrate the regional impacts of land use policies on vehicle travel (Ewing & Cervero, 2010; Zhang, Hong, Nasri, & Shen, 2012), few studies have investigated the impacts of those land use policies on vehicle travel at the local level. Thus, this study addresses two research questions. This study first investigates how land use policies the city implemented influence vehicle travel behavior of its residents according to the city’s urban structure and also examines what the potentials and challenges for the city to reduce vehicle travel exist.

Utilizing the Calgary and Region Travel and Activity Survey (CARTAS) in conjunction with spatial datasets from the City of Calgary this study employs a segmented regression method, also known as a piecewise regression, to examine the impacts of various land use policies on household vehicle miles of
travel (VMT) by the urban structure. Four urban structures of the city (i.e., city center, inner city, established area, and Greenfield) are used as breakpoints.

The results suggest that there is no additional benefit of VMT reduction through land use policies in the city center. However, the light rail transit (LRT) is the key component to reducing household VMT in the established areas and Greenfield sectors. The neighborhoods near LRT stations show a lower level of household VMT. The results also suggest that households tend to drive significantly more as they live further from the city center where more than a half of the city’s employment are located.

The outcomes of this study will provide planners and policymakers with a clearer understanding of the connection between land use policies and vehicle travel while taking consideration of the urban growth context.

References

Key Words:
Land use, vehicle travel, urban structure, Calgary, Canada

BICYCLE ROUTE PREFERENCES OF UNIVERSITY COMMUTERS REVEALED BY SMART-PHONE GPS DATA: SAFE, SEPARATED, FLUID, AND GREEN
Abstract ID: 980
Individual Paper Submission

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Promoting active modes of transportation, such as bicycling, is an effective way to improve the vitality of urban spaces and mitigate the negative environmental and health effects of our long and continued dependence on motorized vehicle travel. One promising way to encourage bicycling is to provide a well-planned bicycle infrastructure reflecting riders’ needs. Based on revealed bicycle route preference data, this research aims to identify and evaluate the importance of various attributes of bicycle facilities influencing bicyclists’ route choices and their propensities to take detours.

Previous studies account for physical, functional, and operational characteristics of chosen and alternative routes as determinants of these choices (Sener, Eluru & Bhat, 2009). However, there is a lack of consideration on the environmental characteristics of these routes, such as surrounding land-uses and landscape. These environmental parameters are important because riders seek diverse utilities, such as health and recreation, even during utilitarian trips. Surrounding land-uses are also associated with
average daily traffic and pedestrian volumes, which affect bicycling conditions (Morency et al., 2012). Information on the effects of the built-environment can inform decision makers on where to invest in and how to design bicycle facilities.

In this study, we use bicycle trip data to analyze bicycle route preferences and their associations with facility types, land-use and other environmental features. Data were collected through smartphone GPS in central Columbus from September through November, 2016. We recruited study participants from The Ohio State University through email invitations, fliers, and advertisement on campus buses. Respondents were asked to download a smartphone application, CycleTracks™, developed by San Francisco County Transportation Authority (Hood et al., 2011). The individuals recorded their bicycle trips by turning the app on and off at the beginning and end of each bicycle trip. We collected data on 1,584 trips. With a high resolution network reconstructed by the authors to include all possible links available for cycling, GPS traces were matched to the network links using ArcGIS custom routines (Dalumpines & Scott, 2011). After a series of data screening and cleaning steps, in addition to the removal of identical routes generated by the same rider, 1,083 utilitarian trips by 76 cyclists were available for our analysis.

We extract a comprehensive set of attributes for these 1,083 routes, including: (1) roadway physical characteristics and classes (e.g., grade, the number of lanes, stop-signs, traffic lights, intersections, on-street parking, and arterial, secondary, tertiary, residential, and service roadways), (2) bicycle-related facilities (e.g., bicycle trail, path, and lane), (3) route characteristics (e.g., travel length, number of turns, trip purpose), (4) roadway functional characteristics (e.g., average daily traffic estimates, speed limits) and (5) surrounding land-uses and natural features (e.g., commercial, residential, and presence of trees). We compare the mean values of each attribute between the chosen and shortest routes. We also implement frequency analysis comparing the number of common street segments across the chosen and alternative routes to understand cyclists’ use of the existing street facilities. Finally, we develop a route choice model to evaluate the determinants of detour decisions and trade-offs between different network attributes (Broach et al., 2012). For this, we formulate a path-based binary logistic regression model that estimates the likelihood of taking a detour instead of the shortest path based on various route-level attributes.

Results show the need for expressways for bicyclists: many bicyclists are willing to take a detour for a long stretch of bicycle trails which provide them with a continuous ride along rich greenery. Bicyclists tend to prefer narrow roadways located in residential areas rather than main streets. Average upslope, separation from vehicular traffic, and number of turns are influential factors for route choices.

References

Key Words:
Bicycle route choice, Revealed preference, Bicycle GPS data, Bicycle facilities, Built environment

PUBLIC GOALS, PRIVATE ACTIONS: ACTIVE PROMOTION OF EQUITABLE TRANSIT-ORIENTED DEVELOPMENT UNDER ENTREPRENEURIAL URBANISM
Abstract ID: 985
Individual Paper Submission

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Transit-oriented development (TOD) continues to grow in importance—including in regions with little experience implementing TOD—as a strategy for meeting goals for sustainable regional growth, enhancing quality of life and improving the utilization of transit systems. These are important public goals and broadly shared among planners. In U. S. practice, however, TOD implementation depends on private-sector actions motivated by profit: American cities are in the midst of an intensifying, multi-decade trend of a shift in the role of government away from direct provision of public goods and towards catalyzing investment through alliances with the finance and real estate sectors. This entrepreneurial model of urbanism presents opportunities to leverage private resources for TOD implementation in dynamic, desirable locations. It also creates problems for accomplishing TOD on a scale commensurate with achieving broad regional planning goals and for implementing TOD in an equitable manner that includes affordable housing and supports existing communities.

In this paper, we explore the research question: What roles can the public sector take on in actively promoting equitable transit-oriented development under the current urban governance regime? Based on a series of semi-structured, long-form interviews with senior and executive staff at programs charged with promoting TOD, we explore organizational goals and relationships in TOD promotion, as well as participants’ understandings of outcomes and interactions with the private sector. As TOD promotion relies on the persuasion and attraction of development—rather than its direct management, it is crucial to consider the human interactions involved, as well as how actors understand them.

Taking an interpretivist approach focused on participants shared understandings of the process of TOD promotion, we conduct an iterative process of thematic analysis moving from broad concepts and their intersections to more specific ideas and understandings, organized using the NVivo software suite. Participants primarily understand TOD as a tool for achieving regional land use planning goals, more so than for influencing travel behavior for its own sake. Given the importance of land use planning in driving efforts to promote TOD, it is noteworthy that participants broadly understand current zoning regimes as being in conflict with their goals. In a reflection of the entrepreneurial model of urban governance, participants see the attraction of so-called anchor employers—large firms able to form the nucleus of a new employment center—as crucial to employment-focused TOD. More surprisingly, participants understand affordable housing as supportive of successful TOD, not in conflict with it, due to guaranteed high occupancy and the attraction of residents likely to use transit forming a more functional connection between transit stations and surrounding communities. Finally, participants understand long-term perseverance as critical for region-scale TOD implementation and for constructing the organizational structures and planning practices needed to accomplish it. The paper advances
planning scholarship by adding to a nascent body of literature focused on the practicalities of TOD implementation, as opposed to TOD impacts or design, and broadens it by considering the previously under-explored area of actors’ relationships and understandings of the process of actively promoting TOD.

References


Key Words:
transit-oriented development, social equity, regional planning, urban governance, public-private partnerships

STREET LIVABILITY, HEALTH, AND HUMANITY IN THE AGE OF DRIVERLESS CARS: INTEGRATING TRANSPORTATION, LAND USE & LIVABILITY

Abstract ID: 992
Individual Paper Submission

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As the world drives toward automated vehicles, many questions remain as to the possible impacts this new wave of transportation innovation will have on the livability and safety of our streets, and arguably aspects of our humanity.

As the rise of automobile use and sprawl in the mid-20th century faced a then nascent planning profession, we are perhaps better prepared but with a variety options before us to best shape this significant technological transformation. Building on seminal work on the impacts of car traffic on community health and livability, this paper builds on the comprehensive, evidence-based examination of the existing power struggle between automobiles, residents, pedestrians and other users of our streets, to frame how we should move forward. Along these lines, this paper examines approaches from multiple perspectives including transportation, land use, and urban design to best guide this new wave of transportation innovation toward supporting community livability, health, and humanity.

Based on past experiences with studies on the impacts of traffic on the user-experience of pedestrians and bicyclists, we know that increased exposure to automobile speed and volumes lowers the quality of the experience for pedestrians, bicyclists and residents. Many questions remain as to the possible impacts this new technological tidal wave will have on the experiences of those outside the protected confines of driverless cars. Issues of livability, safety, and health will certainly be put to the test--moderating speeds, vehicular size, and behavior will be key in determining outcomes. But how will
these streets really feel? Will we, can we, be lifted up in spirit in the presence of driver-less vehicular operation? Or will the incessant, droning, uniform, and predictable, driver-less movement undermine our sense of what it means to be human? If this new wave of driverless cars are large, fast, and everywhere, there is little doubt that street humanity will be deadened — these are key questions we deal in this paper.

This paper utilizes scenario based research as a scholarly methodology to present and compare different outcomes of autonomous vehicles on our cities: (i) the impact of an efficiency focus; (ii) the impacts of increased mobility on land-use; and (iii) the outcomes for street livability and safety for pedestrians and bicyclists.

This paper will serve as the foundations of one of the final chapters of Livable Streets 2.0—the update to the seminal book presenting the general theory that streets are for living, and not merely conduits for cars.

The findings of this paper include the impacts of intersection efficiency, increased sprawl scenarios, decreased car ownership / shared usage scenarios, pedestrian and vehicle adapted street design, and potential overall benefits to safety. Furthermore, the findings of this paper contribute to the research surrounding the future of urban mobility, identifying numerous areas for further research, and recommendations on the subject of Local, State and Federal policy. This paper concludes that transportation and land use integration with a focus on livability as a guiding principle, is an important approach for planners, engineers, and urban designers to follow if they want to achieve livability for entire regions and communities in the era of driverless cars. This paper also policy solutions—including a discussion of the regulatory structures—that can effectively transform the power dynamic of our streets so they can be comfortably shared and more livable and equitable for all.

References

Key Words:
Automated Vehicles, Urban Design, Transportation, Livability, Land use

**SHORT DISTANCE TRIPS: WHAT MAKES US CHOOSE AUTOS OVER OTHER MODES FOR SHORT DISTANCES?**

Abstract ID: 1010
Individual Paper Submission

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Based on the 2009 National Household Transportation Survey (NHTS), 26% of all trips across the nation were less than 2 miles, and 15% were under a mile. Auto mode choice dominates mode split even for these short distances. In the nation, individuals drove for 47% of the trips that were less than 0.5 miles in distance. This percentage increases to 59% for trips that are from 0.5 to 1 mile (NHTS 2009). Understanding the underlying factors for auto mode choice for these trips is particularly important because depending on land-use and built environment characteristics at trip origins, destinations and possible routes, bicycling and walking can replace these short-distance auto trips.

This research seeks opportunities to increase the use of walking and bicycling modes by identifying households that favor short-distance auto trips, underlying reasons for private vehicle choice for these trips, and drawing recommendations on ways to convert these trips to non-motorized alternatives.

We determine the factors associated with short-distance trip mode split, including socio-economic and attitudinal factors, distribution of short-distance auto trips, and frequency of short-distance auto trips across different household compositions. These factors help identify potential policy target areas to incentivize and encourage walking and bicycling substitution (Pucher, Buehler& Seinen, 2011; Yang & Diez-Roux, 2012). We use the National Household Travel Survey data for this study.

We analyze the variations in trip characteristics, focusing on short-distance trips. We examine the distribution of bicycle and walking trip distances to determine the acceptable bicycle and pedestrian trip distance boundaries. We then calculate the number of short-distance auto trips as well as the percentage of these trips. We also observe other trip characteristics (trip purpose, destination type, time, whether the trip is part of a home-based tour or not, etc.) and analyze whether these characteristics differ between short and longer distance auto trips.

We develop two types of models to investigate the determinants of short distance auto trips. We estimate discrete choice models at the trip level to determine the factors associated with the propensity of driving versus other modes for short-distance trips. These models account for personal and household characteristics, attitudes and trip attributes such as time of day, whether the trip is part of a home-based auto tour, trip purpose, etc. These variables have established effects on mode choice (Mackett, 2001; Kuppam, Pendyala & Rahman, 1999) We then estimate seemingly unrelated regression (SUR) models to look at auto trip generation (all auto trips) and percentage of short-distance auto trips together at the household level. The SUR models help us identify the complementary and substitute effects of various variables.

With these models and relevant literature, we determine the underlying factors for short-distance auto trip generation and make recommendations on how to replace these by non-motorized trips. The results help decision makers cater polices to specific household subtypes likely to substitute in bicycling and walking trips.

References


Key Words:
Short-distance trips, Mode choice, Trip generation, Bicycling, Walking

EMBODIED FREIGHT TRANSPORTATION IN US GOODS AND SERVICES, 2007-2012
Abstract ID: 1025
Lightning Research Presentation

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Demand for freight transportation is accelerating with the globalization of increasingly fragmented production processes. In the meantime, the energy usage and environmental emissions of freight grow rapidly. As the awareness of environmental issues grows, it is necessary to transport goods and services in a more efficient and green way. However, when shippers choose freight transportation, they value time and cost rather than its related energy usage and environmental impacts.

This paper brings the analysis of estimating the share of embodied freight transportation for each industry in the U.S. from 2007 to 2012. I use U.S. Bureau of Economic Analysis Input-Output tables and Commodity Flow Survey Data from U.S. Bureau of Transportation Statistics. In the analysis, identifying the shippers of these freights can be challenging. Allocating the freight transportation to the industry level enables the analysis to perform such task. Moreover, freight movements are embodied in upstream supply chains. I track both direct and indirect transportation needs of each industry using input-output analysis.

This research extends the resulting analysis of Nealer et al.’s (2011) by including more recent data. Thereby, I can perform the trend analysis of freight transportation at the industry level. I also estimate energy usage and environmental emissions of freight to inform policies for reducing the environmental impacts of freight. Since freight transportation is induced demand, analyzing modal freight transportation demand of different industries can inform mitigation strategies tailored to industries.

References


Key Words:
Embodied Freight Transportation
CLIMATE JUSTICE IN TRANSPORTATION VULNERABILITY ANALYSIS TOWARDS SEA-LEVEL-RISE

Abstract ID: 1026
Individual Paper Submission

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Many coastal cities are facing increasing flooding risks due to sea-level-rise (SLR). In an effort to establish corresponding adaptation plans, researchers and local agencies have conducted transportation vulnerability assessments towards SLR-induced coastal flooding. However, few empirical studies have incorporated climate justice in these assessments. Rather, most vulnerability indexes proposed in previous studies assign equal weight to each trip/person, with little regard to the variances in travel needs of different social groups (Mattsson & Jenelius, 2015). Climate justice is a concept derived from environmental justice that can refer to a wide range of inequities associated with climate change (Schlosberg, D., & Collins, L. B., 2014). Since President Clinton issued Executive Order 12898 in 1994, Federal Highway Administration is required to develop environmental justice strategies to identify and address disproportionate environmental effects of their programs, policies and activities on minority population and low-income population. So far, the discussions of climate justice are mainly on global and regional scale, providing little support for local vulnerability reduction and adaptation efforts (Barrett, S., 2013). As a key step in building resilient coastal communities towards SLR, transportation vulnerability analyses, if done without considering climate justice, may not only overlook the travel needs of certain groups, but also facilitate the establishment of an improper adaptation plan that redistributes flood risks in a way that actually widens the existing injustice.

This paper aims to extend previous research on transportation vulnerability analysis by incorporating climate justice in an empirical study. Here, climate justice refers to “harm avoidance justice” in transportation accessibility associated with SLR-induced-flooding (Simon Caney, 2014). This study evaluates the distributions of accessibility–based multi-modal transportation vulnerabilities among social groups using data of Hillsborough County, Florida. Hillsborough County is located in U.S.’s top one aging metropolitan area—Tampa Bay Area. It contains the largest urban center in the region—Tampa City, which is also Florida’s top two city in income inequality. Due to its diverse, rapidly aging population and severe income inequality issue, Hillsborough County has a substantial number of transportation-disadvantaged residents that traditional transportation vulnerability assessments may overlook.

This paper studies households by income, race and age to highlight the needs of potential transportation-disadvantaged groups. To mimic future transportation networks and travel demands, this study adopts 2040 cost affordable network alternative scenario in Tampa Bay Regional Planning Model v8.1 (TBRPM v8.1), which is consistent with Tampa’s long-range transportation plan and comprehensive plan. Based on National Oceanic and Atmospheric Administration (NOAA)’s adjusted local SLR scenarios at the closest tide gauge to Hillsborough County, flooding maps of 1ft and 2ft SLR scenarios are chosen and derived from NOAA’s Sea Level Rise Viewer for inundation analyses. First, for each SLR scenario, the study identifies inundated road links, nodes and traffic analysis zones in the study area through spatial analysis in ArcGIS. Second, it simulates three transportation scenarios in TBRPM v8.1: one base scenario, one scenario with a disrupted transportation network under the impacts of 1ft SLR, and the other scenario corresponding with 2ft SLR. Based on the simulation results, the study then calculates the multi-modal transportation vulnerability for each social group with a newly proposed index that integrates their mode choice preferences. The expected findings of this paper will answer the
following questions: 1) Does climate justice issue exist in Hillsborough County? 2) If so, which groups are the most vulnerable to SLR’s impacts on accessibility? Finally, the paper will discuss the policy implications of these findings on adaptive transportation planning.

Though using the empirical data of Hillsborough County, I hope this study will shed some light on the existence, severity and evaluation methods of climate justice in SLR-related transportation vulnerability assessments in general.

References


Key Words:
transportation vulnerability, sea-level-rise, climate justice

ARE ALL MILLENNIALS REALLY THE “URBAN HIPSTER”? A LATENT CLASS APPROACH TO CLASSIFY TODAY’S YOUNG ADULTS BASED ON THEIR LOCATION PREFERENCE
Abstract ID: 1043
Individual Paper Submission

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The Millennial generation, loosely defined as those birth cohorts born from the early 1980s to 2000, is reported to prefer living in cities, own fewer cars on average, and make more non-motorized trips than older birth cohorts. However, we do not understand what makes Millennials choose the urban lifestyle. Two competing theories in the literature focus on economic struggles and cultural differences of Millennials. Due to the recent recession, Millennials tend to postpone marriage, childbearing, and homeownership, while they pursue more education, often struggle in the job market, and are burdened by high student debt. The proponents of the economy-centered theory expect Millennials to return to low-density suburban neighborhoods with auto-oriented travel patterns once they get sufficient earnings. In contrast, another group of scholars points out that the recent trend of increased interest in living in cities with less driving and more walking, biking, and transit trips started around the turn of the century in many developed countries. This culture-centered theory predicts that even if Millennials get stabilized economically, they would be still different from the proceeding generations in their preferences towards residential location and dependency on automobiles. Since these two explanations provide policy
implications in substantively different directions, planners seek to better understand whether Millennials’ urban resurgence will be only a temporary phenomenon or have lasting effects in the future.

The literature offers few clues about the future location choice of Millennials, who currently account for the largest generation in the US. Qualitative characteristics such as attitudes and preferences are missing in most travel surveys. Thus, many studies can only “speculate” on the factors affecting young adults’ residence and mobility choices. There are a small number of studies in which the authors employed focus group interviews and in-depth surveys with questions on values, perceptions, and preferences of Millennials on automobiles and driving. However, their sample sizes are often quite small, and not representative of the target population. Thus, it is difficult to generalize their findings and make policy suggestions based on their results.

This paper addresses the above research gap through the analysis of rich set of sociodemographic, economic, and attitude/preference variables collected together with housing and travel information from 1,965 Millennial and Gen X respondents in California. The analysis of California Millennials Dataset allows us to determine why Millennials selected certain neighborhoods and how their residential choices differ from older birth cohorts. For the individuals in the dataset, we generate a hypothetical choice set of ten alternatives, one census block group that was actually chosen and the other nine that are randomly selected. We estimate a multinomial logit model to estimate the effects of neighborhood attributes, such as socioeconomics (e.g., racial mix), demographics (e.g., the average household size in the block group), and the built environment (e.g., land-use mix and walkability). In doing so, we assume that individuals from the two generations may have various preferences for these neighborhood characteristics. Thus, we employ a latent class choice model that statistically identifies unobserved natural groups in the sample, each of whose members show varying preferences on neighborhood characteristics (e.g., “urban hipsters” vs. “suburban lovers”).

We identify three distinctive groups that differ in their location choice preferences and individual/household characteristics: single urbanites, suburban-oriented couples, and suburban-oriented families. For example, while many members of the second group currently live in urban neighborhoods, their location preferences are very close to those of the older Gen X members with children, who prefer suburban lifestyles and already live in such neighborhoods. In sum, this paper contributes to the Millennials’ location choice literature by modeling individual residential choice with a rich set of covariates. We identify distinctive groups of individuals based on their residential preferences, and analyze the ability of lifecycle events (e.g., full-time employment, marriage, childbearing, and homeownership) and/or attitudes and preferences (e.g., towards walkability and land-use mix) to explain location choices.

References
TRENDS OF INTER-METROPOLITAN COMMUTE AND IMPLICATIONS FOR MEGAREGION PLANNING
Abstract ID: 1048
Poster

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American workers are commuting more and longer. Recent statistics show substantial increase in total vehicle miles traveled (VMT) in the US in 2015 and 2016. VMT per capita decreased after peaking in 2004, but climbed rapidly in 2015 and grew further in 2016. The volatile trend of VMT (both in total and per capita) results from the dynamic interplay of complex demographic, technological, and socioeconomic factors. This study focuses on an emerging yet increasingly important trend of commute, commuting at the megaregion scale. Scholars have observed and described commuting at the megaregion scale in such terms as long-distance commute, extreme commute, mega commute, or super commute. These journeys to work involve travel in distance or time (or both) longer than the typical range, and often across metropolitan boundaries. Recent report from the U.S. Census Bureau shows that the fastest growing group of American commuters are those who travel more than 90 minutes to work, and then another 90 minutes back home. The reported share of megaregional travel is small, accounting slightly higher than 5% of total commute, but contributing a large percentage of VMT and travel emissions. The existing knowledge about megaregional commute is limited, partly because it has been considered as "non-typical" under the conventional framework that focuses on activities and trips performed by household members in a single day. This study is motivated by recent national attentions to megaregions. In January 2017 USDOT designated thirteen Beyond Traffic Innovation Centers (BTICs) throughout the country. The BTICs set a clear focus on transportation research, education, and technology transfers in US megaregions. The study will 1) examine geographic, demographic, and modal characteristics of megaregion commute by looking into multi-year National Household Travel Surveys (NHTS), 2) discuss societal and technological factors influencing the commuting trend, and 3) draw implications for transportation planning, investments and policy-making in megaregions.

References


Key Words:
Long-distance commute, megaregion, NHTS

BICYCLE, PEDESTRIAN, AND MIXED-MODE TRAIL TRAFFIC: A PERFORMANCE ASSESSMENT OF DEMAND MODELS
Abstract ID: 1052
Individual Paper Submission

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Multiuse trails, or shared-use paths, form the backbone of non-motorized transportation networks in metropolitan areas across the U.S. Planners and advocates lack tools not only for estimating demand for planning and prioritizing investments in new facilities, but also for managing the infrastructure of urban trails. Much of the previous research on non-motorized traffic demand, however, has been limited to a single mode, population group, facility, network, or city. This deficiency stems from the lack of comprehensive data. We overcome this limitation by analyzing the daily demand at 32 locations on multiuse trails in 13 urban areas across the U.S.

We collected both bicycle and pedestrian trail traffic volumes from installed automated multimodal counters between January 1, 2014 and February 16, 2016. We augmented the data with a group of built-environment characteristics extracted from the 2014 Smart Location Database at the block group level. The data consists of 5 D’s of the built environment, namely Density, Diversity, Design, Distance to Transit, and Destination Accessibility. We make three contributions to the literature on non-motorized traffic monitoring and management. First, we develop a set of econometrics models to predict average daily pedestrian (ADP), average daily bicyclist (ADB), and average daily mixed-mode (ADM) using 5 D’s of the built environment characteristics. Second, we compare the accuracy of the models against the models that estimate the annual average daily pedestrian (AADP), annual average daily bicyclist (AADB), and annual average daily mixed-mode (AADM). Third, we assess the performance of separate bicycle and pedestrian demand models in predicting mixed-mode travel demand. This enables us to understand whether and to what extent we gain in the accuracy of non-motorized demand prediction, when we establish comprehensive monitoring networks. Our key findings indicate:

1. Automated sensors can provide valid and reliable measures of bicycle and pedestrian traffic on trails, but without care during installation and proper maintenance, devices may fail to operate properly.

2. ADB and ADP vary significantly across sites over at least three orders of magnitude. ADB ranged from a low of 30 cyclists to a high of 1,242 cyclists. ADP ranged from 38 to 2,299.

3. Different factors affect bicycle and pedestrian volumes at the same locations on multiuse trails.

4. With long-term periods of record, there are few differences between models of average daily traffic and annual average daily traffic.
5. Validation using hold-out analyses indicate that bicycle, pedestrian, and mixed-mode demand model have errors within ranges acceptable for many planning purposes.

6. Simulation studies show that more accurate measures of total traffic are obtained by using separate bicycle and pedestrian demand models and summing results than by modeling mixed mode traffic.

Overall, these results provide substantial support for recommendations in the Federal Highway Administration’s Traffic Monitoring Guide that call for year-round continuous, automated counters to be used in conjunction with portable counters that can monitor traffic for at least seven days. Planners can use automated counts and demand models to characterize demand for multiuse trails, compare alternative corridors or segments for trails, and prioritize investments in trails.

References

Key Words:
Non-motorized demand, Urban trails, Transportation infrastructure, Built-environment

HOW HIDDEN COSTS OF PUBLIC TRANSIT INFLUENCE AFFORDABILITY
Abstract ID: 1055
Poster

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In this research, I examine the entire AVL (Automatic Vehicle Locator) dataset for the Colorado Front Range’s Regional Transportation District (RTD) in 2014 to quantify the hidden costs of transit. This builds on my previous analysis of a subset of the 2014 RTD dataset which found the hidden costs of unreliable bus service and the incremental time to take transit instead of driving can total another 52% of the cash fare for individuals earning Colorado’s minimum wage (Wilson, 2016).

The reality is that farebox fees are only part of the cost of taking public transportation. There are also hidden costs built into the transit user’s experience. Using AVL data makes it possible to evaluate the reliability of transit service with higher precision than has been possible previously (El-Geneidy et al., 2011). Until recently, research calculating transit affordability has often neglected the hidden cost of unreliable service (Furth et al., 2006). Here I monetize those hidden costs to arrive at a more accurate cost for transit use.

My previous analysis of the dataset only examined one Local route and one Regional route serving the City of Boulder. The contribution I present here encompasses all 124 local, regional, and express routes that RTD ran in 2014. I calculate opportunity cost for both unreliable on time performance (OTP) for a
given route and for time spent en route above what would be anticipated if driving a personal vehicle. These two types of opportunity costs are parameterized separately. I measured OTP using RTD’s definition of no more than one minute early or five minutes late. If a route does not perform at RTD’s stated OTP goals of 88% of the time for Local service and 94% of the time for Regional/Express service, then it is assumed a commuter will choose the immediately preceding scheduled departure for that route. Thus, the route’s headway is used as the time cost measurement for riders on routes with unreliable service. I calculated the time cost for extra minutes spent en route on a bus versus driving alone by subtracting the Google maps drive time estimate (with no traffic congestion) from the scheduled duration of a bus trip between route origin and route destination. Time is then valued at seven-tenths of an individual’s hourly wage (Stiffler & Vasan, 2014) for both metrics, when applicable, and added to the farebox cost for the route.

Extrapolation of the methods I used in Wilson, 2016 to the whole dataset allows me to compare here the hidden costs across different route types. For example, do Denver routes have higher hidden costs than Boulder routes? How do Local routes compare to Regional/Express service? What socioeconomic variables (e.g. income, race, education level) might be correlated with neighborhoods or communities served by routes with high or low hidden costs? Do correlations between land use/density and hidden costs of transit exist? Preliminary results show that these variables can affect route reliability and thus individual mode choices. Answers to these questions can also inform how transit agencies understand the customer experience and can be used to advocate for equitable and affordable access to public transportation by utilizing the full breadth of available data.

References

Key Words:
On-time performance, Transit affordability

REURBANIZATION BY MILLENNIALS? EVIDENCE FROM TOP TWENTY URBANIZED AREAS IN THE U.S.
Abstract ID: 1056
Individual Paper Submission

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Many planners and scholars have been fascinated by the new trend of declining driving since the mid-2000s, largely led by the millennial generation. While it is still controversial whether a primary cause of
Millennials’ lower car ownership and less driving is lifestyle changes (McDonald, 2015) or economic circumstances (Blumenberg et al., 2016; Manville, 2017); it is indisputable that the ways Millennials choose to live, work, and travel will greatly (re-)shape American cities in coming decades. However, Millennials’ residential location choice is largely understudied although the shift in their travel choices is intertwined with their locational preferences. Do Millennials indeed prefer central and urban locations where alternative travel modes are a more viable choice? What are primary factors that attract Millennials to urban locations? Just a few previous studies attempted to address these questions, but with clear limitations. Many studies use urban/suburban dichotomy (Millsap, 2016; Myers, 2016); yet some other studies examine locational distribution of young adult groups, but not actual migration patterns (Blumenberg et al., 2015).

To fill the gap in the literature, this paper will explore intra-urban (census tract level) migration patterns of young adults in the twenty largest Urbanized Areas and will investigate the location factors that attract older Millennials, those who were 20 to 29 years old as of 2010 (i.e., born between 1981 and 1990). The first part of the research will highlight distinctive location preferences of Millennials using various tools including mapping and other descriptive statistics. In doing so, we will demonstrate that an analysis of net migration can present the location choices made by Millennials much better than the one based on a gross population change of young age cohorts. In the second part, we plan to conduct a series of regression analyses to test several competing hypotheses regarding Millennials' location preferences. We will test various location factors including: physical characteristics of the built environment (i.e., density, street connectivity, and land use mix), access to alternative transportation modes (i.e., walking, biking, and public transit), and consumption amenities (e.g., cafes, bars, and cultural facilities) as well as job accessibility, housing market conditions, and other demographic attributes of the neighborhood.

This study will make unique and significant contributions to the literature, enhancing our understanding of the new generation’s location behavior. First and most importantly, it will be the first attempt to our knowledge that examines net migration of the same birth cohorts, not a gross change of the same age groups at different points in time. As such, it will present the location choice of Millennials much more accurately than previous studies. Second, it will analyze Millennials’ location choice at a finer geographic level, census tract, than previous studies that typically rely on urban/suburban dichotomy. Third, it will develop and use a rich set of measures of neighborhood-level attributes to test several hypotheses that have been proposed to explain unique location preferences of Millennials. In doing so, we will extensively employ innovative data collection methods (i.e., via Google API and web scraping) to reach beyond conventional data sources. Finally, it will explore heterogeneous effects of location factors across the twenty largest Urban Areas in the US to assess whether the new trends are generalizable or specific only to some cities.

References
THE BICYCLE INFRASTRUCTURE AND BICYCLE USE IN PORTLAND: IS THE RELATIONSHIP CHANGING OVER TIME?

Abstract ID: 1074
Lightning Research Presentation

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Many U.S. cities advocate constructing bicycle infrastructure nowadays than ever before, aiming to increase bicycle usage and take the advantages of the health and environment benefits derived from it. Therefore, it is worthwhile to examine whether the considerable investments on bicycle infrastructure reaches the goal of increasing bicycle activities. Aggregated and disaggregated bicycle travel behavior studies showed that there were positive relationship between bicycle infrastructures and bicycle usage controlling for other factors, including land use, climate and personal characteristics (Buehler & Pucher, 2012; Dill & Carr, 2003; Moudon et al., 2005). However, with the increase of infrastructure provision, other questions come out: whether the influence of bicycle infrastructure on bicycle usage increase or decrease over time? If the impact is not constant over time, what other factors contribute to change of impact on bicycle mode choice, other than infrastructure construction?

To address these questions, this study analyzes empirical relationship between bicycle infrastructure and mode choice based on travel survey data. Portland is selected as a case study area, because it has a long history of bicycle-advocate practice, and becomes most bicycle-friendly city among American cities. The data I use includes Oregon Household Activities Survey Dataset (includes individual level travel behavior and socio-economic characteristics) in 1994 and 2011, combined with accordingly built environment dataset. I apply multinomial logit models to estimate the impact of bicycle infrastructure based on different years (i.e. 1994 and 2011). The elasticities of bicycle infrastructure on bicycle mode choice, derived from the models, will be compared to illustrate the change of impact over years. In addition, market segmentation analysis based on different demographic characteristics will be specified to uncover the mechanism of how bicycle infrastructure affect bicycle mode choice, and further provide policy implication to different contexts and sub-groups.

References

Pedestrian and bicyclists traffic collisions are rare and random, yet, collisions often result in disproportionately severe injuries and fatalities. Although collision or crash data plays a key role in assessing transportation safety, collision or crash data may underrepresent issues of safety that exist—and the frequency of near-miss incidents is strongly correlated with perceived traffic risks (Sanders 2015). In the context of encouraging physical activity to achieve public health outcomes, perceptions of safety may influence the willingness to adopt active transportation modes (e.g. bicycling and walking), therefore, conflicts between road users and near-miss incidents may enhance performance measures for safety assessment. Furthermore, there is a need to understand the relationships between safety and perception of safety with other factors such as the built-environment, transportation infrastructures (Winters et al 2011); and perceptions of right over street spaces (Jacobsen et.al 2009).

Using a crowd-sourced data collection effort, this paper aims to answer the following questions: First, what can we learn from crowd-sourcing data on near-miss incidents and whether it can contribute to identifying dangerous locations? Second, what are the relationships between these reported near-miss incidents with other factors such as the built-environment, transportation infrastructures, and behavioral factors of road users?

We collected information about daily trips and near-miss incidents within one week from participants who regularly bike, use public transit, or walk in Houston, TX. Participants were asked to record their daily trip information such as origins, destinations, modes, and purpose along with near-miss incidents that occurred during the trip. Each reported location of origins, destinations, and near-miss incidents were geocoded. Comments from participants were analyzed using a coding scheme to provide insights into contributing factors to near-miss incidents and “spill-over” effects of conflicts between road users that extend beyond traffic safety concerns.

The near-miss data are then compared with crash data on injury and fatalities to identify whether there is a significant difference in identifying hotspots based on both the near-miss and traffic crash data. Origins and destinations routes are mapped using estimates based on the shortest distance on road networks and overlaid with existing bikeways to identify relationships with existing built-environment factors such as land use and active transportation infrastructures. Several themes emerge from detailed comments across reported near-miss incidents in relation to the marginalized position of pedestrians and bicyclists as road users, disproportionate burden of taking safety measures and actions, and the prevalence of blame-the-victim narrative.

Crowdsourcing has been found to be useful in transportation by bringing together a group of people into the same platform around a common issue. This suggests that planners and policymakers need to
consider how the use of data and technology can move beyond providing information but also facilitating social inquiries (Goodspeed 2016). At the same time, limitations exist due to the nature of crowd-sourcing data collection, such as ensuring representations of people from a variety of socio-economic background. However, rare insights into near-miss incidents can be used by agencies and community organizations to identify and prioritize strategies for responding to safety and potential public health concerns as well as making strategic responses to improve safety for all road users.

References


Key Words:
active transportation, physical activity, bicycle and pedestrian planning, safety and perception of safety, crowd-sourcing

REPRESENTATIONS OF NON-MOTORIZED TRAVEL IN TRAVEL DEMAND MODELS, A STATE OF THE PRACTICE

Abstract ID: 1078
Individual Paper Submission

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It has been nearly 30 years since non-motorized modes and non-motorized specific built environment measures were first included in the travel demand models of metropolitan planning organizations (MPOs). Non-motorized modeling practices have evolved considerably as data collection and analysis methods have improved, decision-makers have started demanding more information on non-motorized travel, and these modes of travel have grown in popularity. As MPOs look to enhance their models’ representations of non-motorized travel, it is important for researchers and planners to understand current and emerging modeling practices and abilities.

This research aims to investigate and determine the state of the practice for travel demand models as they relate to bicycle and pedestrian planning, and to determine how this has changed over time. The models are an indication of progress in representing non-motorized transportation, a reflection of policy needs and the motivations of decision-makers. Thus, by investigating the processes used to predict and model non-motorized travel it is possible to determine how the state of the practice is evolving, and therein determine the needs and desires of decision-makers.

This paper reviews the documentation of the travel demand models of the 48 largest MPOs in the United States in mid-2012 and early-2017. Using the available documentation, this paper classifies how travel
demand models represent non-motorized travel; if the models differentiate between walking and cycling within non-motorized travel; the change in representations of non-motorized travel in models over the past 5 years; and the change in overall model framework in the last five years, as more MPOs begin to utilize activity based models. Using the changes in model structure over time, from the 2012 and 2017 reviews, the progress and trajectory of the field are observed.

Additionally, MPO employees familiar with their region’s model were surveyed on various aspects of their model, their needs, and the demands placed upon them by local decision-makers. This survey is used to determine the rationale, from across the nation, as to why bicycling and pedestrian travel is and is not being modeled; and what types of tools would be most helpful to be developed to improve travel demand models, or otherwise be useful to MPOs. A survey was conducted in 2012 to investigate similar concerns, and the changes in the results will be discussed.

In mid-2012, 63% (30) of the 48 largest MPOs included non-motorized travel in their travel demand models, while by early-2017 this had increased to 65% (31). More MPOs were focusing on the difference between bicycling and pedestrian modeling, and were not considering a single non-motorized mode, as 47% (14) of the MPOs that modeled non-motorized travel considered both modes in 2012, while in 2017, 58% (18) of the MPOs that model non-motorized travel model bicycling and walking separately. Additionally, activity based models (ABMs) constituted only 10% (5) of the models reviewed in 2012, whereas in 2017 ABMs were 27% (13) of the models reviewed, with multiple areas developing an ABM. The interest in modeling bicycles and pedestrians does not seem to be increasing from MPOs which did not model non-motorized transportation, but the models that did include non-motorized transportation are modeling bicycling and walking separately, and the field is moving towards activity based models.

This research establishes the current foundation of the practice, and the areas of highest usefulness and need are highlighted. These results are relevant because they will help researchers direct their research to applications and improving models in practice. Better bicycling and pedestrian models will help planners and decision-makers as they analyze safety improvements, health benefits and environmental effects of active transportation.

References

Key Words:
Travel Demand Modeling, Non-Motorized, Bicycling, Walking, Forecasting

COMPARING ECONOMIC OUTCOMES OF TOD,TAD,AND HYBRID STATION IN THE US
Abstract ID: 1080
Individual Paper Submission

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Transit-Oriented Development (TOD) is an approach that many cities have been practicing in recent years. In the last two decades, around 32% of transit stations in all US cities have been developed to be TODs (Renne, Tolford, Hamidi, and Ewing, 2016). TOD provides a higher quality of life, attracts investments, people, jobs, labor and housing, and increases property value (Nelson, et al., 2015). A growing number of studies report a relationship between new rail transit investment and job growth. Renne, Hamidi, and Ewing (2017) indicate that the higher the share of jobs and people living in areas accessible by fixed-guideway transit, the higher the predicted mode share for transit commuting at the station level. Renne (2013), also found that only six regions including New York, San Francisco, Chicago, Philadelphia, Portland and Eugene have more than 25% of jobs accessible within walking distance of the fixed-guideway transit network.

In an analysis of 23 transit systems operating in 17 metropolitan areas in the Southern and Western US, which have one or more of those systems, Nelson (2015), revealed that most TOD areas increased office jobs, knowledge, education, health care and entertainment sectors, adding more than $100 billion in wages capitalized over time. Moreover, in recent developments higher-wage jobs in compare with lower or middle wage jobs tend to locate in TOD areas due to high competition which requires more investment, consequently they attract higher-paid labor to justify the investment (Nelson et al., 2015). Building upon pervious work of Renne et al., (2016) to classify (TOD), hybrid, and transit-adjacent development (TAD) based on walkability and housing; our study focuses on job share by industries, open businesses, closed businesses, wages, rent value, and housing price among TODs, TADs, and Hybrids stations. The study would provide an economic outcome indicators on the mentioned categories to show how TOD typology influences the economic performance of the area.

For our study we will be using ANOVA to answer these questions which is the best method to analyze the variation between different groups. After establishing the differences, the study would indicate what transit typology is the most successful than the others in terms of economic outcomes based on data collected from the National TOD Database and publicly open database. The unit of analysis is half mile buffer around stations, which is the most common distance used in this type of research. The outcome expectations of the study:

The competition of allocation is mostly among nonmanufacturing industrial activities such as Office, entertainment, knowledge, education and health care activities to take advantage of agglomeration economies.

It could be concluded that TODs, and Hybrids are more successful in attracting entertainment and knowledge industries than TADs.

We are witnessing a growing number of transit station infrastructures which have been built upon State and local communities investments. TODs create the optimum application for these stations in socioeconomic aspects. While there are some uniform applications, not all the regions have the same reactions for different transit station. Other factors such as sprawl, gentrification and sociodemographic characteristics may project different issues on transit stations. However; there is no doubt that
encouraging investments in these areas helps TADs and Hybrids shift to TODs to achieve prosperity in economic development.

References

Key Words:
Transit stations, TOD, TAD, Hybrid, Economic Outcomes

RANDOMIZED CONTROLLED TRIAL TO REDUCE PARKING AT MIT
Abstract ID: 1086
Individual Paper Submission

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Employer-based transportation demand management (TDM) programs have been shown to have a powerful effect on the travel behaviour of commuters. At the Massachusetts Institute of Technology (MIT), a series of TDM initiatives have been established in an effort to manage parking demand on campus while reducing the carbon footprint of its commuting population. In September 2016, MIT launched a new commuter benefits program known as AccessMIT, aimed at providing flexible, affordable and low carbon travel options to its staff, students, faculty and visitors. The flagship element of the program is the introduction of zero-cost local transit passes to all benefits-eligible employees. In addition, most annual parking permits have been replaced with daily pay-as-you-park pricing in order to remove the sunk cost of yearly permits and provide the opportunity for commuters to save money on days when they choose not to drive. Finally, a series of secondary incentives include an increase to commuter rail subsidy, discounted Massachusetts Bay Transportation Authority (MBTA) station parking fees, and the integration and promotion of other existing commuter programs. An online commuter dashboard called AccessMyCommute helps employees track their commuting patterns and provides incentives for sustainable travel through gamification and financial rewards.

As the Institute makes progress towards its goal of reducing parking demand by ten percent from 2016 levels, researchers are using this opportunity to better understand how employees respond to commuting incentives. Using a randomized controlled trial (RCT) framework, drive-alone commuters who frequently park on MIT campus were enrolled in an email-based campaign in which personalized information and cash rewards were disseminated in an effort to encourage the use of non-drive-alone
modes. Two thousand staff participated through an opt-out email list, and were categorized into three treatment groups and one control. Over a period of six weeks, one treatment group received individualized “Commuter Digest” emails reminding them of the various commuting benefits available, and presenting comparisons with their colleagues’ travel behavior. A second treatment group received monetary rewards proportional to how much they reduced their parking compared to their yearly average parking frequency. A third group received both the informational digests and monetary rewards. The final group received no communications, and was passively monitored as a control group. Monitoring consisted of parking lot usage (in which employees tap their ID card to enter and exit), transit pass usage, and stated preferences through exit surveys.

In this paper, we present the results of this experiment, and discuss a broader evaluation of the suite of commuting benefits introduced by MIT in the past year. The research aims to inform the development of a generalizable toolkit for employer-based TDM programs, building on the literature of best practices applicable for individual urban employers as well as regional TDM initiatives.

References


Key Words:
randomized controlled trial, transportation demand management, parking, employer

THE CASE STUDY OF SEVEN UNIVERSAL TRANSIT PASS (U-PASS) PROGRAMS IN THE US
Abstract ID: 1089
Individual Paper Submission

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Many universities across the US address sustainability on campus and aim at reducing the environmental footprint. Universities’ strategies to reduce the carbon footprint include promoting alternative modes of travel, such as walking, biking, taking transit, carpooling, and van pooling, to reduce the amount and impacts of single occupancy vehicle (SOV) trips within transportation, along with other strategies, such as the use of renewable energy sources and cogeneration, recycling and composting, and campus gardening. In particular, a number of universities has adopted universal transit pass (U-pass), which is a transportation demand management (TDM) program to provide free or substantially discounted transit service to students, faculty, and/or staff of the university, and reduce SOV commuting and parking demand on campus.

In this study, we examine U-pass programs at seven universities in the US regarding the types of U-pass program, costs and financing, effective discount rates, governance, and planning procedure. We conduct a study with particular attentions on: (1) the cost to the students and university, (2) contractual terms
with the transit agency or agencies involving timing and funding, and (3) the governance and planning procedure that led to the successful implementation of the U-pass programs. Seven universities have been selected based on four criteria, such as campus size, geographic location within a region, types of available transit service, and availability of information about U-pass programs. We obtain data and information from/through: (a) the websites, reports and other documents that were made available by the universities, (b) communication via emails and phone calls with university transportation personnel, and (c) a brief questionnaire filled by them.

Based on the synthesis of data and information collected, we identify similarities and differences among the programs of the seven universities that are important to be considered by other universities in consideration of a U-pass program for meeting the mobility needs of the students, faculty, and staff and improving sustainability on their campuses. Many of these are related with each other, including: (1) level of campus transit access, (2) current level of transit commuters to campus, (3) whether the program is mandatory or opt-in, (4) financing (pricing and funding) scheme, (5) students’ involvement in decision making, (6) clear understanding of motivations and objectives of both university and transit agency, and (7) comprehensive transit service planning. Particularly, it is critical for a university to understand both the financial impacts of the members of campus community and the effectiveness of U-pass program in achieving its sustainability objectives, and communicate and negotiate with a transit agency regarding the payment and the level of transit service provided.

Based on the study findings, we provide a set of factors to be evaluated and recommendations of the procedure and steps to be taken toward a successful implementation of U-pass program. This study supplements the past studies on the topic with more information of the governance and planning issues, and help further adoption and improvement of U-pass program by the universities across the US.

References


Key Words: Transportation demand management (TDM), universal pass (U-pass) program, campus sustainability

**ASSESSING THE OVERALL EQUITY OF SPATIAL-TEMPORAL TRANSIT ACCESS TO JOBS IN ORLANDO URBAN AREA, FLORIDA**

Abstract ID: 1108
Individual Paper Submission
Achieving equity in the allocation of public resources has been a long-term goal for public transportation agencies. The traditional benefit-cost analysis that evaluates public project investments rests on the assumption that an efficient alternative can maximize the net benefits to society as a whole. However, such method results in projects that inevitably provide different levels of benefits to members, contradicting the principles of equity. In recent decade, researchers have explored the transit equity issues mainly related to transit dependent/socially disadvantaged population. Although the studies on the worse-off help to promote fairness, they provide little information to guide public transportation investment. Public project investments need to be both economically efficient and socially equal. This requires a deep understanding on the distribution of benefits among different social groups, assisting the efficient investment under the principle of social equity.

Since commuters take up to 60% of total ridership (APTA, 2014), the research contributes to better understanding on the distribution of transit benefits among different worker groups in Orlando Urban Area, Florida. The central hypothesis in the research is that the transit benefits vary among different worker groups over 24 hours. The job accessibility by public transportation is used as the key measure to represent the transit benefits to workers. We develop a methodology to examine the relationship between workers’ characteristics and pertinent transit job accessibility at census block group level. Workers’ characteristics are grouped by different ages, incomes, job types, education attainments, races, and genders. Transit job accessibility is computed as cumulative opportunities within a threshold of transit travel time (e.g. 30 min, 45 min, and 60 min). The results will show the variances in transit job accessibility for different worker groups over 24 hours of weekday and weekend. ANOVA and Gini Index are used to examine the distribution of transit benefits. The preliminary results show that there is no significantly difference in transit job accessibility among workers with different levels of income at 8 am on weekday. Although the transit job accessibility for all groups decreases in the afternoon, the transit job accessibility for high-income workers is significantly better than middle-income and low-income workers at 1 pm on weekday. The full findings will be presented at the conference. Compared with previous research that often fails to consider the temporal impact of services (e.g. transit schedule fluctuation) on accessibility measures, the research incorporates the temporal dimension into transit job accessibility measure to improve the accuracy of assessments. The findings in the research will not only help the transit agency achieve the goal of overall equity but also assist the efficient investments on public transportation.

References


Key Words:
THE RELATIONSHIP BETWEEN URBAN FORM AND CONCENTRATIONS OF AIR EMISSIONS

Abstract ID: 1114
Lightning Research Presentation

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Many studies have argued that urban sprawl relies on automobiles which in turn have negative effects on the air quality because the increase of car driving distances results in large releases of carbon monoxides, carbon dioxides, particulate matter, nitrogen monoxides and hydrocarbon forming ozone (Easa and Samdahl, 1998). However, higher emissions don’t always create a worse air quality because emissions refer to the amount of pollutants released from a source like tailpipes or smokestacks, but concentration refers to an amount of ambient pollutants in the air in a particular location (Schweitzer and Zhou, 2010). In addition, even though compact development reduces emissions of air pollutants, higher population densities may expose more people to areas where air quality is already poor (Cervero, 2000; Kenworthy & Laube, 2002; Marshall, McKone, Deakin & Nazaroff, 2005). Therefore, the purpose of this study is to explore the relationship between the level of urban sprawls and air quality divided into three perspectives: emission, concentration, exposure. The 377 Metropolitan Statistical Areas (MSAs) were selected as study areas. This study establishes an urban sprawl index to measure the level of urban sprawls including six factors: density, land use mix, centeredness, street connectivity, accessibility, green design, and shows the relationship between the level of urban sprawls and each perspective of air quality. Emission data are derived from National Emission Inventory is a subsector from U.S. Environmental Protection Agency. In this study, air pollutants include NO2, Ozone, PM2.5, and PM10. To measure concentration and exposure to air pollutants, this study predicts the concentration on the ground level using Land Use Regression (LUR) as well as adding emission facilities, interactive terms between emission sources and chemical reaction catalyst, and regional variation using spatial error model. In each MSA, pollution areas and the numbers of people in polluted regions are estimated. Finally, models between the urban sprawl level and each air quality perspective are established based on Ordinary Least Square (OLS).

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Key Words:
The success of app-based, on-demand ride services (known as ride-hailing) in recent years has raised many debates over their role in urban transportation system. Ride-hailing is provided by Transportation Network Companies (TNC), such as Uber, Lyft and Didi Chuxing (Rayle, Dai, Chan, Cervero, & Shaheen, 2016; Shaheen & Chan, 2016). Many policy makers advocated that the growth of TNCs and ride-hailing should be halted by regulations because of unfair competition with taxi, causing congestion, and taking ridership away from transit. In Shanghai, regulation that sets strict entrance criteria for drivers has been enforced in late 2016, which excluded more than 90% of the current driver out from the market (Shanghai Municipal Transportation Commission, 2016). One of the primary goal of such policy were to reduce VMT and congestion, as Chinese policy makers believed that ride-hailing demand would have coming from public transit and induced travel. Such regulation could result in a significant increase of fare associated with ride-hailing to the reduction of drivers and the increase of operational cost, making ride-hailing a premium service that targeted medium-high income travelers. As such, this study focuses on examining whether the spatial demand of ride-hailing is associated with areas of higher property value where higher income households reside. More specifically, this study answers the following two questions:

1. Is ride-hailing demand correlated with neighborhood average property values?
2. Given fare changes, how would ride-hailing demand likely to change in terms of spatial patterns according to neighborhood average property value?

This study focuses on ride-hailing in Shanghai, 2015. What makes 2015 so interesting for ride-hailing in China is that there were dramatic changes in ride-hailing fares throughout the year due to the changes in company fare subsidies. Before July 2015, ride-hailing fares in China were low and were comparable to transit prices because of fierce market competitions and abundant subsidy. But after July 2015, all promotion and subsidy for users and drivers were cut off due to market changes, resulting in an increase of fares.

The primary data source of this paper is a large random sample of the ride-hailing GPS travel data in Shanghai, 2015 provided by Didi Chuxing, the largest TNC by market share in China: a total of 140,854 observations over a period of 10 months in 2015. The data includes the date, time of day, addresses and geolocations of origins and destinations of each trip. These trip data are joined to data on the asking prices and location of properties for sales and rent in 2015. Additionally, population density and employment density at census tract level, as well as all points of interest in Shanghai, such as the offices, shops, restaurants, parks, and bus stops/metro stations etc., are both included. All these data were aggregated into 1-km grid cells as the basic analysis unit.

Time-series analyses are conducted to investigate the relationship between ride-hailing demand in each grid cell and average property value, controlling for other factors. I find that property value is highly associated with ride-hailing, after controlling for other built environment factors. Ride-hailing demand is
more highly associated with the price in places with lower property values, suggesting that the reduction of ride-hailing demand after the price increase were probably coming from low-income travelers.

The findings of this study suggest that after several years of ride-hailing operations, the reduction of ride-hailing demand from policies would come from low income travelers, rather than the decrease of induce demand from all travelers. Given the fact that in Shanghai private vehicle ownership is low and concentrated among high-income households (Chen & Zhao, 2013), the VMT reduction from excluding a large portion of ride-hailing supply would primarily come from travelers without car ownership, whereas high income travelers might be unaffected.

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Key Words:
ride-hailing, accessibility, app-based, on-demand

BARRIERS AND MOTIVATORS TO BIKE SHARE PARTICIPATION: LESSONS FROM RESIDENTS OF DISADVANTAGED COMMUNITIES
Abstract ID: 1122
Individual Paper Submission

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Over the past ten years, public bike share systems have transitioned from operating in select European cities to expanding in North America at a pace of nearly two dozen cities per year. Despite the appeal and success of bike share in the U.S., there is growing evidence that certain groups are participating less and enjoying fewer benefits from these new transportation options. In particular, lower-income and minority populations, as well as women, remain substantially under-represented among U.S. bike share users. Bike share research to date has focused almost entirely on those already participating in bike share systems as members or casual, day users. To better understand key factors preventing underserved groups from benefiting equally, additional research needs to include non-users as well.

This research presents data from a unique sample of residents living near bike share stations in Philadelphia, Chicago, and Brooklyn. The mail survey randomly sampled 18,000 households in seven predominately lower-income, minority neighborhoods. Each neighborhood had received public bike share stations within the previous one to three years. The majority of respondents were aware of bike
share but had not yet decided to use the system. The survey questionnaire included a broad range of items, but this research focuses on specific barriers and motivators to participating in bike share (and bicycling in general). What are the most important factors that discourage and encourage use among groups that have thus far been largely left out of bike share?

Statistical analyses performed (ANOVA, logistic regression) indicate both significant group differences but also commonalities when examining the relative importance and frequency of barriers and motivators to bike share use. Categories of barriers and motivators analyzed include: safety, cost, logistics, physical ability, image/appearance, recreation/fun, exercise and cost/time saving. Lower-income, minority populations and women often face a range of barriers to participation along many of these dimensions, an important point for policy and outreach. These barriers are in addition to inequities in system coverage of disadvantaged neighborhoods and groups. Motivations also vary considerably, particularly around views of bike share as useful for transportation versus only for recreation and exercise.

This research adds to literature on participation in bike share—and bicycling more generally—in three key areas. First, the dataset is one of just a few to survey a large sample of non-users of bike share, along with users and members. Second, the sample was specifically targeted toward areas traditionally underserved by bike share systems, but that had received stations nearby, thus controlling for the large impact of station proximity. Finally, the study is among the first to examine interaction effects of race, income, and gender on bike share and bicycling use. Taken together, the unique sample and analysis provide a more complete picture of persistent equity challenges in bike share and bicycle planning.

References

Key Words:
bike share, equity, bicycling

STREET-NETWORK SPRAWL, WORLDWIDE
Abstract ID: 1123
Urban sprawl exacerbates a host of social and environmental problems, from climate change to obesity. At the heart of these relationships is the way dispersed land-use patterns promote the use of the private car, through increasing travel distances and making transit, walking and cycling unattractive or infeasible.

Sprawl has been studied extensively in single countries, predominantly in North America and Europe (e.g. Hamidi & Ewing 2014). Cross-national or global comparative work, however, is rare. The few studies that exist usually employ remote sensing data to infer the extent or density of urban areas (e.g. Seto et al., 2011). But these measures of urbanization do not necessarily capture the reach of sprawl – large cities, for example, are not necessarily sprawling. Moreover, global studies are often limited to a small sample of cities. In short, it is still far from clear whether the conclusions from studies in the West generalize to the rest of the world.

This paper quantitatively characterizes one dimension of sprawl – which we call street-network sprawl – at the most disaggregated scale possible, for most of the globe. We ask: What are the cross-national patterns of street-network sprawl? To what extent does street-network sprawl also occur in fast-growing cities in Asia and Latin America? Through cluster analysis, we identify archetypal patterns of urban sprawl in different parts of the world. We also draw some qualitative conclusions about the nature of the relationships between sprawl, demographics, and energy and greenhouse gas emissions.

We measure sprawl as street-network connectivity. One of our metrics is the nodal degree (number of connected legs) of each intersection. A deadend has nodal degree one, while a four-way intersection has nodal degree four. Such street connectivity measures are well established as a valid measure of sprawl in the urban planning literature (e.g. Barrington-Leigh and Millard-Ball 2015; Marshall & Garrick 2010). In contrast to alternative metrics of sprawl, such as the contiguousness or extent of an urban area, our measures make no restrictive assumptions about the size and shape of cities, such as monocentricity, and can be computed at any geographic scale.

The underlying data source is OpenStreetMap (OSM), a crowd-sourced geospatial data source that is sometimes described as the “Wikipedia of maps.” In related work, we show that for most of the globe, OSM has a street network that is more than 80% complete, and more than 95% complete in much of the world (Barrington-Leigh and Millard-Ball, under review). Our algorithm to measure street-network sprawl ingests the underlying OSM data, and computes nodal degree and other connectivity measures at the level of the street intersection.

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Key Words:
sprawl, street networks, global analysis, OpenStreetMap

TRANSIT ACCESSIBILITY AND THE GEOGRAPHY OF OPPORTUNITY: EVIDENCE USING GTFS AND GIS ON LOS ANGELES
Abstract ID: 1125
Poster

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Physical access to economic opportunity is still a factor dominated by geography. The existing scholarly literature finds that job growth often happens in places away from the populations that need the new jobs: also known as spatial mismatch. We argue that public transportation could and should play a role in mitigating that, particularly for low-income populations in search of quality work opportunities. Currently, cars are the primary barrier to entry in bridging that gap for job seekers in metropolitan areas. Blumenberg (2004) measured jobs that could be reached from low income neighborhoods in Los Angeles (LA) in 30- minute commutes by car and by transit, and found that cars provided access to an order of magnitude larger number of jobs than transit access. Nationally, the majority of commutes to work via public transportation requires over 45 minutes, which is significantly more than cars (U.S. Census Bureau American Community Survey 2010-2014).

This study extends the research on the geography of opportunity in two important ways. First, we use a new tool from ESRI that allows us to integrate General Transit Feed Specification (GTFS) open data to dynamically analyze travel times that exist within public transit networks. These new data are only beginning to be used by practitioners and some researchers. We are then able to link these data to job sub-centers across the Los Angeles metropolitan area using Census tract data to determine more precisely what is the accessibility of jobs for individuals in high poverty neighborhoods and specific populations within them; we focused on low-income “opportunity youth” in this paper.

We further distinguished job clusters by industry type to highlight if there are differences in accessibility between emerging economy jobs in the information technology (IT) sector and the general job market. Finally, we created transit access measures that can be widely used and rapidly deployed in a broad range of contexts. GTFS data is available for a wide geographies in the United States and abroad. We plan to make these measures available in an online environment (i.e. web maps) based on the Los Angeles area.

As such, we arrived at three findings. First, most opportunity youth in the County reside in the city of Los Angeles, but some are spatially isolated from opportunities. This challenges our idea of where the spatial mismatches are. Second, jobs clusters exist throughout the County, but most are concentrated in Central and West L.A. Third, and lastly, the best overall combinations of transit-to-job and transit-to-college accessibility are in the city of L.A.
The potential of transit-oriented development has spurred much activism and policy initiatives, federally and locally, to address equity concerns in low-income and highly-impacted neighborhoods. While there exists much political will, especially in places like Los Angeles, to extend transit to high-need areas, there is a dearth of accessible measures to help understand who will benefit and how. The existing method of using complex, link level agency data on transit routes has created an accessibility debate that allows few opportunities for participants and even agencies to effectively measure how different policies will or will not change the geography of access to opportunity. Therefore, questions of environmental justice and equity are prominently debated without much definitive evidence about how changes in transit operations relate to the geography of economic opportunity this paper aims to address these.

References


Key Words:
transit, geography, opportunity, GTFS, open data

SMART, EQUITABLE, AND INCLUSIVE URBAN TRANSPORT

Abstract ID: 1129
Individual Paper Submission

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Smart technologies are considered to be part of the solution for urban problems. This paper explores the topic in the context of transportation by asking: What role does and will 'smart' play in bringing about equitable and inclusive urban transport? We answer the question by examining the concept of ‘smart’ as well as equitable and inclusive urban transport and by focusing on issues at their junction. Specifically, the integration of smart solutions in three modes of transport (public transit, active transport, and automobiles) is examined through a primary research, positioned in the literature of the above concepts. The paper focuses on transport disadvantage (as a result of low income, physical disability, and language barriers) in relation to the use of smart technologies in the above modes of transport. Data divide and its effect on equity and inclusiveness in transport is discussed in detail. Our preliminary literature review indicates that while smart solutions contribute to efficiency and convenience, they tend to operate within the limits of and reinforce the status quo regarding equity and inclusiveness. The purpose of the paper is to bring forth the issues of inclusiveness and equity in the ‘smart’ discourse in
the context of urban planning. It is also to highlight the potential and limitations of smart technologies in contributing to solving urban challenges.

References


Key Words:
Urban transport, Smart cities, Equity and inclusiveness in transportation

THE GEOGRAPHY OF CAR-FREE HOUSING

Abstract ID: 1130
Individual Paper Submission

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Minimum parking requirements have a major effect on urban development. In many if not most cities, the requirements are binding, meaning that they force developers to provide more parking than they would otherwise choose (McDonnell et al. 2011; Guo & Ren 2013). A wide range of literature demonstrates the consequences of minimum parking requirements in reducing densities, increasing housing costs and increasing car travel (e.g. Shoup 2005).

In response, several cities have begun to reduce or eliminate their minimum parking requirements, particularly in walkable neighborhoods that are well-served by transit. However, the impacts of these policy reforms on developer decisions remain largely unstudied. In particular, it is unclear whether developers are using their new-found flexibility to create car-free housing, i.e. housing without parking.

In this paper, we explore the geography of car-free housing. We ask whether developers choose to build car-free once freed from the constraints of minimum parking requirements, and if so, where. Are car-free developments limited to the immediate environs of rail stations, or are they appearing in a wider range of urban contexts?

Our evidence comes from three cities -- London, San Francisco and Seattle -- that lifted parking requirements, at least in some neighborhoods, in the early 2000s. In all three cities, sufficient time has elapsed that the effects on the built environment should now be visible.

We first recreate the spatial history of parking requirements since 2000. In San Francisco in particular, minimum parking requirements have been abolished on a neighborhood-by-neighborhood basis,
meaning that the history of zoning reform needs to be reconstructed from the zoning code amendments. For each submitted land-use or building permit, we then calculate the parking ratio; whether the parcel was subject to minimum parking requirements; and a range of location-based covariates such as access to transit, density, and mix of uses. This data-collection step is almost complete.

We will then estimate a spatial regression model to identify the types of locations where developers choose to build car-free, and the extent to which this choice varies across the three cities. We will also estimate the number of parking spaces avoided through the policy reform, and, using existing research (e.g. Weinberger 2012), assess the implications for housing production and vehicle travel.

Given the limited research to date, while our methods are quantitative, our expected results are exploratory and descriptive. However, they are important not only from an academic perspective, but also for planners and policy makers who wish to understand the potential impacts of removing parking requirements. Our results will demonstrate the developer response from parking reform in the three case study cities, and also indicate the types of neighborhoods and cities where planners may usefully focus their efforts in the future.

References

Key Words:
parking requirements, car-free housing

STREET SAFETY, LOCAL REVENUES AND RACE: UNDERSTANDING IMPLICATIONS FOR TRAFFIC ENFORCEMENT
Abstract ID: 1146
Individual Paper Submission

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This paper examines racial and economic issues associated with trends in street safety initiatives, traffic enforcement activities and enforcement revenues. Many cities are embracing street safety improvement programs to reduce pedestrian and bicyclist crashes, injuries and deaths. Some of these efforts are design oriented, such as new plazas and bike lanes, and some of these efforts are improved enforcement of driving violations. City budgets are strained by large existing spending commitments and limited public acceptance for new taxes. At the same time, shifts in transportation finance and policy mean that cities bear a larger role in developing and paying for transportation projects.

These trends create new concerns for planners and transportation policy. First, cities and counties are under new pressures to raise revenues to pay for transportation investments and revenues, as the state and federal shares of transportation spending is declining. Yet political opposition to raising existing taxes, especially property taxes, has led to greater reliance on fines and enforcement revenues in many
places. Second, cities are actively changing the function and use of local streets, which includes restrictions on driving, lower speeds and managed parking. The success of these initiatives rests on enforcement of new rules. Third, public awareness of racial disparities associated with policing has increased. It is now clear as day that interactions with law enforcement are influenced by race and ethnicity, and traffic enforcement is particularly fraught for racial and ethnic minorities. Whether driving, cycling or walking, African Americans in particular are subject to much higher rates of police enforcement than whites. As these trends converge, the push for safer streets may result in punitive policing of certain groups, while local governments increase reliance on traffic enforcement as a revenue tool. This raises distributional questions about fairness and efficiency.

New York City is used as a case to study these associations. In 2013 New York City elected Mayor Bill de Blasio. One of his earliest commitments was to improve street safety through the principles of Vision Zero. Vision Zero aims to eliminate pedestrian deaths by vehicles through lower speed limits, improved street design and better enforcement of vehicular moving violations. These are laudable goals that many other cities are pursuing as well. Police precinct level data that describes traffic summonses, pedestrian and bicyclist injury and fatality incidence and socio-demographic characteristics are used for analysis during the years 2011-2015. The results show that the total amount of citations remained stable while the distribution of the types of moving violation summonses issued changed across summons type and precinct. Revenue from summonses has increased, though this was a negligible influence on total summonses issued. Precinct level analysis of factors associated with observed changes are then analyzed and implications are discussed. The results suggest that planning interventions to improve street safety through police enforcement can affect and can be affected by public revenues and civil rights in addition to public safety.

References

Key Words:
Traffic Enforcement, Environmental Justice, Vision Zero, Public Finance, New York City

ANALYZING THE IMPACT OF TRUCK TRAFFIC ON SMALL TOWN AND RURAL AIR QUALITY AND HEALTH
Abstract ID: 1161
Individual Paper Submission

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Rural and small town highways are critical links for national economies and transport systems to function well and they carry large amounts of traffic resulting in impacts that expose nearby residents to health risks. While urban areas generally experience the most severe air pollution, many freight corridors pass through rural areas generating pollution that receives comparatively less attention. Frequently this pass through traffic can exact heavy tolls on health, safety and the environment compared with the small benefits these communities may accrue. This becomes even more problematic given the high growth forecasts for U.S. truck volumes.

The literature on freight’s health effects focuses on urban areas, omits most freight corridors and a quarter of the U.S. population. Many urban studies have shown disproportionate exposure to air pollution among the poor and members of racial and ethnic minorities (Houston et al. 2004; Pastor, Morello-Frosch, and Sadd 2005). Bronx residents inside high-pollution zones were 66% more likely than the borough population at large to be hospitalized for asthma, 30% more likely to be poor, and 13% more likely to belong to a racial or ethnic minority (Maantay 2007). Moreover, nationwide studies in the U.S. and Britain have shown broad environmental justice concerns (Mitchell and Dorling 2003; Rowangould 2013).

This study estimates truck-generated air pollution in rural Georgia and examines health degradation and environmental justice, concentrating on two criteria pollutants: Nitrogen Dioxide and Particulate Matter (NO₂ and PM2.5). Additionally, we forecast baseline truck-generated pollutants through 2040 to highlight communities with worsening environmental quality and increased exposure. The analysis uses literature-derived coefficients to estimate health impact on rural populations that are adjacent to freight corridors. Finally, a subpopulation analysis of small urban and rural communities is also performed to understand the disparity among vulnerable sectors of the population.

Results of the analysis indicate that freight emissions are non-negligible in small towns and rural areas of Georgia. The number of communities experiencing above-standard pollutant exposure from trucks alone increases from 1 in 2007 to 38 and 56 in 2040 for NO₂ and PM2.5 respectively. Moreover, the communities with the highest current and forecasted pollution exposure from trucks disproportionately house racial minority and low-income residents.

Planning can benefit from analysis of rural truck pollution to create health and environmental performance measures, in accordance with the direction of the U.S. MAP-21 regulation. Importantly, if rural trucks do in fact create health hazards or induce inequitably distributed environmental impacts then planning solutions and mitigation strategies are appropriate.

References


Key Words:
air quality, pollution, health, freight, rural areas

EXAMINE THE HETEROGENEITY IN ELASTICITIES OF TRAVEL BEHAVIOR TO BUILT ENVIRONMENT WITH LATENT CLASS MODELS
Abstract ID: 1178
Individual Paper Submission

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There have been numerous studies on the relationship between travel behavior and built environment. Past studies have ended up with a wide range of estimates for elasticities travel behavior of to built environment (Ewing and Cervero, 2010; Stevens, 2017). Even though there have been multiple efforts in synthesizing findings of these studies (Ewing and Cervero, 2010; Stevens, 2017), so far little effort has aimed to systematically explain the variations in the elasticity estimates, as they may arise from different methods or data used in the study, or may be due to temporal, regional, and/or socio-demographic variations.

This study uses the 2009 National Household Travel Survey (USDOT Federal Highway Administration, 2011) joined with consistent nationwide measures of built environment from the EPA Smart Location Database and a systematic latent class approach to examine the variation in elasticities. The consistent dataset allows us to rule out variations from data collection and measurement. We apply latent class models (LCM) to examine the heterogeneity in travel behavior patterns in the joint dataset. To our knowledge, this is the first study applying a latent class approach to systematically examine heterogeneity in travel behavior patterns and variations in elasticities to built environment. Previous studies have found that LCMs perform better than mixed logit models when modeling mode choice with stated choice surveys (Shen, 2009) and in capturing latent modal preferences (Vij et al., 2013). Our method is similar to that of Vij, Carrel, and Walker (2013). But they only examine the heterogeneity of elasticities of mode choice to travel time across different modality groups and have not considered built environment variables in their study. We model annual average daily vehicle mile traveled, mode shares of transit and active transportation in turn as the outcome variables. In addition to showing the variation in elasticities across different groups, an LCM also includes a latent membership class model that allows us to identify the members with different elasticities, which help identify factors that best explains the variation. This research will help shed light on a missing angel of the research on the relationship between built environment and travel behavior.

References

Key Words:
Travel behavior, Built environment, Elasticities, Variation of elasticities

PLANNING IN THE ERA OF BIG DATA – LESSONS FROM THE TRANSPORTATION DATA COLLABORATIVE IN SEATTLE AND THE GREATER PUGET SOUND REGION
Abstract ID: 1179
Individual Paper Submission

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Organizations from both public and private sectors hold a large quantity of data, both in static form and real time flow. If these datasets were stored and shared more widely within and across organizations, the resulting analytics could be used to improve organizational efficiencies and productivity, enable and empower the general public, and produce economic and commercial values. Despite the expected benefits, much of the data are stored separately within each organization. While the current discourse around big data is mostly technology-driven, the hurdles that prevent organizations from sharing their data often arise from a lack of an inter-organizational governance structure. This study examines some of these organizational challenges and corresponding strategies that planners can utilize to deal with them, using the ongoing Transportation Data Collaborative (TDC) in Seattle and the greater Puget Sound Region as a case study. The TDC is an initiative at the University of Washington (UW) to create a protected and linked data repository of real-time information from regional public and private transportation providers. The goal of the TDC is to help partnering agencies to establish a trusted platform to create data-driven policy, enable data access for research uses, and provide individuals with authenticated access to their own transportation records. To achieve the above goal, a team from the Urban Infrastructure Lab at UW has been carrying the TDC through three phases. The first phase includes sequential meetings with key personnel in different transportation agencies in the region. The second phase establishes and tests a set of policy protocols based on one of the user cases identified in the first phase that agencies share common interests in. The third phase uses data from the user case to test the privacy protection capacity of the TDC, operating on a Microsoft Azure cloud platform. A number of lessons have been drawn so far. The agencies interviewed have shown interests in many common areas that can benefit from data sharing. However, the major challenges include a lack of data policy that would govern data ownership, access, security, and privacy protection; and a lack of communication between organizations. The situation creates a classic collective action problem where data, as a type of common-pool resources, are characterized by difficulty of exclusion and substractability of resource units and are threatened by overuse. In order to overcome the challenges, the planning team utilizes a number of strategies, ranging from establishing roadmaps to structuring conversations, based on the knowledge of policy approval procedures, software development, politics and institution, and key
personnel, to help the agencies bridge information gaps and build mutual trust. The strategies draw parallels with traditional planning practices in terms of the knowledge areas and the types of communicative work. It is noticeable that technology has played a relatively insignificant role so far in forming the governance structure. This is because technology is most useful in solving narrowly defined problems. However, narrowing the problem too early based on available data and methodology would only make the progress seem impossible. Nevertheless, it is important to understand the strengths and limitations of different technical options in order to incorporate them into the policy framework. Apart from the above, the transaction cost economic theory has proved to be useful in disaggregating and evaluating the social cost of the institutional and contractual arrangements of data sharing external to the direct economic cost. In conclusion, this paper argues that a diverse set of political and economic rationalities are at play in shaping the current landscape of open data movement. Consequently, it is important to revisit the role of planners in such context to identify the core skills required to do planning in the era of big data.

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Key Words:
transportation data collaborative, collective action problem, common-pool resource, communicative practice

IMPACT OF RAIL TRANSIT STATIONS ON HOUSING VALUE CHANGES: THE DALLAS FORT-WORTH METROPOLITAN AREA AS A CASE STUDY

Abstract ID: 1185
Individual Paper Submission

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Dependency on the automobile in the United States has been associated with many urban problems, such as urban sprawl, traffic congestion, air pollution, etc. As the use of automobiles increases, negative externalities also increase. As a result, many American cities have seen a rebound of public transportation systems—many of which have built modern rail transit systems to mitigate the negative impacts of higher dependency on automobiles, to improve mobility and accessibility for commuters, to offer alternative to drivers, to shape development patterns, and to increase economic growth. This resurgence of rail transit systems has caused apparent shifts in economic, social, and spatial aspects of neighborhoods located in proximity to rail stations, but negative impacts may still also occur. This study investigates the changes in housing value between 2000 and 2014 in 454 block groups within a one-mile buffer around rail stations (study area) located in the Dallas-Fort Worth metropolitan area to see if proximity to rail stations affects median housing value for the study period. This study begins with data collection from many sources including U.S. Census and Council of Governments and uses
different techniques to answer the research questions. In addition to statistical analysis, ArcGIS tools are used to determine the shortest straight-line distance from the block group’s center to the closest rail station and to major amenities that may affect some of the research questions, as well as to visualize geographical comparisons. The research uses three approaches to analyze the data. First, a comparison of changes in housing value within block groups located in the “study area” in the study period is introduced. Next, a comparison of the study area to the rest of block groups (2610 block groups) located within the four counties served by rail transit system in the study period is presented. Finally, this is followed by employing a regression model with the data on the block groups located in the study area to understand the relationships between the selected independent variables and the changes in housing value in the study period in relation to the research question.

The findings demonstrate that within the block groups around rail stations, changes in median housing value are greater than the rest of block groups within the four counties. However, the results of the regression model show that, during the study period, closer block groups to rail stations experienced lower changes in housing value compared to block groups located farther away from stations. These findings are a useful addition to the existing literature and contribute to the field of urban planning. In addition, planners and policymakers could use the implications from findings to adopt some policies for furthering the success of rail transit systems in urban areas in increasing the transit usage and sustaining station area development. Policymakers should promote transit-oriented development (TOD) with good urban design, improve rail transit coverage and quality of services, and alleviate negative externalities associated with rail transit stations.

References

Key Words:
Rail Transit, Accessibility, Housing value, Rail station, Block group

PROPERTY MARKETS AND VALUE CAPTURE: UNDERSTANDING VARIABILITY IN CHANGING LAND VALUES DUE TO TRANSPORT INFRASTRUCTURE DEVELOPMENT
Abstract ID: 1190
Individual Paper Submission
Understanding property markets is a key to understanding growth in cities and regions. Increasing land prices propel increasing housing costs (Knoll et al. 2014), drive the rhetoric of housing supply shortage and increasingly are seen as a revenue stream for infrastructure development. The potential increase in land value associated with transportation infrastructure improvement is termed ‘value uplift’. Government appropriation of a portion of value uplift in order to fund current or future transportation infrastructure projects is known as ‘value capture’. Value capture is an attractive means of funding infrastructure improvement; quantifying value uplift is a key step in evaluating the feasibility of value capture (Mulley 2014).

Applied economists quantify and forecast value uplift using hedonic price models. Hedonic analysis is based on the idea that goods bought and sold in a market consist of different bundles of characteristics. Each property transaction associates a market price with a bundle of property characteristics. In this way markets relate the transaction prices of goods with the characteristics associated with those goods (Rosen 1974), including the impact of housing characteristics and transportation infrastructure development on property prices.

However, hedonic price modeling presents conceptual and practical challenges. The extensive literature on value uplift struggles to find consistency in results. Jones (2015), for example, summarizes over sixty studies of heavy rail, light rail and bus rapid transit. The range of value uplift found in these studies is wide, ranging from -42 to +40 per cent for heavy rail, from -19 to +30 per cent for light rail and from -5 to +32 per cent for bus rapid transit. Jones (2015) and numerous others who summarize the results of hedonic studies looking at transportation infrastructure development present an extensive set of research. Due to the high variability in results, this body of literature offers little in the way of generalizability and little definitive guidance for planning and urban management.

This research confronts the issues of generalizability in hedonic pricing studies through investigation of alternative econometric methods as well as inclusion of local context based on urban design and the quality of the public realm. This approach follows Robinson (1998) who sees research strength in augmenting quantitative methods with qualitative methods. Combining these approaches yields a more relational, contextual understanding.

A case study in western Sydney, Australia is presented in order to unpack the opportunities and constraints of standard and spatial econometric models within the spatially explicit local context in which the research is taking place. Quantitative evaluation is based on a time series of geocoded sales data augmented with property boundaries and other spatial data from state government. Qualitative assessments of urban design are incorporated in order to ascertain the influence of urban design, walkability and the quality of the public realm.

Preliminary findings are congruent with the broader literature. Property characteristics such as number of bedrooms, zoning and distance to high voltage power lines present the expected positive and negative influences on property prices. However, the influence of commuter rail infrastructure on property prices varies widely. This indicates a need for further detailed investigation of the methods employed, alternative methods as well as a deeper understanding of the local context of the drivers of property price in relation to transportation infrastructure. There exists a significant opportunity for cities to redefine, re-invent and revitalize if the wealth generated by land value increases can be understood, measured, and applied to the benefit of society. By combining established quantitative methods with a qualitative assessment of the built environment this research can contribute to improving the
generalizability of econometric evaluations of value uplift and, ultimately, provide improved guidance for planning and urban management.

References

Key Words:
Transit, Hedonic, Spatial, Econometric

DETECTING OF SMART AND CONNECTED COMMUNITY: INSIGHT FROM A MOBILITY APP
Abstract ID: 1207
Individual Paper Submission
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The advancement of information and communication technologies is shaping and assuring the boom of smart communities. Communities are becoming smart to boost their efficiency and to enhance their competitiveness. This necessitates rethinking traditional models and employing innovative ones to define and form smart and connected communities, which are quite different from what we have experienced hitherto. Planners and advocates, consequently, have begun to seek how to detect social structures that are neither individualistic nor holistic, but fundamentally relational, in which are able to response to their needs effectively.

Much of the previous research has been limited to define smart and connected communities building on either socio-economic characteristics or geographical borders. We are, however, of the opinion that defining communities solely on socio-economic characteristics and geographical borders is defective. We therefore introduce a model to detect communities using the similarities and dissimilarities in the activity patterns of individuals. We postulate two hypotheses:

1. Individuals with similar space activity patterns are not necessarily clustered in a geographical neighborhood.
2. Individual with similar space activity patterns have more intentions to interact socially to response their travel needs.
The raw data used in this study was collected 438 individuals using an incentive-based mobility app, Metropia, over 300 days in Tucson, Arizona. The data consists of the latitude and longitude for visited places along with its duration. We prepared the data in three distinct steps:

1. Capturing important places using a DBSCAN clustering method
2. Inferring Activities
3. Shaping user-activity network

To test the first hypothesis, we develop a set of network transforming methods. These methods, lead us to shape a user-activity network which demonstrate relationship of users with different activity space locations. However, as this network entails two different node types (being bipartite), our choice set of possible graph analytic methods will be limited. Therefore, using similarity measurements on clean data, we will transform this bipartite network to a one-type network (graph with one node type). More specifically, we use cosine similarity measurement to in this study.

Aforementioned final network, encompasses strength of relation and connection that users share with each other regarding their similarity of visited activity spaces. This representation is much similar to social network graphs, in which link between users stages friendship, but similarity of their life-style. Applying graph clustering (community detection) methods on this user-activity network can reveal hidden communities of users with similar activities.

Among many community detection methods, we apply Markov Graph Clustering, Clique Percolation, and Modularity Maximization methods. Aligning with the same data set, we leveraged carpooling data as an indicator of social interaction based off travel needs. By evaluating inclusiveness of carpooling among the detected communities we test our second hypothesis, and report back which community detection method has higher performance.

Results indicate that geographical neighborhood would not be a suitable representative of individuals with same cluster of space activity patterns. Moreover, overlap of carpooling instances with users within a same cluster puts a sufficient proof on our second hypothesis.

References

Key Words:
Connected Communities, Community Detection, Smartphone Apps, Activity Pattern

ESTIMATING THE IMPACTS OF CAPITAL BIKESHARE ON METRORAIL RIDERSHIP IN THE WASHINGTON METROPOLITAN AREA
Demographic changes and shared-mobility technology have redefined the urban transportation fabric. Bike share, a public short-term bicycle rental program, has emerged around the world and quickly gained popularity in large metropolitan areas. As of the end of 2016, more than 2 million public use bikes were provided in about 1,200 cities of 63 countries (Meddin, 2017). Many users find bike share to be a convenient, healthy, and smart transportation option that solves first- and last-mile issues. But some are concerned that it may pose a challenge to existing rail transit systems and reduce ridership. Hence, for better transportation planning and policy making, it is important to understand the impacts of a bike share program on rail transit ridership.

The Washington metropolitan area lends itself well to studying this topic. Both the bike share and rail transit systems in this area, Capital Bikeshare (CaBi) and Metrorail, are the largest in the United States. Also, the area has the largest share of commuters who do not drive to work, as the recent ACS 5-year estimate shows. According to the Washington Metropolitan Area Transit Authority (WMATA), which operates Metrorail service, CaBi services may bring challenges to Metrorail ridership, especially for the short-distanced trips (WMATA, 2015). Based on WMATA’s concern, we explore whether CaBi substitutes for Metrorail and reduces its ridership.

To address this question, we performed two sets of studies, an exploratory analysis and a set of regression analysis. In the exploratory analysis, we used data visualization and ArcGIS mapping tools to study both CaBi and Metrorail trips’ trends and patterns. We found that CaBi can complement Metrorail trips in some cases and substitute for rail in others. To estimate CaBi’s impacts more precisely, we applied three regression models: the Direct Ridership Model (DRM), the Difference-in-Difference (DID) model, and the Station-Specific Dummies (SSD) model. These models are new to the research question, since previous studies largely relied on survey data and descriptive analytical methods (Martin & Shaheen, 2014). Input data in this paper are the weekday Metrorail and CaBi trip data at the Metrorail station area (which is defined as the ¼-mile radius) between August 2010 and August 2015. To maximize the benefits of the detailed data, Metrorail ridership and CaBi trips are further split by types of ridership (entry vs. exit) and the times of the day (AM and PM peaks).

The results of three models consistently demonstrate CaBi’s mixed impacts. CaBi may complement some Metrorail trips, but substitute for some others, depending on the type and time. More importantly, results of the SSD found that CaBi’s impacts vary by Metrorail station locations, either a core station located in downtown DC or a non-core station in the peripheral and suburban communities. Separating Metrorail stations into core and non-core stations, we found that CaBi reduces core Metrorail stations’ ridership by 4,814.4 per month for the number of entries in the AM peak and by 4,886.9 per month for the number of exits in the PM peak, but increases ridership of non-core stations by up to 2,781.2 per month, at a high statistical significance level.

The finding that CaBi can complement Metrorail ridership is contrary to WMATA’s concern that a bike share program pose challenges for Metrorail. Based on the results, we suggest that WMATA work with CaBi to expand docks to Metrorail stations in the peripheral and suburban communities to maximize the benefits of CaBi’s complementary effects. We also propose specific strategies to integrate WMATA and CaBi to improve commuters’ mobility.

References
THE EFFECT OF LIGHT RAIL SYSTEMS ON URBAN FORM: A SPATIO-TEMPORAL ANALYSIS OF SELECTED LIGHT RAIL SYSTEMS ON URBAN DENSITY

Abstract ID: 1213
Individual Paper Submission

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The transportation - land use link has been the focus for many decades now, both in planning practice and research. However, most recently, greater attention has been directed towards the effects of land use on transportation choices rather than the other way around. Research around the impact of travel modes on urban form is relatively limited. Specifically, the enquiry into the effects of rail transit on urban form is under researched. A few existing studies testing this relationship revealed mixed and unclear findings (Loukaotou-Sideris, 2010; Cervero and Duncan 2002; Clower and Weinstein, 2002). Most of these studies were conducted on individual transit systems rather than a comparative assessment of multiple systems to truly understand the relationship.

This study addresses this gap by assessing the effects of multiple Light Rail Transit (LRT) systems on urban form over time. LRT systems have been adopted in many U.S. cities and have become a popular transit mode to serve American urbanites (Black, 1993). Unlike bus transit, LRT systems have fixed routes, and hence are of more permanent nature, allowing a longitudinal assessment of growth patterns along the routes.

The study uses historic and current (1980 to 2017) data from American Public Transportation Association, National Transit Database, US Census, and transit agencies. Leveraging GIS software, spatial data mashing techniques, and spatio-temporal statistical approaches, it evaluates the effects of LRT's footprint on urban form. It focuses on 4 case studies from different urban and growth contexts - Denver (CO), Portland (OR), San Diego (CA) and Sacramento (CA), taking a closer look at how population densities have changed over time in these areas, especially along the system routes and stations. While preliminary analysis of these light rail systems suggests that highways still dominate in their role in shaping these cities, there are certain instances where an LRT still seems to be having a complementary role in promoting urban growth. Discussions on these findings will help planners and practitioners to strategically plan transit systems to promote sustainable urban development.

References


Key Words:
Public transit, Light rail, GIS, Urban Form, spatio-temporal analysis

EXPLAINING THE DETERMINANTS OF CAR RESTRICTION POLICIES ACROSS 287 CHINESE MUNICIPALITIES

Abstract ID: 1216
Lightning Research Presentation

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Many Chinese cities experienced the negative effects of congestion and air pollution, and many municipalities have implemented car restriction policies to address these problems. Research on these policies has identified numerous factors that motivated the municipalities to adopt the car restriction policies, but has not yet systematically evaluated the different factors and their relative importance for a large number of diverse cities. We collected a panel dataset from all 290 Chinese municipalities for the past ten years, extracted policy information from 116 legal documents. We used discrete choice models to assess the impact of 15 indicators measuring economic power, population, fiscal and administrative resources, urban structures, environmental challenges, and transportation related variables in predicting the adoption of car restriction policies and their specific features. We find that the cities with more motor ownerships, more population, more fiscal power, and more political influence are more likely to engage in car restriction policies.

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Key Words:
Car restriction policies, Chinese municipalities, Policy adoption

JOINT ANALYSIS OF THE IMPACTS OF BUILT ENVIRONMENT ON BIKE SHARING STATION CAPACITY AND GENDER-SPECIFIC TRIP ATTRACTIONS
Abstract ID: 1218
Individual Paper Submission

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Many studies report that built environment characteristics, bicycle and bike sharing infrastructure, and public transit facilities have substantial influences on station-level bike sharing ridership (e.g., Noland et al., 2016). Except for Faghih-Imani and Eluru (2016), the mechanisms by which bike sharing system installation process affects bike sharing usage have been less investigated. The relationships between aforementioned factors and the number of bicycle docks installed at the station-level reveal the extent to which system operators predict that certain built environment characteristics, such as job density, intersection density, bike lane length, and destination accessibility, may affect bike sharing trip attractions. A better understanding of the direct impacts of the built environment and the mediation effects of system installation process informs policy makers better coordinate the installation of new systems or modify existing systems within scarce transportation investments. This study contributes to quantify the mediation effects of system installation process on these relationships between our exogenous variables of interests and station-level bike sharing trip attractions.

We develop a zero-inflated negative binomial structural equation model (ZINB-SEM) approach to jointly explain the bike sharing ridership of males and females in different age cohorts in terms of built environment characteristics, bicycle infrastructure, public transit facilities, and temporal and meteorological factors on bike sharing station capacity and trip attractions, accounting for the presence of excess zero outcomes caused by weather and temporal factors. Using data from New York City’s CitiBike system, the model results shows that these factors have significant effects on bike sharing ridership. The analysis suggests that: (1) job density is positively associated with station capacity, however, its effect on trip attractions is in the negative direction; (2) the negative effects of sidewalk length and number of bench services on trip attractions are completely mediated by station capacity; (3) the area of green space is positively associated with station capacity, but negatively correlated with males’ trip attraction; (4) the number of subway entrances is negatively associated with millennial women’s trip attractions, but positively associated with other age cohorts; (5) the number of street intersection is positively associated with younger males’ (born 1989 – 2000) trip attractions, but insignificant for others. This study provides planners a better understanding on how the surrounding environment influences bike sharing system installation process and gender-specific trip attraction. Consequently, planners and system operators could develop effective and targeted countermeasures.

References

Key Words:
Bike Share, built environment, Structural Equation Model

TRANSPORTATION SAFETY EVALUATION USING DATA ENVELOPMENT ANALYSIS: A CASE STUDY OF MIAMI, FLORIDA
Abstract ID: 1224
Individual Paper Submission

Background:
Traffic safety in US remains an important research issue. According to National Highway Traffic Safety Administration (NHTSA), fatalities have increased from 2015 to 2016 nationwide and based on a report from the Florida Department of Highway Safety and Motor Vehicles traffic crashes in Florida increased by 4.82% from 374,342 to 393,292 from 2015 to 2016. When analyzing transportation safety, most studies depend on quantitative analysis to determine safety levels, focusing on traffic crash frequencies, crash rates, and crash severity. After-crash recovery is also an important part of transportation safety. It reflects the ability of a system to avoid secondary crash and reduce the crash severity. Both the risk of traffic crashes and the ability to recover and reduce severity, affect the overall safety of the transportation system. However, there is a lack of research that looks comprehensively at all three aspect of crash risk, crash response and system recovery.

Study Design:
This study develops a Data Envelopment Analysis (DEA) based methodology to measure transportation safety which combines the measurements of crash rate, crash severity and crash recovery. DEA is a nonparametric method using linear programming to evaluate relative performance efficiency of a set of Decision Making Units (DMUs) (Charnes et al., 1978). It has been widely applied to various fields as benchmarking in operation system such as primary care efficiency measurement, bank ranking, cities ranking, safety performance (Azadeh, Ali et al., 2012; Azadeh, A. et al., 2014; Deidda et al., 2014; Zhu, 1998). It is calculated based on multiple inputs and multiple outputs, and it is measured by a ratio of weighted sum of outputs to a weighted sum of inputs(Charnes et al., 1978). In this study, the outputs variables in the DEA models are traffic crash rate, crash severity, and crash recovery. Traffic crash rate is calculated by observed traffic crash frequency divided by traffic volume in peak hour and off-peak hour. Equivalent Property Damage Only (EPDO) model is used to calculate the monetary loss from all crash types along a roadway segment. Recovery time is measured as the time difference between crash reported and scene cleared. The inputs variables are the attributes of the roadway, which include traffic volume, the width of road, and the number of lanes of the roadway. Based on the quantified impact of the output and input variables, a transportation safety index is calculated and applied to each road segment.

Results:
This study compares two models using different variables. The first model calculates the transportation safety of a roadway segment by considering the crash frequency, crash severity, and crash recovery assuming no effect from adjacent roadway segments. The second model considers the adjacent crash frequency, crash severity, and crash recovery. Result show that the second model provides better measurement of the safety index due to the impact of the adjacencies of the surrounding network.

Contribution:
This study used safety risk and emergency reaction performance to determine a more complete measurement of the transportation safety. The results suggest that transportation safety evaluation should consider the weight of affecting factors instead of their simple sum, as well as it highlights the importance of the surrounding network for a complete safety evaluation.

References

Key Words:
Transportation safety, data envelopment analysis, traffic crash, crash recovery

URBAN MOBILITY INEQUALITY: IMPACT OF SUBSIDIES FOR LOW-INCOME TRANSIT RIDERS WITH RCT
Abstract ID: 1228
Individual Paper Submission

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Policymakers and advocates are increasingly concerned with the growing unaffordability of public transit for low-income riders in US cities resulting from rapidly increasing transit fares coupled with growing income and wealth disparities. More than 70 percent of the nation’s transit systems cut service, raised fares or both during the recent recession and its aftermath. The worry is decreased access to important goods and services, such as jobs, medical care, healthy food options, training programs, and visiting family for the poor. Despite these concerns, literature contains little about how low-income households manage their transportation costs while also preserving their desired level of accessibility.
and quality of mobility. When low-income households do find ways to cover their transportation expenditures, many of these strategies create hardship. With the poorest in urban areas relying mainly on public transportation, its affordability is central to the discussion of equity.

This study investigates the impact of subsidizing public transit fares on the accessibility of low-income populations to needed goods and services in the US context. The lack of such studies hampers informed policy decisions regarding the need for means-based fare subsidies. Specifically, the behavioral response of low-income riders to changes in the fare (e.g., fare elasticity) is poorly understood. We conducted a two-month random control trial (RCT) study with 100 low-income transit riders who use Boston’s MBTA transit system in Spring 2017 to investigate changes in travel behavior, namely: (a) number of trips taken and (2) destinations accessed. Half of the participants were placed in a treatment group receiving a modified smartcard that automatically provided a 50% fare discount on a per-use basis (the other half were placed in the control group where no discount was provided.) Collaboration with the transit agency allowed us access to the SmartCard data for all participants to determine the number of trips. An automated ChatBot was developed to interact daily with all participants by SMS/text messaging to collect travel diary information about trip purpose. The texting approach was taken because of the lack of smart-phone or data-plan penetration to low-income populations whereas mobile phones with texting capabilities are ubiquitous. In addition, daily automated texting allows for more immediate and frequent responses which improved data quality. Finally, we conducted semi-structured interviews with a subset of the treatment group participants after the study period to gain a better qualitative understand of the impact of the fare subsidy. The results of this study are not yet available, but will be included in the final paper submitted to ACSP prior to the conference date.

While housing, food security, and healthcare programs are available to low-income residents across the US, transportation subsidies, with limited exception (San Francisco and Seattle), are not. For decades, subsidies were built in to public transportation systems such that fares were kept low for everyone. When local governments took over the ownership and operation of transit systems in the 1960s, fares were set to be affordable to low-income riders. Rising fares are counteracting this built-in subsidy and disproportionally affecting low-income riders. Seniors and persons with disabilities receive discounted fares from transit agencies so it is not unreasonable to consider extending this benefit to those with low-income. With city and state budget shortfalls increasing, though, society has thus far been reluctant. In addition, there are competing theories on why sensitivity to the fare for low-income riders would be inelastic (because of being transit dependent) or elastic (because of constrained financial resources) but no conclusive research on how income groups’ differing marginal utilities of income effect their sensitivity to fares.

References

Key Words: transportation equity, transit fare subsidy, randomized control trial
IS IT WISE FOR TRANSIT AGENCIES TO ADOPT AUTONOMOUS BUSES? A COST-BENEFIT ANALYSIS IN AUSTIN, TEXAS
Abstract ID: 1232
Poster

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This paper contrasts costs and benefits for transit agencies to adopt autonomous buses (AB). During the past decade, autonomous vehicles has gained substantial momentum in cities worldwide. By eliminating human drivers, autonomous vehicles may result in reduction in traffic collisions, among other predicted / proven benefits. Many transit agencies are enthusiastic in learning about the multi-facet implications and feasibility of adopting autonomous public transit, while studies in these areas are very scarce. This paper, based on a Cost-Benefit Analysis (CBA) study for the Capital Metropolitan Transportation Authority in Austin, Texas, aims to provide quantitative information of costs and benefits associated with adopting autonomous buses, and to raise contingent investment strategies for transit agencies. This study considers six different scenarios of replacing one traditional 40-feet diesel bus with autonomous buses; these scenarios differentiate in bus sizes and fuel types. The major categories of costs and benefits include prices of buses and supportive infrastructure, fuel costs, greenhouse gas emissions, staff salaries, insurance costs and accident costs. The Net Present Value (NPV), which is calculated for various choices of time horizons and discount factors, is used as a key decision criterion. The results showed that small (22-feet) diesel AB would provide the largest benefits versus costs for transit agencies. Transit agencies, depending on the ridership of certain routes, could use one to two small (22-feet) diesel AB to replace one regular (40-feet) diesel bus. Small (22-feet) electric AB and regular (40-feet) diesel AB can also result in positive benefits versus costs, but the NPV of these scenarios are much smaller. It would be financially unfeasible for transit agencies to adopt regular (40-feet) electric buses. The market and regulatory environment for automation technologies can be volatile and hence drastically change the results of the study. Transit agencies could use the analytical framework of this study to generate new results when market and regulatory conditions change.

References

Key Words:
Autonomous Buses, Cost Benefit Analysis, Transit Planning, Autonomous Vehicles

REGIONAL EMPLOYMENT CONNECTIVITY AND TRANSIT ACCESSIBILITY METRICS
This paper analyzes the connectivity, enabled by public transit, between workers and firms of specific types in Greater London. It uses geographically precise analysis (at the level of UK Census Output Areas, analogous to US Census blocks) to characterize how this connectivity varies by industry and education level, and how the accessibility of residential locations to jobs relates to unemployment. Transit enables high effective densities of firms, unlocking agglomeration effects and productive economic clusters (Chatman and Noland (2014)). Regions with strong connectivity between workers and jobs tend to attract firms, as do specific locations within those regions that have accessibility to many well-qualified workers. Accessibility-enhanced thick labor market mechanisms, such as better matching, reduced costs of changing jobs, and increased incentives to invest in specialized training, can benefit both workers and firms. Residents and firms may benefit from locations with high accessibility, but this accessibility must be to relevant jobs or workers, and accurately reflect realistic transportation options.

Building on past work (e.g. Shen (1998), Cervero, Rood, and Appleyard (1999), Cui and Levinson (2016)), this research compiles accessibility metrics, for different employment types, and over the course of multiple days based on vehicle tracking data. Employment types are drawn from UK Census data. Finance and healthcare are used as example industries, and No/Level 1 Qualifications and Level 4 Qualifications are used as example education levels. Accessibility is calculated for multiple days using travel times derived from vehicle tracking data from London buses; these values of actual (as opposed to scheduled) accessibility are then used to calculate network-level measures of transit reliability. A cloud-computing accessibility analysis tool (described in Conway [2017]) was used to calculate various employment accessibility metrics for the twenty-five thousand 2011 ONS Census Output Areas in Greater London.

Results show a connectivity advantage for the finance industry and high education levels, and a connectivity disadvantage for the healthcare industry and low education levels. The average finance workplace in London has access to 24% of the region’s total workforce (within 45 minutes of combined walking and transit travel time), while the average healthcare workplace has access to only 18% of the region’s total workforce. Accounting for matching, the average finance workplace has access to 39% of region’s finance workers (a matching advantage of 61%), while the average healthcare workplace has access to only 15% of the region’s healthcare workers (a matching disadvantage of 17%). Not only are finance firms concentrated in central, accessible locations, their workers also take advantage of this accessibility. Similar discrepancies are found for education levels. For selected boroughs in London, models were estimated to gauge associations between the day-to-day reliability of accessibility to low-education jobs and unemployment. While causality is not clear and any extrapolation beyond this limited sample would be suspect, estimated coefficients suggest an increase of 1 million low-qualification jobs easily reachable by bus during the morning of an average day would be correlated with an approximately equal reduction in unemployment as a decrease of 1% in the network-level variability of bus service during that time window. An implication of this finding is that reliability should be considered to be a much more important factor in the evaluation of transit projects. Future research could test if this sizeable effect of transit unreliability remains in the presence of more robust controls.
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Key Words:
Transit, Commuting, Job Access, Labor Market

MODE CHOICE BEHAVIOR OF A MIDWEST COLLEGE COMMUNITY: THE CASE OF THE UNIVERSITY OF TOLEDO, OHIO
Abstract ID: 1238
Individual Paper Submission

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Global warming and climate change have emerged as two of the most spoken words in the world for the last couple of decades. Scientists have been relentlessly working to increase awareness among public about the impacts of climate change on our universe. Considering this, the study strives to provide a sustainable college campus with fewer motorized vehicles and more active transportation on campuses. Before starting the study, the researcher reviewed relevant articles and research papers to get an overview of the previous studies on this topic. She observed from the literature review that there were very few studies on college community mode choice behavior. Hence, she chose this study to investigate travel behavior of the students, faculty, and staff of the University of Toledo (UT) Main campus. The null hypothesis of the study considers that there are no significant factors that affect people’s mode choice decision to and within the college community. Multinomial Logistic regression models (MNL) are used in the study to explore the probability of non-motorized mode choice decisions of the college community. Car, bicycle, shuttle, and walking are four alternative modes of the study while the car is considered as a base mode. MNL models identify the significant factors that inspire people to use active transportation modes (i.e. walking and bicycling) to and within the college campus. The findings of the study show that gender, residency status, academic status (i.e. faculty, staff, and students), race, distance, driving license, car ownership, safety, and weather are the significant factors that affect people's mode choice decision to UT campus. Similarly, age, gender, income, safety, academic status, residency status, weather, and semester are significant factors for walking and bicycling within the campus. The result shows that if all factors remain constant, the probability of choosing a car is six times higher than the probability of walking to the campus. It also indicates that for females, the likelihood of biking to the campus decreases 96% while the likelihood of walking within the campus increases 53%.
Furthermore, a descriptive and qualitative analysis were performed in the study. The study provides some recommendations for the practitioners and the campus planners based on the analyses. It recommends that improvement of walkways and bike lanes may inspire people for actively commuting to and within the campus. The study also explores that many respondents feel unsafe on campus at night. So, the authors suggest providing better lighting systems and more police patrols at night to increase the number of bicyclists and pedestrians on the college campus. The results of the study will help not only the UT campus planners, but also other mid-west campus planners who want to create a pollution-free, environment-friendly, and healthy college campus.

References


Key Words:
Mode Choice Behavior, Multinomial Logistic Regression Model, Sustainable Transportation, College Campus Transportation, Walking and Bicycling

VEHICLE LOAN FINANCING IN LOW-INCOME AND MINORITY HOUSEHOLDS

Abstract ID: 1251
Individual Paper Submission

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While the United States has made substantial investments in public transit, many households still need vehicles to access employment and other economic opportunities. Vehicles are especially important for the growing number of low-income households in suburban areas with non-existent or poor transit service. Some of these households, however, may have difficulty purchasing or retaining vehicles due to high interest rates on vehicle loans. High interest rates and higher resulting payments may act as a barrier to transportation access for these households, or may leave them more vulnerable to financial shocks. Low-income minority households may face further difficulties obtaining vehicle loans: researchers have provided evidence of racial disparities in vehicle loans even after controlling for financial and demographic characteristics (e.g., Cohen 2006; Charles et al. 2008).

In this paper, we investigate the relationships among income, race and ethnicity, and vehicle financing using triennial data from the Survey of Consumer Finances from 2004 to 2013. The number of households in the United States with high-interest vehicle loans has increased with the growth of the
subprime automobile lending industry in the last decade, and this paper extends previous research by investigating vehicle loans in light of this growth. Following the approach of Charles et al. (2008), we construct regression models of vehicle loan interest rates at various points of the percentile distribution. After controlling for demographic, financial, and vehicle loan characteristics, we find that black households pay higher interest rates at all percentile levels, and that Hispanic households pay higher rates at percentiles above the median. For black households, the difference is largest for interest rates at percentiles above the median. We also find that Hispanic households pay higher premiums to use vehicle finance companies at all percentile levels, and that black households pay higher premiums at percentiles above the median.

This research contributes to planning practice by providing a deeper understanding of the factors contributing to transportation barriers for disadvantaged populations. The findings have implications for planners and policymakers considering subsidies and financial programs to promote economic development in low-income and minority communities, as well as implications for consumer regulations and financial literacy education.

References


Key Words:
Automobiles, Vehicle loans, Consumer finance

SCHOOL LOCATION AND AIR POLLUTION EXPOSURE
Abstract ID: 1266
Individual Paper Submission

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Background: Understanding how school location impacts children’s air pollution exposure and the ability of children to walk and bike to school has been a policy issue of interest in recent years. Smart growth advocates encourage districts to locate schools in “walkable” locations, often near high-volume roadways while health professionals emphasize the importance of minimizing near-roadway exposure and support decisions to distance school locations from major roadways. As states, such as California, implement laws to site schools away from high-volume roadways, such policies can lead to school locations that are disconnected from neighborhoods and accessible only by motorized transport modes. This study analyzes children’s air pollution exposure across an average school day—from the time they
leave home in the morning to the time they return home from school. This research compares the daily average exposure for children walking to a local school in a high traffic area with a significant number of trucks compared to their exposure if they were required to be bussed or driven to a more remote school located in a low traffic environment. The analysis also assesses how pollution exposure can be mitigated through policy interventions such as adoption of clean school bus fleets and improved school HVAC systems.

Methods: Researchers selected two Detroit neighborhoods with different air quality environments – heavy-diesel/heavy-traffic and low-diesel/low-traffic – with a synthetic sample of students. Students’ routes were analyzed for commutes to their high traffic neighborhood school and for commutes to the school in the low traffic neighborhood. Home-to-school commuting routes were created for three modes: walk, automobile, and school bus. Air pollution exposure along each route was estimated using models developed from the Near-Road Exposures and Effects of Urban Air Pollutants (NEXUS) study, which are calibrated to capture conditions in 2010 during typical school travel periods for the Detroit metropolitan area. Daily average exposures for six pollutants (Benzene, CO, NOx, PM2.5, EC, OC) were estimated across 5 phases of an average school day (AM Commute, Unload, School Day, Load, PM Commute). Infiltration factors were adjusted to model effects of clean bus technology and improved school HVAC.

Results: Bussing children from a high-diesel/high-traffic neighborhood to a remote school in a low-diesel/low-traffic environment is associated with average daily exposures ranging from 2 to 4.4 times higher than if those children were to walk to the local school. These disparities were statistically significant across all 6 pollutants (p<0.001). Driving in an automobile to the remote school yields lower air pollutant exposure than bussing; however, the average daily pollutant exposure levels for driving are the same as, or greater than, respective exposures for walking to the local neighborhood school for four of the six pollutants. For students who must bus to a remote school, adopting a clean bus fleet reduces average daily pollutant exposure by more than half for all six pollutants (p<0.001). Compared with students walking to the local school, clean bussing to the remote school still yields greater daily exposures for all but one pollutant (p<0.001). Lastly, improved HVAC systems at the local school in heavy-diesel/heavy-traffic yielded moderate decreases in average exposures for the three pollutants modeled, EC, OC, and PM2.5 (p<0.001).

Conclusions: Our simulated school siting policy assessment found that bussing children to a remote school in a “cleaner” air quality school site did not lead to reductions in average daily personal exposure of children who would otherwise walk or be driven/bussed to the local school in a “dirtier” school site. A clean bus scenario greatly reduces exposures for children bussing longer distances to a remote school while school HVAC improvements in a heavy-diesel/heavy-traffic school environment yield more conservative reductions.

References
A HOTSPOT ANALYSIS OF FATAL CRASHES AMONG OLDER DRIVERS: AN IDENTIFICATION OF HIGH RISK LOCATIONS IN THE STATE OF FLORIDA

Abstract ID: 1270
Individual Paper Submission

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Motor vehicle crashes are the second leading cause of unintentional deaths in the United States (Center for Disease Control and Prevention, 2013). Vulnerable road users, such as elderly, have recently received quite some attention in the crash analysis literature. This age group is up to four times more susceptible to die in similar types of crashes compared to 20-year-old drivers (Eberhard, 1996). A prior study of fatal traffic crashes of older drivers in Florida, conducted by the authors, found that there is a significant association between the fatalities and older drivers aged 65 and up, from both aggregated and disaggregated regression models. On the other hand, the distribution of population aged 65 or higher within the state varies significantly, ranging from 9% in Leon County to 43% in Sumter County. This is consistent with local regression model (GWR) result that shows a spatial variation regarding the magnitude of the association between older drivers and fatal crashes. The complexity and spatial variation of the relationship between fatal crashes and older drivers highlights the importance of spatial analysis. Several studies have applied spatial analysis to profile road accident hot spots and black zones and have demonstrated the spatial–temporal patterns of crashes (Loo et al., 2011, Prasannakumar et al., 2011, Mitra, 2009). However, very few studies have explored the detailed spatial patterns for different crash types and specifically pertaining to older drivers.

This paper conducts an in-depth analysis of the spatial–temporal patterns of crashes involving older drivers. Utilizing GIS, the study applies several spatial statistical analysis tools to determine hot spots and spatial distribution of vehicle crashes. To provide a good representation of the problematic locations, the study considers crash rates (crashes normalized by traffic volume) when delineating hot spots and applies the method for both intersection-based and area-based scales of aggregation. To examine specific driving behaviors of older populations in order to help understand their crash risks, this study evaluates several variables including exposure - older driver crashes per annual average daily traffic, residential locations of elderly population and driver license information. This study contributes to further deepen the understanding of traffic crash risk for elderly in order to inform crash reduction policies. Identifying traffic crash hot spots can inform urban and transportation planners on where and how to improve transportation safety for older drivers.

References

Key Words:
Hotspot analysis, Older drivers, Spatial analysis, Crash patterns

IMPROVING THE UNDERSTANDING OF THE FACTORS AFFECTING THE PROPENSITY TO CHANGE HOUSEHOLD CAR OWNERSHIP
Abstract ID: 1277
Poster

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Millennials are increasingly reported to have different lifestyles and travel behavior from previous generations at the same stage in life. Among the observed changes, millennials often postpone the time they obtain a driver’s license, choose to live in urban locations and not to own a car, are heavy adopters of new technology-based transportation options and use other alternative means of transportation more often. Several explanations have been proposed to explain millennials’ behavior, including the changes in household structure, the substitution of travel with telecommuting and social media, and the preference for living in more urbanized area with higher accessibility to the vibrant parts of a city. Understanding the reasons behind these trends, and the likely impacts of these changes on housing and future travel demand, car ownership and the use of the other modes of transportation, is of extreme importance to researchers, planners and policy-makers. However, the debate is often dominated by speculations about the factors affecting millennials’ behavior, and their likely persistence (Polzin et al., 2014), and previous studies have been limited by the lack of information on specific variables (e.g. personal attitudes and preferences), or the use of convenience samples.

This paper investigates the factors affecting the propensity to change the level of car ownership, using the California Millennials Dataset, a rich dataset that we collected in fall 2015 with a detailed online survey designed and administered to a sample of 2100 California residents, including millennials (i.e. young adults 18-34 years old) and members of the preceding Generation X (i.e. middle-age adults 35-50 years old). The dataset contains detailed information on individuals’ attitudes, lifestyle, travel patterns, use of transportation technology and shared mobility services, life events, aspirations to purchase and
use a private vehicle, and sociodemographic traits. For additional information on the survey content and data collection, see Circella et al. (2016).

There are very few studies that analyzed the factors associated with changing the level of car ownership in a household (e.g. Clark et al. 2016). The propensity to change car ownership level is likely a result of a range of factors and circumstances, including major life events, the characteristics of the residential location, attitudes toward a car, disrupting trends (e.g. emerging transportation technologies, adoption of telecommuting, and use of social media), lifestyle preferences, differences between current and desired level of car ownership as well as other exogenous stimuli (e.g. habits and changes in the cost of vehicle ownership).

We estimate a multinomial logit model (MNL) with unequal choice set and test the application of a cross-nested logit model to explore the factors affecting the propensity to change level of car ownership in the household. The result of MNL model denotes that households with lower satisfaction rate with current level of travel, and households with lower number of vehicle per household drivers are more likely to increase their level of car ownership. Somewhat disappointingly, from the point of view of sustainability, the highest propensity to increase vehicle ownership is found among older millennials who live in zero vehicle household. In contrast, households with higher ratio of vehicle per household drivers (who, therefore, have more space to reduce vehicle ownership) are more likely to give up one or more of their vehicles if they move (or plan to move) to a more urban neighborhood. Among various attitudinal factors, we found that the propensity to change the level of vehicle ownership is affected by individuals’ attitudes towards materialism, variety seeking, and owning a car. All else equal, individuals who like bicycling are more likely to be willing to reduce their vehicle ownership. In order to overcome some of the limitations of the MNL model and control for the impact of the current level of car availability in the household on the propensity to change vehicle ownership, we use cross-nest model to simultaneously model the factors affecting both current and the desired level of vehicle ownership.

References

Key Words:
Car Ownership, Cross-Nested Logit Model, California Millennials Dataset, Propensity to Change the Level of Household Car Ownership, Unequal Choice Set

EFFECT OF TOLL ROAD ACCESSIBILITY ON JOURNEY TO WORK DISTANCE
Abstract ID: 1288
Lightning Research Presentation
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Since late 20th-century car dependency and its side effects have concerned researchers. Loss of the environmentally fragile lands and regional open spaces, obesity, air pollution, higher energy consumption, diminishing the diversity of species, excessive removal of native vegetation, and ecosystem fragmentation (Johnson 2001), higher GHG emission, higher commuting distances are some of the many aspects of car dependency.

Kaplan et al. addressed the enormous impact of the interstate freeways on suburbanization (Kaplan, Wheeler, and Holloway 2008). Federal highway act 1956, progressive technology in both transportation industry and IT, higher demand for job and housing, land availability, and lack of efficient policies for environmental preservation helped the emergence of a unique urban form characterized by automobile dependence and Broadacres development. More highways and cheaper gasoline led to a higher tendency towards more commuting distance. Even the “homeownership subsidizing programs” promoted higher commuting distance by offering more living space with lesser cost in the suburban area. As Glaeser once identified speed and space as the two big advantages of car-based living(Glaeser 2011).

Hence studying travel behavior has become a means of addressing urban sprawl(Hamidi and Ewing 2014), car dependency, greenhouse gas emission, and environmental protection. Many studies have examined the effect of socioeconomic and built environmental factor in travel behavior but there is limited literature on examining the role of the toll road accessibility.

If one of the concepts of developing toll roads is providing faster commutes, then it is assumed that toll roads will lead to a higher commuting distance within the same time frame comparing to other corridors. Also, because it is assumed that toll road accessibility may increase the dependency on cars and discourages public transit use.

For this research, hierarchical linear modeling(HLM) has been used to analyze the relationship between Journey-to-work Distance and the independent variables.

This paper is trying to find the relationship between socioeconomic, demographic, and behavioral factors as well as D variables on Journey-to-work distance and define the intensity of each factor. Factors such as population and job density, household size, household income, and residence type have taken into consideration as control variables to explore the combination of explanatory factors on different journey-to-work distances. As Ewing and Cervero presented in 2010 “conventional wisdom holds that population density is a primary determinant of vehicular travel and that density at the work end of trips is as important as density at the home end in moderating VMT (Ewing & Cervero, 2010).

By reaching this goal, the authors are hoping to be able to address the impact of toll road accessibility on VMT with more specific and tailored answers.

References

EXPLORING THE RELATIONSHIPS BETWEEN MILLENNIALS AND OLDER ADULTS’ ADOPTION OF UBER AND THE USE OF PUBLIC TRANSIT

Abstract ID: 1289
Poster

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Millennials tend to be early adopters of new technologies, and have different lifestyles and travel behavior from the members of older generations: they postpone the time they obtain a driver’s license, often choose to live in urban locations and not to own a car, drive less if they own one and use other alternative means of transportation more often. Several explanations have been proposed to explain millennials’ behavior, including the changes in household composition (e.g. postponing marriage and procreation), the substitution of travel with telecommuting and social media, and the preference for urban lifestyles and locations closer to the vibrant parts of a city. Understanding the reasons behind these trends, and their likely impact on housing and travel demand, and the use of the various modes of transportation, is of extreme importance to researchers, planners and policy-makers (Polzin et al., 2014). However, the debate is often dominated by speculations about the factors affecting millennials’ behavior, and their likely persistence, and previous studies have been limited by the lack of information on specific variables (e.g. personal attitudes and preferences), or the use of convenience samples. This study builds on a large research effort undertaken to investigate the relationships among millennials’ residential location, individual attitudes, lifestyles, travel behavior and vehicle ownership, the adoption of shared mobility services, and the aspiration to purchase and use a vehicle vs. use other means of transportation in California. We collected a rich dataset with a comprehensive online survey that was administered in fall 2015 to a sample of 2100 California residents, including millennials (i.e. young adults, 18-34) and members of the preceding Generation X (i.e. middle-age adults, 35-50). For additional information on the survey content and data collection, see Circella et al. (2016).

In this paper, we explore the relationships between the frequency of use of on-demand ride services (also known as transportation network companies, or TNCs) such as Uber and Lyft and the frequency of use of public transportation for both commute and leisure purposes. Understanding the impact of on-demand rides services on the use of other modes, is not an easy task due to the lack of comprehensive data, the continuously evolving characteristics of these services, and the multifaceted impacts they may have. A study published by the Shared-Use Mobility Center (2016) found that frequent users of on-
demand ride services tend to use public transit more often and are more multimodal. However, there is no study that confirms the causal relationships among the use of on-demand ride services and different components of travel behavior. Specifically, it is not yet clear the extent to which the adoption of shared-mobility services might cause an increase/decrease in transit use.

In this paper, we analyze the data from the first wave of data collection of the panel study, and find that the use of on-demand ride services tends to reduce the use of a car for most users, but it also substitutes for some trips that would have otherwise been made by transit or active modes. This is particularly the case for millennials, who are less likely to own their own car and use public transit and active modes more often than older cohorts (Alemi et al. 2017). The frequency of using on-demand ride services and public transit are found to be significantly (and positively) correlated. To test the direction of the eventual impacts between the adoption of these transportation services we estimate a bivariate probit model of the frequency of use of on-demand ride services and the use of public transportation, while accounting for the impacts of individual and household characteristics, the land use features of the neighborhood where individual lives, and respondents’ attitudes and preferences. In addition to the more conventional seemingly unrelated model specification, we also test two alternative recursive probit model specifications, to test the eventual effects of the adoption of Uber and Lyft on the use of transit, and vice versa.

References


Key Words:
On-demand ride services, Uber/Lyft, Bivairate Ordered Model, California Millennials Dataset, Public Transit

AN EQUITY ANALYSIS OF THE U.S. PUBLIC TRANSPORTATION SYSTEM BASED ON JOB ACCESSIBILITY
Abstract ID: 1290

1101
Background:
In recent years, there has been a shift in focus from encouraging mobility to encouraging accessibility, along with the provision of more sustainable travel options (e.g., walking, cycling, public transport). Access to quality public transportation is critical for employment, especially for low-income and minority populations. This research contributes to previous work on equity analysis of the U.S. public transportation system based on job accessibility by covering the 45 largest Metropolitan Statistical Areas (MSAs) and their counties.

Objective:
The objective of this study is to assess the existing differences in accessibility between Census-defined socioeconomic status (SES) categories. A cross-sectional analysis was performed to observe transit job accessibility patterns by SES categories, and to identify the MSAs with the lowest and highest transit inequity. This research aims to answer the following: (1) How does job accessibility change as a function of income? (2) How equally distributed are the existing public transportation services across the MSAs? (3) How significant is the role of SES variables (e.g., income, race, education, English speaking ability, etc.) in describing variations in job accessibility?

Method:
2014 Census demographic data were matched to a previously published 2014 dataset of transit job accessibility at the Census Block Group level. Transit equality and justice analyses were performed based on population-weighted mean job accessibility (PWMJA) and SES variables. PWMJA, injustice, and inequality metrics were calculated by county, MSA, and MSA groups defined based on MSA area and worker density. PWMJA was calculated for each BG separately by race, auto-use, and English speaking ability. Among the commonly used inequality indicators (Gini, Atkinson, etc.) the authors used the Gini Index. While there is no consensus on the definition and indicators of transit justice, in this study the difference in PWMJA between low-income non-Whites (LINW; non-Whites in the lowest median household income decile) and high-income Whites (HIW; Whites in the highest median household income decile) was used as the primary indicator of injustice.

Results:
The findings suggest that within individual MSAs, the low-income populations and people of color have the highest transit job accessibility. However, in certain MSAs with high job accessibility, such as New York, Washington, D.C., Chicago, and Houston, there is a significantly disproportionate access to public transportation based on income. In describing the variations of job accessibility, income, and the use of personal vehicle, were found to be significant in all MSAs, while the percentage of people with limited English speaking ability, and the percentage of White workers were found to be statistically significant in some within-MSA analyses. While low-income populations have high job accessibility, the ability to speak English, and the percentage of White populations contribute to transit inequity in certain MSAs controlling for income and race. Asians have the highest job accessibility, followed by Blacks, Hispanics, and Whites. Disparities by race are often higher between the low-income populations, and increase by MSA size and density controlling for income.
Discussion:
Planning for transit equity should include assessment of the risks as well as the benefits of transit commute. One of the limitations of this study is the inability of its accessibility indicator to address occupational matching. In fact, if residents of an area are close to many job opportunities, but do not have the required skills or education, they still have low access to employment. Another limitation is that it covers the largest MSA which are home to the majority of nation’s racial and ethnic groups and immigrants. In addition, these areas include a high concentration of rental housing. The conclusions made by this study may not reflect the reality in small MSAs and their counties.

References

Key Words:
Social sustainability, transit equity, the Gini Index, inequality, injustice

NEW HABITS DIE HARD: EVALUATING THE DYNAMIC IMPACTS OF ATTITUDES AND PERCEPTIONS ON NEW LIGHT RAIL USE IN LOS ANGELES.
Abstract ID: 1292
Poster

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Recent research provides convincing evidence of a link between characteristics of the built environment and travel behavior, and planning policy has increasingly focused on altering the built environment to encourage energy efficient and healthy travel. However, few land use – travel behavior studies include “soft” factors (such as attitudes and perceptions) that have been found to affect travel mode choice. In addition, travel behavior studies seldom make use of panel data to evaluate before and after effects of major infrastructure projects. The current study utilizes longitudinal data and an attitude-behavior framework to address this gap in the planning literature and to suggest interventions to maximize the impact of infrastructure investment.

The current research has two aims. The first is to evaluate the temporal effects of a light rail line opening through longitudinal models of transit use, driving, and active (bicycle and walking) trips. The second objective of this research is to examine the causal pathways between attitudes and perceptions and transit use. This analysis helps to further illuminate a crucial question. Do attitudes and perceptions
cause behavior, does behavior cause attitudes, or is there a reciprocal relationship between the two? To examine this problem, a cross-lagged structural equation model (SEM) is developed that evaluates the causal relationships between transit attitudes, personal safety fears and transit use.

Data for this study were obtained through a 7-day travel survey of residents in south Los Angeles, conducted over a two-year period spanning the opening of the Expo light rail line, which runs between downtown Los Angeles and Culver City, California. Random effects models of transit use, car driver trips, and active travel trips are developed that include socio-demographics, attitudinal measures, and built environmental characteristics as independent variables. In addition, a cross-lagged structural equation model (SEM) is used to examine the dynamics of transit use, attitudes, personal safety perceptions, and car ownership before and after the opening of the line.

The results show that socio-psychological factors such as attitude toward transit, personal safety concerns, car attachment, and perception of neighborhood quality all significantly affect travel behavior. These effects vary based on travel mode (transit, car, walk/bike), and are distinct from built environment and socio-demographic impacts. Additionally, structural equation models of the effects of transit attitude and personal safety concern show that prior attitudes and perceptions only predict transit use between the periods directly before and after the opening of the new service. At 18 months after the opening of the line, prior use alone predicts transit use, implying both the power of travel habit and the critical importance of fostering positive impressions among users before a new service begins operation.

The practical importance of these findings is that attitudes and perceptions matter in maximizing the impact of transportation infrastructure investment. Positive attitudes and lower fear for personal safety on transit before the opening of the new line predict higher transit use after opening. This points to the potential effectiveness of attitude-based interventions designed to alter mode choice. Though the evidence in this study suggests that attitudes and perceptions are quite stable over the short term, other programs that target attitudes specifically have found that attitude change may promote behavior change. Based on the findings from the Expo Line study, programs that increase positive attitudes toward transit would seem to promote a move away from cars to transit and active travel modes. The use of marketing, information and promotions, such as providing free trial transit passes and trip planning information during startup of a new service, may be important tools for nudging people into more sustainable travel behaviors.

References
HOW MUCH ARE RENTERS WILLING TO PAY FOR NEIGHBORHOOD WALKABILITY?
Abstract ID: 1300
Individual Paper Submission

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During the past decade, homeownership has been declining in many American cities, and the rental cost has been on the rise. Such a phenomenon, coupled with the declining car ownership, poses a challenge to urban planners and policy makers to offer renters better non-motorized transportation choices. Walkable communities, which have increasingly gained its momentum, may serve as an effective strategy to address such a challenge. However, it is little known whether and how much renters are willing to pay for neighborhood walkability.

This study assesses renters’ willingness to pay for neighborhood walkability based on a spatial hedonic study in Austin, Texas. The dataset includes 12,324 single-family and 4,585 condominium rental transactions that took place in Austin during 2010-2012. The main indicator of neighborhood walkability is the Street Smart Walk Score. The researcher uses the Spatial Cliff-Ord Model as the analytical method to control for spatial autocorrelation effects.

Increased walkability would elevate rental prices for 48% of the single-family properties and 81% of the condominium properties. On average, a one-percent increase in walkability will lead to an increase of 0.0223% in the single-family rental price, and 0.1965% in the condominium rental price. While the former seems minimal, the latter raises an affordability concern for renters seeking walkable communities. For example, the rental price impact of a one-percent increase in walkability could be as high as 0.62% for condominium homes located in highly walkable communities.

References


Key Words:
Walkable communities, Affordable Housing, Hedonic Pricing Models, Spatial Hedonic Models, Rental Housing
AN ASSESSMENT OF SOCIAL EQUITY IN TRANSIT SERVICE IN SALT LAKE COUNTY: DEVELOPING A NEW METHODOLOGY FOR QUANTIFYING SOCIAL EQUITY PROMOTION THROUGH TRANSIT SERVICE.
Abstract ID: 1301
Individual Paper Submission

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Transit managers are typically concerned with ridership as it is the most ubiquitous performance measure of transit agencies. Ridership is an effective metric because it is easy to measure and objective, allowing agencies to be compared against each other in the same terms. However, the sheer number of transit riders is not an adequate descriptor of an agency’s success in fulfilling its broader societal role. A purpose of transit service, and one of the main reasons that transit is so heavily subsidized, is to provide economic opportunity for disadvantaged populations. (O’Regan & Quigley, 1998) How can we best measure transit agencies’ efficacy in promoting social equity? In order to gain a more comprehensive interpretation of transit agency performance, we must develop a new objective way to assess social equity provision. Much of the literature on transit focuses on specific aspects of the industry, often neglecting the important justification for providing service in the first place. (Taylor et al., 2009) Transit service is supported by local governments with aid from larger bodies to provide a more diverse transportation network that serves as many needs of the public as possible. (Cervero, 1984) Using a combination of geographic information systems analysis and statistical analysis, we measure the ease of connecting from poor and rich census block groups to employment centers. We compare the mean distance of transit connections from census block group centroids to employment centers using t-tests. The study of Salt Lake County shows that there is a statistically significant difference in distance to employment centers via transit connections between poor and rich block groups. Additional spatial analyses are conducted to determine if discrepancies in ease of travel are a function of the geographic distribution of wealth within the county, or if there is, in fact, more to the story. The results demonstrate that it is more difficult to travel from impoverished block groups to employment centers via transit than it is from their affluent counterparts. This finding is troublesome, and indicates that the Utah Transit Authority is not performing the function of providing adequate economic opportunity for disadvantaged populations. This work is vital to the study of planning because it creates a methodology for researchers and practitioners to assess transit agencies’ efficacy in promoting economic opportunity for disadvantaged populations. Other studies have compared transit accessibility and the placement of fixed transit infrastructure with social need for such services, but these efforts have fallen short at creating a generalizable and accessible tool for measuring agency performance. This study advances that effort by establishing a replicable methodology which can be widely applied to regions and agencies around the country.

References

Key Words:
Public Transit, Performance Measurement, Social Equity
Contemporary urban transportation planning aspires to reduce motor vehicle dependence, encourage active transportation, and limit congestion and air pollution. In this context, rational planning demands knowledge of the relative and absolute effectiveness of the complete toolkit of infrastructure and non-infrastructure approaches for reducing VMT, air pollutant emissions, greenhouse gases, and resultant impacts on health and climate. However, few large-scale empirical studies have identified the most efficient means for achieving these goals.

Since 1991, the Congestion Mitigation and Air Quality Improvement Program (CMAQ) has provided states with flexible funding for innovative and non-traditional projects focused on these goals, supporting attainment and maintenance of the National Ambient Air Quality Standards in State Implementation Plans (SIPs) and Transportation Improvement Plans (TIPs). The FHWA CMAQ Public Access System represents one of the largest extant repositories of the cost and impacts of transportation projects, but to date has been approached primarily with small (n<100) case studies focused on reported reductions in pollutant emissions (FHWA 2008, 2009, 2014). A 2002 assessment claimed “it is not possible to undertake a credible scientific quantitative evaluation of the cost-effectiveness of the CMAQ program at the national level” (TRB, 2002).

This study conducts quantitative evaluation of the cost-effectiveness of the CMAQ program, estimating project-level reductions in equivalent light auto VMT for all 28,000+ metropolitan-scale CMAQ projects from 2000-2016 by combining reported emissions reductions with annual per-mile fleet emissions modeling using the US EPA MOtor Vehicle Emission Simulator (MOVES) for criteria pollutants and their precursors (PM2.5, PM10, SO2, CO, and NOx) following guidelines for MOVES application in SIPS. Inversion from emissions to VMT is conducted for each emitted species, combined, and in regression on project characteristics to quantify and minimize uncertainty in the process. Projects are assessed by project type, metropolitan area, and state, comparing the effectiveness of CMAQ strategies in $/equivalent avoided VMT, and identifying trends in implementation and diffusion of best practices.

At the national scale, average CMAQ projects and project types remain consistent in inflation-adjusted $/equivalent VMT since 2000 despite progressively cleaner passenger and heavy duty vehicles. The distribution of projects by project type and the five-fold difference in cost-effectiveness between travel demand management and infrastructure projects also remain consistent. Cost-effectiveness of the average CMAQ project varies by two orders of magnitude among metropolitan areas, and the average $/VMT by metropolitan area varies by more than four orders of magnitude, from $0.25 to $3000+. Some metros yield cumulative CMAQ impacts of 1-5% of total VMT.

Case studies of the extremes of both cost-effectiveness and total impact illustrate that the effects of divergent transportation planning strategies are more profound than the differences in effectiveness among project-level tactics. Results provide national scale longitudinal empirical evidence to contextualize transportation planning objectives, strategies, and performance across space, time, and...
local context at the urban scale. The study also suggests enhanced future project reporting standards, mechanisms, and evaluation strategies for federal transportation projects.

References


Key Words:
evaluation, emissions

THE FUTURE OF URBAN TRANSPORTATION: A ROADMAP TO THE 21ST CENTURY
Abstract ID: 1334
Individual Paper Submission

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There has been a dramatic shift in urban transportation planning over the last decade, one which has brought about a revolution in urban transportation planning practice, and one in which planning academics have played very little part. As detailed by Peter Norton (2015), a historian of technology, “paradigms thrive in environments in which they can count on popular and institutional support. A paradigm can struggle on without one of these two pillars, but will collapse if it loses both.”

In the area of transportation practice, both pillars have collapsed. On the institutional side, declines in VMT, increased vehicle fuel efficiency, and the political unwillingness to raise gas taxes have destabilized the federal highway program that has directed our transportation system over the last 60 years. At the same time, there has been a growing demand for more urban transportation and housing options.

These changes have led to a profound shift in transportation practice, one which has received little systematic evaluation in either the professional or scholarly literature in urban planning. Indeed, a very recent edition of the Journal of the American Planning Association (2017, Volume 1) featured an extended debate about the travel effects “transportation and land-use connection,” an arena that is of declining relevance to contemporary transportation practice.

This paper emerged out of the authors’ professional work in cities throughout the US, and the corresponding recognition that the information needs of the professionals have diverged radically from the concerns of planning academics. While a cursory examination of the recent practices of cities in the United States suggests a hodgepodge of disparate activities, they can be largely categorized as belonging to two related areas: 1) value capture, or the decision to undertake projects that are self-financing through increases in adjacent property values and; 2) livability, which can be roughly defined as projects that attempt to provide more “urban” housing and transportation options.
These, in turn, have resulted in new policies and practices in 7 areas:

1. People as the basic unit of mobility
2. Accommodating short trips
3. Protecting vulnerable users
4. Encouraging lingering
5. Enhancing the role of transit authorities
6. Incremental projects, trial and error
7. New methods of measurement and evaluation

In this paper, we outline these trends, policies, and practices, and provide examples of how they have been applied in major cities throughout the United States. We proceed to detail the research and education program needed to support these changes to professional practice. In particular, we discuss the need for transportation academics to re-engage with the domain of physical planning, rather than abdicating them to traffic engineering.

As detailed in the works of William Whyte (1980) and Jane Jacobs (1961), two figures at the forefront of the concerns of contemporary transportation planners, streets are the basic unit of urbanism. If transportation academics are to have a meaningful role in the shape of our cities in the 21st century, it is time for them to expand their concerns into the planning and design of city streets. This paper concludes with a discussion of the theories, methods, and measures on which scholars and educators need to focus. These include an increased focus on complexity theory and quasi-experimental design, as well as the focus on measures such as person capacity, person delay, total injuries and deaths, property values, and retail sales.

References

Key Words:
Transportation, Urban Design

TRANSIT RIDERSHIP AND TRANSIT ACCESSIBILITY IN LOS ANGELES AREA
Abstract ID: 1342
Poster

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Los Angeles area has invested significantly to expand the capacity of public transportation. Yet, transit ridership is still under five percent according to the American Community Survey (ACS). What are the reasons? Why transit ridership continues to decline nationwide? The reasons for low and declining transit ridership may include, not limited to: low gas prices; poor, unreliable, and crowded transit services; presence of convenient services such as Uber/Lyft; less accessibility to bus stops and rail stations; different transit ridership of residents in urban or suburban areas; different transit ridership among different age groups or racial/ethnic groups. Many reasons can be listed but it is difficult to explore all of those reasons due to the lack of data. This study focuses on transit ridership and transit accessibility in Los Angeles area.

There are several studies that analyzed public transit accessibility. Mavoaa et al. (2012) measured combined public transit and walking accessibility index for major destinations in Auckland, New Zealand. They used transit network, parcel data, and location of major destinations to identify service areas accessible by public transit and walking. They applied the estimated accessibility scores to see which areas are accessible by public transit and walking. Tribby and Zandbergen (2012) constructed a multi-modal network model by applying bus network and street network. They used the location of bus stops and street networks to estimate total travel time to arrive at each bus stop from residential locations. The constructed model was applied to test the impact of adding a new bus route in Albuquerque, New Mexico. Biba et al. (2014) proposed a parcel-network method to estimate the population in transit service area. They utilized parcel data, street network, Census data, and transit network to estimate the population who can access to bus stops by walking. They applied the model in Dallas, Texas and demonstrated that traditional methods (i.e. buffer method, network-ratio method) have overestimated population in transit service area compared to the parcel-network method.

Although previous research constructed models to measure transit accessibility, few studies utilized the constructed data or models to explain the relationship between transit accessibility and transit ridership. Therefore, this study focuses on explaining the relationship between public transit accessibility and transit ridership. Several steps are involved in the study. First, we estimate the population and jobs within walking distance of transit service. Population data are obtained from American Community Survey and job data are obtained from Longitudinal Employer-Household Dynamics. Parcel data are used to estimate population and jobs in transit service area. Locations of bus stops and rail stations are collected from transit network in the 2016 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) provided by the Southern California Association of Government. Second, the estimated population and jobs in transit service area are combined with transit ridership in various geographies (i.e. census tract, city). Third, various socioeconomic data are used to explain the relationship between transit accessibility and transit ridership.

The results of this study will be useful to understand the relationship between transit ridership and transit accessibility in Los Angeles area. More accurate understanding about the relationship in various geographies will help to develop better transit plan and to increase transit ridership. Although the study area is Los Angeles area, the method can also be applied to other areas with available data.

References
THE COLLECTIVE EFFICACY OF CONRAIL CONSERVANCIES TO CULTIVATE RESILIENT CITIES

Abstract ID: 1345
Individual Paper Submission

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The 100 Resilient Cities Initiative of the Rockefeller Foundation funnels funding to long-term custodians of urban infrastructure—in some cases, the same conservancies that have played critical roles in the planning of legacy cities and the preservation of their legacy systems since the dawn of community and corporate philanthropy in the early 20th century. Yet conservancies’ conception, construction and conservation of “critical infrastructure” for urban vitality remains on the margins of planning scholarship on disaster preparedness and recovery. A combination of archival, qualitative, geospatial and participation-action research with conservancies of the Rustbelt affords unprecedented understanding of the resilience plans that conservancies crafted with CONRAIL (1976-1999), a for-profit corporation created by Congress to revive the real estate of railroad companies in its receivership. Focused on the collective efficacy of custodial bodies, this paper demonstrates these grey and green infrastructure stewards derailed the Rails-to-Trails movement in hundreds of American cities that contracted CONRAIL to serve as their chief resilience officer.

The short-lived success of long-standing CONRAIL conservancies raises many questions about stewardship as a praxis of planning. How did conservancies decide which CONRAIL properties warranted or required rehabilitation, restoration or redevelopment to turn a profit? At what cost, financial and political, were decisions made? What use was made of the railbanking certificates and preservation certifications that Congress, CONRAIL, public utility commissions and interstate commerce courts granted conservancies and their donors via the Regional Rail Revitalization & Reorganization Act (1976), the National Trail Systems Act (1978) and related court filings? This paper, a comparative study of the Center City Development Corporation (est. 1976, Philadelphia) and Chelsea Property Owners, Inc. (est. 1984, New York City), reveals both established and emergent conservators expended their newfound allowances on the rezoning, restoration and reactivation of buildings alongside CONRAIL infrastructure for midtown mobility, leaving little political capital for the Reading Viaduct (Philadelphia) and High Line (New York) that these buildings abutted.

Promoted by cis-gender pioneers in gayborhood development, these revitalization strategies for legacy systems in legacy cities resulted not only in the central city “culture wars” that critical urban studies of ‘gayborhood’ gentrification chronicle. The controversy over CONRAIL’s cis-conservancies also compelled gay community leaders and allies such as Chelsea’s Peter Obletz to conserve CONRAIL infrastructure for the midtown mobility of minorities and the marginalized. The outgrowth of CONRAIL conservancies into paratransit planning contradicts the inside story of rails-to-trails conversion across the
Rustbelt. By focusing on the first friends of the High Line and its counterparts in Philadelphia, this paper argues protectionist social networks facilitate critical infrastructure protection.

References

Key Words:
resilience, conservancy, legacy cities, critical infrastructure, paratransit

CAN WE EXPLAIN CHANGING TRAVEL BEHAVIOR?: AN APPLICATION OF THE OAXACA BLINDER APPROACH
Abstract ID: 1364
Individual Paper Submission

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Over the past two decades auto travel has risen to its highest recorded levels and then fallen greatly only to begin rebounding since 2014. The observed changes in annual mileage were large with decreases up to 2,000 miles observed for young adults. Explaining empirical patterns has occupied many transport researchers in recent years with most research identifying ongoing demographic and lifestyle shifts (increasing age at first marriage and first child), macroeconomic trends (gas prices, GDP, global financial crisis), changing attitudes to residential location and mobility, as well as a host of other issues which have been difficult to measure (rising student debt). Differing results about explanatory factors may be explained by the application of analytic approaches unsuited to comprehensively explaining change. This paper adopts a technique from labor economics, the Oaxaca Blinder decomposition, that provides a framework for understanding the drivers of change.

Methodology
This study utilizes data from the UK National Travel Survey from 1995 to 2014 (annual) and assesses changes in weekly automobile miles. The analysis utilizes standard demographic variables (age, sex, income) and also incorporates home price indices and petrol prices. We adapt the Oaxaca Blinder approach to allocate observed changes between compositional shifts (in demographics, house prices, gas prices) and changes in underlying behavior. We decompose results by gender and location (London).

Results
Empirical data shows large drops in driving in the UK during the study period with the changes being apparent for all age groups but largest among young adults. For young adults aged 24-35, annual auto mileage as driver or passenger decreased by nearly 2,000. Of this decrease, a net decline of 980 miles can be linked to changes in the levels of factors that influence travel behavior including petrol prices, decreasing household formation, changing residential density, and decreasing car access. The remainder
of the decline is not explained by compositional shifts in the population or changing petrol and house prices. Instead, we can link the remaining to structural changes in society. For example, results show that impacts of household income on travel have decreased over time. In other words, the rich in 2014 drive less than the rich in 1995. We observe an opposite effect for gender. Women’s annual driving mileage increased significantly over the period.

Conclusions
Demographic shifts and changes in petrol prices and house prices explain 50% of the decline in driving observed between 1995 and 2014 in the UK. The remaining decline is linked to behavioral shifts. For example, employed individuals and high income individuals drove less in 2014 than 1995 all else being equal. Using a systematic approach such as Oaxaca Blinder highlights the contribution of these two sources of change and provides an opportunity to better understand the changes already observed and think about the future of automobility.

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Key Words:
Travel behavior, millennials

MODELING NON-MOTORIZED ACCESSIBILITY IN DEVELOPING COUNTRIES
Abstract ID: 1369
Individual Paper Submission

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Recent and rapid changes in technology are prompting many cities across the globe to reevaluate their existing transport systems. Smaller and autonomous cars, cleaner means of propulsion and increased solar efficiencies are spurring more use forms of transport other than traditional cars, transit or bicycling. Cities from developing countries (e.g., the Global South) are, in many respects, re-evaluating and transforming their transport portfolio at faster rates than their industrialized counterparts. In these contexts, such cities are demanding better approaches and stronger methods to understand the complex relationships between accessibility and transport patterns.

Medellin’s (Colombia) transport system is one in need of dire attention, owing to exceptionally high death rates on the city streets combined with mounting levels of poor air pollution. Almost 300 deaths
each year have occurred on the streets of Medellin over the past four years; hundreds of other deaths in the city are reliably traced to poor air quality, largely derived from the emissions of private vehicles.[1] Non-motorized forms of transport, particularly bicycles, are actively being urged by the city. However, widespread use is low owing largely to scant facilities and unsafe bicycling conditions. Stronger analysis and guidance is needed to better understand current levels and patterns of bicycling use and the possible latent demand for corridors with safer conditions for bicycling.

In this fast-changing context, how reliably can researchers better understand predominant patterns of non-motorized transport use (particularly bicycling), prevailing linkages to accessibility patterns and can they model flows accordingly? If Medellin—often regarded as a city typical of other Latin American cities, which is often employed as a model for other cities in the Third World—can better model these phenomena, then such understanding has immediate implications for other contexts (e.g., other developing cities in China or India).

Few, if any, systematic studies have analyzed details of the effect of the urban environment along the route as an input to measures of bicycling accessibility. Our interest in this investigation focuses on understanding bicyclist behavior related to the urban environment. More specifically, it addresses characteristics of the urban context related to the origin, destination and route. Employing foundations of accessibility as an important explanatory factor, we hone in on estimating reliable impedance functions for cycling and how they are affected by the risk of accident, the street density and also by topography. We employ data from 830 cyclists who were surveyed in order to recognize the routes they take to get to work or to study. We complement this analysis with Geographic Information Systems to further understand physical variables related to origins, destinations and routes environments. Conventional accessibility measures and econometric tools are used to understand those factors affecting the cyclists travel distance. Medellin city will be the case study, taking into account the urban socioeconomic segregation, the diversity of land uses, the variability of topographic conditions and the risk of accident on the streets.

This work uses the diverse city of Medellín as a laboratory to better understand bicycle accessibility in cities from the developing world. The econometric tool implemented here serves a twofold purposes: (i) it provides a stronger support for decision-making processes to prioritize actions that promote cycling and (ii) it helps evaluate the impact of such actions on bicycle use.

Stronger understanding of accessibility (defined herein as effectively integrating transport and land use) and its potential to address other domains for developing regions in the Global South is largely untapped. Accessibility, and the lack of it, is a factor that remains the gravest problem facing cities such as Medellin. Knowing more about this context in the developing world must pass the litmus test of helping to alleviate extreme and persistent poverty. In so doing, this work helps cities design transport systems to enhance accessibility, strengthen non-motorized use and public transport, keep fares affordable, and protect vulnerable populations from the hazards of motorized travel.


References


Key Words:
accessibility, non-motorized travel, corridors, latent demand, equity

DETECTING EFFICACY THRESHOLDS FOR PUBLIC TRANSIT SYSTEMS –A STUDY OF THE EFFECTS OF POPULATION DENSITY AND CONGESTION

Abstract ID: 1381
Poster

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There have been recent studies that analyzed (Levine, 2013; Guerra and Cervero, 2011) conditions suitable for achieving efficiency in fixed-guideway transit projects and how rail-based systems complemented bus-based systems. These studies reflect the recent emphasis on fixed-guideway transit projects utilizing both light and heavy rail systems. The investment in such projects increased from $3.9 billion in 1992 to $9.8 billion in 2008 (Guerra and Cervero, 2011). Such projects have been sometimes criticized for taking resources away from bus-based systems that often serve poorer communities. Studies focused on rail-based transit systems tend to use technical efficiency (for example, high ridership, congestion relief and reduced emission) as the most important concern to estimate efficacy of transit systems. Broader studies that include several forms of public transit (Boile, 2001) argue that efficiency measures should be combined with other studies and inputs to arrive at decisions regarding resource allocation by policy makers.

In this study, we combine technical efficiency (passenger cost per mile) with coverage (route miles standardized for coverage area) to produce a combined efficacy index of transit systems. This variable is then regressed on population density and average travel time, while controlling for other constraining variables to estimate if the efficacy of transit systems vary significantly with density and congestion. We use data from National Transit Database (NTD) to produce the dependent variable of efficacy index for public transit systems in all Metropolitan Statistical Areas (MSAs). Census data and Urban Mobility Report are used to generate data on the variables of central interest (population density and average travel time), along with controlling variables. Preliminary estimates indicate that on average there is a weak but statistically significant relationship between efficacy index for public transit systems and population density. The relationship is stronger and statistically significant for average travel time. We further investigate variations attributable to geographical locations, MSA sizes, and income levels. Our
results are largely in agreement with expected relationships and further develop a quantitative understanding of the effects of density and congestion on efficacy of public transit systems.

References

Key Words:
Public Transportation, Urban Density, Travel Patterns, Modal Choice

RELATIONSHIP BETWEEN NEIGHBORHOOD BUILT ENVIRONMENT AND ACCESSIBILITY TO JOBS
Abstract ID: 1385
Individual Paper Submission

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Accessibility is regarded as one of the most important goals in the transportation policy. This study focuses on job accessibility by public transit systems which have been the topic of interest within the Spatial Mismatch Hypothesis of John F. Kain (1968). Despite the importance of accessibility in transportation and land-use planning policy and the popularity of job accessibility measures in evaluating the impact of accessibility on employment outcome of low-income households, some scholars (Geurs & Van Wee, 2004; Grengs, 2010) criticize the ambiguous definition and the crude measure of accessibility. The critics argue that the accessibility measures used in past practices are easy to interpret and operationalize but often lack a theoretical rigor because they fail to incorporate the mechanisms of land-use and travel behavior.

In particular, within the variety criteria or indicators of accessibility proposed by many scholars, the distinction of “perceived” accessibility from “objective” accessibility (Morris et al., 1978) is missing from many of the current practices of measuring accessibility. According to Morris et al. the objective accessibility is the supply characteristics of transport infrastructure and systems and mobility capacity of individuals whereas the “perceived or revealed” accessibility measures the actual use of services or the determinants of behavior. The combination of these two types of accessibility measures is rarely applied in the studies and current practices take either one form or the other.

The gravity-based measure of job accessibility is widely applied in spatial mismatch studies. This measure takes into account the characteristics of transit systems as well as the “perceived” accessibility by using a distance as a decay function. Although the distance is a significant indicator of perception of accessibility, there exist other important factors that influence the determination of travel behavior.
Thus, the aim of this study is to develop a holistic measurement applying objective and perceived indicators of job accessibility. Studies on transit ridership factors propose the demand for transit follows the basic consumer economics theory that the ridership is a function of the utility of the trip and its cost (Taylor et al., 2008). As the utility of the trip and its cost are largely how one perceives the attributes of the neighborhood environment and transit systems, this study uses the factors of ridership invariably as the factors of accessibility. Among the factors that are found to have a significant influence on the travel behavior, the density, diversity, design, and distance to transit (3Ds+1D by Cervero & Kockelman, 1997; Ewing and Cervero, 2010) are applied in the job accessibility measure. Specifically, the population density, land-use mixture, street connectivity, and distance to transit station/stops are used. The improved measure of job accessibility is applied in Baltimore, Maryland and compared with the previous measure of job accessibility. The findings of this study are expected to contribute to better understanding of the impact of neighborhood environment on job accessibility and further applied to examine the impact on employment outcomes.

References


Key Words:
Accessibility, Public Transportation, Built Environment

NEIGHBORHOOD WALKABILITY, DRIVING TIME, AND SEDENTARY BEHAVIOR AMONG CANADIAN ADULTS

Abstract ID: 1395
Individual Paper Submission

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Central theme or hypothesis:
Driving is part of the North American lifestyle. Most Americans drive occasionally and spend an average of 47 minutes driving daily (Triplett, Tefft, Rosenbloom, & Tefft, 2016). Although driving is important for daily mobility, it is also believed to have some adverse health impacts. Time spent in cars is linked to sedentary lifestyle and a broad range of health risk factors, such as obesity and cardiovascular mortality (Warren et al., 2010). Driving long hours may also lead to reduced time for physical activity (Sugiyama, Ding, & Owen, 2013). Previous studies indicate that neighborhood walkability may help reduce the negative impact of driving by allowing residents to walk more (Frank, Andresen, & Schmid, 2004) and to reduce TV viewing time (Sugiyama, Salmon, Dunstan, Bauman, &
Owen, 2007). However, few studies have examined the role of the built environment in reducing sedentary behavior due to time spent in cars. This study examines the impact of the built environment on the relationship between driving time and sedentary behavior. We first hypothesize that time spent in cars will be positively related to sedentary behavior. We then hypothesize that individuals living in more walkable neighborhoods will show lower levels of sedentary behavior due to driving than those living in less walkable neighborhoods, after adjusting for socioeconomics and demographics.

Approach and methodology:
Data for this study have been drawn from 1,097 individuals who participated in the NEWPATH study conducted in the Region of Waterloo, Canada. The NEWPATH study includes trip diary and objectively measured physical activity and sedentary behavior data collection. A series of multi-level linear regression models were estimated to model physical activity and sedentary time as a function of driving time, with an interaction term for neighborhood walkability measures.

Findings:
The preliminary results confirm driving time is major component of overall sedentary time. We also confirmed neighborhood walkability moderates the relationship between driving time and sedentary behavior. Residents in a less walkable neighborhood showed a statistically positive relationship between driving time and sedentary behavior. In contrast, residents living in highly walkable neighborhoods showed no apparent relationship between driving time and sedentary behavior. This suggests that the highly walkable neighborhood has some protective effect of reducing sedentary behavior due to increased driving time.

Relevance to planning scholarship, practice, or education:
Results of this study provide important policy implications of walkable neighborhoods in reducing sedentary behavior. This study confirms the previous findings that walkable neighborhoods, characterized as higher residential and commercial density, street connectivity, and mixed land-use, are independently associated with sedentary behavior. Results also inform decision makers and planners about the importance of the built environment in not only promoting physical activity but also reducing sedentary behavior, each of which has independent effect on health.

References

Key Words:
Quantitative analysis of traffic crashes present a major focus in the transportation safety improvement efforts. The Highway Safety Manual (HSM) provides methods to estimate the expected crash frequency and to quantify the influence of contributing factors on crash occurrence. These methods broadly comprise a Safety Performance Function (SPF) and Crash Modification Factors (CMFs), and possibly, a Calibration Factor (C). The first version of the Highway Safety Manual was released in 2010 and is currently being deployed by several states as the primary methodology for performing predictive analysis to identify critical segments of the network and to evaluate the benefits of countermeasures to reduce traffic crashes. In this context, it is critical to train professionals on the underlying theory behind these methods and their effective application in practice. Although the HSM methods rely on vast amounts of spatial data (roadway network and geometry, geo-coded crashes etc.) the HSM training materials rely mostly on spreadsheet-based tools and the available HSM software packages are also non-spatial.

This study develops an interactive GIS-based instructional tool which can be used by researchers and professionals to understand the HSM-based predictive methods. The GIS platform of the tool is immensely beneficial so that users can better understand and visually appreciate the context in which these methods are being applied.

The overall methodology of the study comprises two steps. First, the HSM crash-prediction methods are coded into the software for selected roadway facility types covering both intersections and segments. This involves coding the appropriate Safety Performance Functions and Crash Modification Factors. Next, an Instructional Module provides overviews of both the software and the analytical methods in addition to providing step-by-step guidance for segment- and intersection- level analyses. The tool also allows the users to change the CMFs and the exposure measures in order to develop various “what-if” scenarios. Moreover, by comparing the predicted crashes with the historical crashes gives users a better picture of the safety problem of the selected segments or intersections. The software uses data from Florida, however, since the software is web-based, the tool can be accessed and used easily by researchers and practitioners in other states.

This study directly contributes to enhancing the goals of transportation safety. The instructional module can facilitate improved understanding of the HSM-based predictive methods and their appropriate application in the practice of transportation planning. The instructional module is designed to allow future scalability to include all roadway facility types and to allow a full integration with crash and roadway characteristics databases to support the needs of researchers and practitioners in the traffic safety improvements efforts.
References


Key Words:
Crash Prediction Methods, Traffic Safety, Transportation Planning, GIS Safety Tool, Crash Analysis

SYNCHRONIZING PUBLIC INVESTMENT, LAND USE AND ECONOMIC PRODUCTIVITY IN EAST AFRICA: EVIDENCE FROM ADDIS ABABA, DAR ES SALAAM, KIGALI AND NAIROBI
Abstract ID: 1427
Individual Paper Submission

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Rapidly developing cities in Africa face particular challenges to mobility and to the coordination of transportation and land use, including spatial mismatches between jobs and work, weak zoning and planning regimes, and insufficient transit and underdeveloped road infrastructure (Cervero 2013). The poor tend to be on the fringes in African cities, isolated from job opportunities in the urban core, and they tend to trade off high transport costs for cheap (informal) housing costs. Further, weak urban planning controls, such as zoning, and institutional fragmentation undermine the coordination of urban services within and across sectors: strategic planning and coordination of transportation and land-use across transport modes is rare, as institutions are often preoccupied with reacting to rural-to-urban migration pressures (Dimitriou & Gakenheimer 2011). High transport and congestion costs, low mobility, and insufficient organization of land use activities to facilitate effective linkages between transport and housing-to-work mobility are typical.

Transport investments are widely recognized as an effective tool for achieving economic growth, poverty reduction and other socio-economic benefits, and there is a long theoretical basis for that expectation. Reductions in transport costs creates linkages that makes specialization and economies of scale possible, improves mobility, and affects the resulting transport/land-use equilibrium. Road investments have the potential to address spatial mismatch problems, reduce commuting costs, improve intra-city mobility, and spur poverty reduction and economic growth. In Africa, whether or not to use transport investment as a means to achieve economic growth becomes a strategic public policy question, because in African cities it is mainly provided by the public sector (Srinivasan 2005). However, when it comes to the specific guidance for transport investment decision-making, particularly at the strategic level, knowledge on the linkages of transport with poverty reduction, economic growth and land use is not adequate (Liu, 2005). Empirical studies can help inform policy proscriptions for influencing growth.
of certain land uses, for poverty alleviation or economic productivity, for development control mechanisms or efficient implementation of urban master plans (Cervero 2013).

In this study, we examine the extent to which the timing and spatial incidence of public investment in roads in four cities in four countries in East Africa in the first decade of the 21st Century is synchronized with land use and private investment in formal and informal housing and commercial and industrial structures, with economic productivity and population density changes. The cities studied are Dar Es Salaam in Tanzania, Nairobi in Kenya, Addis Ababa in Ethiopia and Kigali in Rwanda for the 2003-2013 time period. Using data derived from very high resolution satellite images we quantify road investment using well-established remote sensing classification methodologies at a very high spatial resolution, and we examine the extent of synchronization among these investment processes in these cities by precisely measuring urban and peri-urban roads and land used for homes, and commerce/industry at very fine granularity (0.5 m spatial resolution for roads and 8m spatial resolution for land use). The fine spatial resolution of our data allows us to examine a range of important characteristics of the dynamics of road investment, land use and economic growth in these cities, including the degree that the cities keep a monocentric structure (in terms of road levels and road investments), and the spatial location of different types and magnitudes of road investment and land use change. Given that we have data for two points in time for each part of the city, we use econometric techniques, including differences-in-differences with Propensity Score Matching (PSM) to estimate the quantitative associations between road investment, land use changes, economic productivity and population density. Although results are primarily consistent with hypothesized expectations, there are some departures from theoretical expectations that provide insight that may inform metropolitan planning policies. This research was funded by The World Bank.

References

Key Words:
transportation, roads, land use, Africa

IDENTIFYING SPATIAL GAPS IN TRANSPORTATION OPTIONS SERVING VULNERABLE POPULATIONS
Abstract ID: 1435
Individual Paper Submission

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Background:
An important transportation issue concerns special segments of populations referred to as transportation disadvantaged or vulnerable populations. They include elderly, people with disabilities and low income populations. Such populations have limited mobility, especially in American suburbia, due to the dependency on individual automobile either unavailable to them due to unaffordability or inability to drive due to physical limitations. Therefore, these populations must rely on alternative transportation options such as public transportation, specialized on-demand transportation services designed to serve such populations, or regular taxi services including Uber/Lift type of service. Unfortunately, utilization of such services suffers from either a lack of services within a reasonable walking distance or from inability of populations to get to such services due to limited geographic accessibility.

The purpose of this study is to assess the geographic coverage of such transportation services in order to determine where the services are missing or where gaps in service exist. In this study, we use GIS to model a supply-demand approach to identify these gaps which can be examined by urban and transportation planners to improve transportation provisions for the vulnerable populations.

Study Design:
The Supply model is constructed by considering residential populations as source of travel and by considering various destinations as attractors. An Origin-Destination (OD) matrix was developed using network analysis. The distances are weighted by the percentage of trips to various destinations based on the National Household Travel Survey (NHTS). For public transportation, we add pedestrian catchment areas in the distance calculation both at source and destinations. For the specialized on-demand services we calculate the availability of service provider per each coverage area. The distance for the taxi or Uber/Lift kind of service is weighted by cost. The output layers are overlaid and weighted based on frequency of use of such services as reported in NTHS. Each transportation service category is normalized by using standard scores and combined into a single Supply layer.

The Demand model considers percentages of vulnerable populations by each census blockgroup normalized by the overall such populations in the entire student area. Finally, the geospatial layers of demand and supply are overlaid to reveal the spatial gaps. A comparison matrix of standardized Demand and Supply is constructed to highlighted areas that are more vulnerable, in particular those of very high demand and very low supply.

Results:
We applied the GIS model presented above to Alachua County, Florida, and found that 11 deficient areas, representing 17.40% (5,059 people) of elderly, 14.47% (1,964 people) of people with disabilities, and 5.85% (480 units) of housing units without vehicle. The general assumption prior to this study was that the deficiencies would be expected mostly in the large unincorporated part of the county, away from the city of Gainesville which has a multitude of the transportation options given the larger population concentration in the county. However, in particular, the two areas of ‘low supply and very high demand’ and one of the areas of ‘low supply and high demand’ located in the south-east part of Gainesville, are either within the city or adjacent to it. These findings show the value of this proposed model which enabled us to identify gaps that otherwise were not obvious by simply observing the data.

Conclusion/Contribution:
This study presents a geospatial model to identify gaps in transportation service accessibility for our most vulnerable populations. The ability to determine and depict these gaps spatially provides transportation planners with concrete results that can help prioritize and focus their interventions effectively for providing more equitable transportation options for all segments of population.

References
This paper examines the impact of converting existing high-occupancy vehicle (HOV) lanes to high-occupancy toll (HOT) lanes on carpoolers. Since the opening of the first HOV lanes in Virginia on I-395 between Washington, D.C. and the Capital Beltway in 1969, nearly 350 HOV lanes are operating throughout over 3,300 miles in the United States. HOV lanes refer to limited access roads designated for use by vehicles with two or more occupants to manage congestion and increase person throughput by incentivizing carpoolers with travel time savings and travel time reliability (U.S. Department of Transportation 2016). Despite their popularity among policy makers as an alternative tool for managing congestion (Button 1998; Mohring 1998), HOV lanes have been criticized for not achieving intended optimal congestion levels and wasting valuable road space. Consequently, many HOV lanes are either underutilized or degraded, causing congestion in general purpose lanes.

In recent years, several regulatory changes at the federal level have opened opportunities to add a road pricing component to the operation of existing HOV facilities, namely HOV-to-HOT conversion. The regulatory changes initially started as pilot programs in 1990s but the 2005 SAFETEA-LU mainstreamed programs so that existing HOV lanes may be converted to tolled lanes to maintain minimum average operating speed of 45mph (23 U.S.C. 166). HOV-to-HOT conversion projects have attracted attention from policy makers because such projects utilize already existing infrastructure and free policymakers from considering complex problems such as right-of-ways. However, the discussion is very limited on how the project might impact previous beneficiaries of HOV policy after the conversion and the empirical evidence may assist policy makers planning to implement road pricing in their jurisdictions.

Taking the I-85 HOV-to-HOT conversion project in Atlanta, Georgia as an empirical case, this paper employs the I-85 Corridor Household Travel Survey taken before and after the opening of the I-85 Express Lanes in 2011 by the Volpe National Transportation Systems Center at the U.S. Department of Transportation. The paper first examines the characteristics of express lane users using logit model and finds that the likelihood of driving on express lanes increases for drivers with following characteristics:
medium- to higher- income group, younger age cohort, white, female, smaller household size, driving for the childcare purpose. Female and childcare interaction is found not statistically significant.

To examine the impact of the conversion project on carpoolers, the difference-in-difference estimation approach was employed to study the route and occupancy choices made after the conversion by the carpoolers who used to be the primary beneficiaries of HOV lane policies. The results show that previous HOV2 users are likely to switch to general-purpose lanes after the conversion, whereas HOV3+ users are more likely to continue driving in express lanes. In terms of occupancy choices, the previous HOV2 drivers in high-income groups are less likely to switch to solo driving, and those in the medium-income group are also less likely to increase the number of occupants. The previous HOV3+ drivers showed a strong tendency to maintain the number of occupants and benefit from toll-free rides on the express lanes after the conversion.

References


Key Words:
HOV-to-HOT conversion, travel demand, road pricing, carpooling
PRE-ORGANIZED SESSION: STREET LIFE: IS NEIGHBORHOOD-SERVING RETAIL STILL VIABLE?
Proposal ID 9: Abstracts 126, 127, 128, 129, 130

TALEN, Emily [University of Chicago] talen@uchicago.edu, organizer, proposed co-discussant
KICKERT, Conrad [University of Cincinnati] conrad.kickert@uc.edu, proposed co-discussant

Street-level retailing used to be the life-blood of thriving urban neighborhoods, but neighborhood-based retail, especially with localized ownership (mom and pop stores) struggles to survive. Many factors have led to the demise of street-level retailing, and many of these factors seem to be beyond anyone’s control: car-based consumer culture, online shopping, zoning that encourages segregated land use, corporate ownership and chain stores, and internet-based social contact. This session will consider the death and life of active frontages and neighborhood-based retail, including issues related to the maintenance of active frontages, small businesses, and independent retail ownership. What’s keeping main streets and active retailing from thriving, and what is less controllable (market realities) vs. more controllable (government regulations)? What incentives or financing mechanisms have successfully supported neighborhood-based retailing? We welcome papers that explore the issue of active streets and neighborhood-based retail from a variety of perspectives: urban design, marketing, governance, and public policy.

Objectives:
- Learn what’s working and not working in the quest to retain small, independent, neighborhood-serving retail

PRE-ORGANIZED SESSION: PLANNING CITIES FOR CHILDREN
Proposal ID 25: Abstracts 234, 235, 1199

SEVERCAN, Yucel Can [Middle East Technical University] csevercan@yahoo.com, organizer
MILES, Rebecca [Florida State University] rebecca.miles@fsu.edu, proposed discussant


Objectives:
To understand the determinants of environmental satisfaction in children living in mass housing estates
To understand how inclusive, participatory planning processes benefit children
To understand what differentiates cities that incorporate children in planning processes from those that do not

PRE-ORGANIZED SESSION: URBANISM NEXT I: AUTONOMOUS VEHICLES, EFFECTS ON URBAN DESIGN AND DEVELOPMENT
Proposal ID 35: Abstracts 313, 314, 315, 316
LARCO, Nico [University of Oregon] nlarco@uoregon.edu, organizer
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Recent advances in autonomous vehicle technology have made their widespread expansion imminent. While there is ample research on the technology itself, there is a lack of understanding of the dramatic, secondary effects this will have on urban form, design and development. These new technologies are changing the ease of transport, the role of transit, and the places we spend our time. These changes will in turn affect large shifts in land use, street design, the need for parking, metropolitan footprints, and the vitality of urban areas. This session brings together current research on these topics, helps organize an approach for urban designers and planners, and provides a discussion of the key policy areas cities must consider to protect quality of life and vitality.

Objectives:
- Understand the speed at which AV technology is arriving and the magnitude of its disruption
- Understand the secondary effects of autonomous vehicles on urban form and development
- Understand the key regulatory levers/issues that will shape how this technology is incorporated into cities.

URBAN DESIGN, BRANDING, AND HISTORIC PRESERVATION IN THE LAST REMAINING FILM ROW DISTRICTS
Abstract ID: 52
Individual Paper Submission
FRANK, Stephanie [University of Missouri-Kansas City] franksb@umkc.edu, presenting author

The recent transformation of movie theaters to digital (rather than film) projection and ubiquity of online streaming services that deliver a seemingly endless supply of on-demand movies to home entertainment systems and portable devices represents a culmination in the dramatic shift of motion-picture industry practices over the last century. For most of its existence, film prints were shipped across the country by railroads and rented to local movie theaters through film exchanges. Film rows—warehouse and commercial districts where film company exchanges and ancillary services clustered to serve a nationwide network to distribute films to local theaters—existed in thirty-one U.S. cities.

Kansas City and Oklahoma City are home to the last two remaining film row districts. Both are former warehouse districts in close proximity to their city’s central train depot that have been revitalized in recent years with arts-related spaces, design firms, and local businesses. They have diverged in
preservation strategies: Oklahoma City’s film row is listed on the National Register of Historic Places while Kansas City’s is not. Kansas City adopted an urban design concept for its film row that has not been implemented; Oklahoma City effectively uses movie imagery to delineate its district. Relying on plan analysis and fieldwork, this paper compares the districts’ morphology, urban design, branding, and preservation strategies and outcomes to interrogate how cities combine the twentieth-century built heritage and legacy of industry with contemporary urban design and revitalization in the twenty-first century.

This paper is part of a multi-year, multi-part project on the film industry and urban development in Kansas City. It charts new territory and contributes to our understanding of industrial networks, private planning, economic development, and broader national patterns. With contributions to the fields of urban planning and urban, planning, film, and business history, this project asks questions about little-understood implications of the film industry and how they have contributed to national urban development patterns.

References

Key Words:
urban design, historic preservation, industrial districts, revitalization, arts and culture

CAN BUILDING NEW TOWNS REFORM CHINA’S HOUSING MODEL? AN INVESTIGATION OF URBAN MORPHOLOGY, DEVELOPMENT HISTORY, AND SOCIAL PERCEPTIONS IN LIANGZHU CULTURAL VILLAGE, HANGZHOU, CHINA

Abstract ID: 121
Individual Paper Submission

QIU, Xi [Massachusetts Institute of Technology] xiq@mit.edu, presenting author

China is searching for urbanization strategies that generate physically appealing cities while being environmentally and socially responsible. To encourage sustainable development strategies, in 2016, China announced to build 1,000 “characteristic new towns” by 2020. As one of the experiments preceding this policy, Liangzhu New Town was planned as a pioneering mixed-use community and a promising paradigm for a revised Chinese housing model. Liangzhu features historical heritage, novel architectural design, ecological setting, New Urbanist planning strategies, and is intended for middle-class and entrepreneurial audiences. Through archival research, fieldwork, and interviews, this study examines whether and how Liangzhu’s morphological characteristics differ from the Chinese norm, how
the project’s design was conceived and enacted, and how Liangzhu’s users – original inhabitants, new residents, and visitors – perceive its distinctions. In this experimental and partially successful project, I find that urban design greatly contributed to the qualities of its physical environment, including comprehensive program integration, tourist-friendly neighborhood environment, advocacy of communal culture, and a focus on improved livability and reformed social norm. Its novel spatial, environmental, and cultural characteristics are well-received by its users. I conclude that Liangzhu represents the fashion of new town ideology and marks a shift in China’s housing development from a single-used gated community to a town, one that encompasses comprehensive services and attractive environment. This study demonstrates how design has enhanced livelihoods in China and how spatial characteristics have impacted lifestyles and brought about social change. Liangzhu experience offers valuable lessons for the ongoing development of housing and new towns in China’s continued search for “ideal,” “improved” urban life.

References
- Brent Ryan, MIT
- Lawrence Vale, MIT
- Siqi Zheng, MIT

Key Words:
Chinese urbanization, new town, housing development, New Urbanism

DIFFERENT BUT NOT DEAD: RETHINKING NEIGHBORHOOD RETAIL
Abstract ID: 126
Pre-Organized Session: Street Life: Is Neighborhood-Serving Retail Still Viable?

TALEN, Emily [University of Chicago] talen@uchicago.edu, presenting author

Neighborhood-based retail establishments used to play a more active role in the life of urban neighborhoods. A variety of factors, including most recently online shopping, have contributed to the long decline of small, independent retail establishments, rendering, according to some critics, Jane Jacobs’ vision of activated street life via small business ownership a nostalgic illusion. Planners, however, have long recognized that neighborhood-based services are essential for neighborhood stability. Neighborhoods that have been able to provide local services and facilities – small groceries and other retail outlets serving daily life needs – have been shown to be more stable, often with a higher sense of community and an ability to promote social networks of interdependence. Knowing these two paradoxical realities: 1) that neighborhood-based retail is increasingly difficult to maintain, and 2) that neighborhood-based retail has numerous social benefits—this research evaluates the current status and viability of existing retail that is small, independent, neighborhood-based. The first part of the paper clarifies the nature of the problem, which can be condensed down to two inter-related issues. First is the loss of interactive frontages, which is a problem for maintaining human scale, pedestrian focus, walkability, sense of uniqueness and sense of place. The second issue is the loss of local, independent ownership and operation of retail, which has been correlated with a number of problems, including loss of diversity, security and affordability, increased car dependence, loss of caring for place, loss of small business as a source of neighborhood-based employment, and loss of employment for entrepreneurs and those left out of the “urbanized knowledge economy”. The second part of the paper presents an analytical framework for studying small-scale retail. It first assesses the varied responses and policies that have emerged to address the competing realities of small business loss and small business need, and develops a typology of the responses, policies, and pro-actions that have been attempted. The third part
of the paper presents an empirical study of neighborhood-based retail in the City of Chicago. Using business license data analyzed in a GIS framework, locally-owned, neighborhood-serving businesses will be mapped and analyzed.

The study’s main research questions are: what independently owned retail operations still exist, where are they located, and what socio-demographic and other correlates explain their existence and locations? In addition to socio-demographic, locational, regulatory and built environment factors, the study will evaluate the role of government intervention, including direct subsidies to retail establishments in underserved neighborhoods, and loans in targeted “retail thrive zones.” Other factors to be explored are the role of co-ops, informal barter economies, retail that integrates manufacturing, collaborative services that leverage “timebanks” and educational enterprise, and other forms of sharing, collaborating, and exchanging designed to service neighborhoods in new ways. The paper presents a typology that summarizes the varying approaches that are now being attempted in an effort to sustain neighborhood-serving retail, and presents a methodology for evaluating how the successes and failures of these varied approaches can be approached. The conclusion assesses the prospects for a different formulation and renewed approach to supporting neighborhood-based retail.

References

Key Words:
Retailing, neighborhood-based services

DIVERSITY SELLS? THE ROLE OF IMMIGRANT BUSINESSES IN SUSTAINING NEIGHBORHOOD RETAIL STRIPS
Abstract ID: 127
Pre-Organized Session: Street Life: Is Neighborhood-Serving Retail Still Viable?

ZHUANG, Zhixi Cecilia [Ryerson University] zczhuang@ryerson.ca, presenting author

The Greater Toronto Area (GTA) has attracted the largest proportion (nearly 40%) of immigrants to Canada which has brought with it new retail opportunities: ethnic strip malls have speckled urban and suburban landscapes with increasing immigrant settlement. While many ageing strip malls in the GTA are experiencing business blight and slated for redevelopment (Linovski, 2012), as a contrast, these ethnic strip malls are thriving. The influx of immigrant businesses has readapted and transformed existing strips to create vital retail and community spaces. As suggested in the literature, immigrant businesses often play an important role in restoring social, cultural, and economic vitality to declining urban areas (Loukaitou-Sideris, 2002). However, little is known about how these small-scale immigrant businesses have survived in obsolete built environments (Gomez et. al, 2015). Distinguished from mainstream retail strips, ethno-cultural diversity seems to act as a catalyst to promote social interaction and economic vibrancy in these ethnic strips (Zhuang, 2017a, 2017b). This is not surprising in the multicultural context of the GTA that diversity is often celebrated in city branding and promotion, similar to how it is portrayed in Toronto’s city motto 'Diversity Our Strength.' Yet, it remains
questionable if diversity is truly an added value to ensure the success of ethnic retail strips at the neighborhood level.

It is imperative for municipalities to understand how these ethnic strips are constructed socially and culturally, and evolve spatially and physically. More importantly, municipal policies and processes should consider how to maximize the diversity advantage to help support immigrant businesses and sustain neighborhood retail strips. Using a case study approach, this research explores over 40 multi-ethnic retail strips in the GTA by addressing the following research questions:

1. What are the diversity advantages and disadvantages in the evolutions of ethnic retail strips?
2. What are the challenges faced by immigrant entrepreneurs who operate their small businesses along the ethnic retail strips?
3. What municipal programs (e.g., Business Improvement Area) have been effective in supporting immigrant businesses and the long-term sustainability of neighborhood retail strips?

Based on the business inventory, three multi-ethnic retail strips under the BIA program were selected for in-depth investigation. Multiple data collection methods were adopted, including reviews of secondary documents and archival records, site observations, focus groups, semi-structured interviews with key informants (e.g., immigrant entrepreneurs, BIA managers, city officials), and a consumer intercept survey.

The findings reveal that diversity can be seen as a double-sided sword when concerning the long-term sustainability of ethnic retail strips. Undoubtedly, diversity is an attraction to these retail places where the social, cultural and political meanings of the respective ethnic community are embodied in the retail landscapes. However, despite the cultural diversity of the Toronto area, immigrant communities and businesses do not feature prominently in municipal plans, policies, and documents reviewed. Therefore, there is a lack of community outreach in municipal processes and intercultural communication and understanding is hard to achieve among community stakeholders who share a stake in the local neighborhood retail strip. In addition, the current city-wide BIA program does not provide diversity-focused initiatives to support ethnic strips other than standardized streetscape beautification templates. Similar to their mainstream counterparts, these ethnic retail strips are disadvantaged by physical and structural barriers to rejuvenation and public gathering. They could easily be targeted for intensification and redevelopment, which could translate into increased pressure on the current immigrant businesses which look less desirable from a conventional urban design perspective. The case studies illustrate the challenges faced by the majority of ethnic strips in this study: they shared similar re-adaptation processes associated with immigrant settlement patterns, but are facing an uncertain future. There is no guarantee that diversity sells.

References


Key Words: diversity, immigrant businesses, neighborhood retail strips, Toronto

THE RISE AND FALL OF NEIGHBORHOOD RETAIL: A CENTURY OF LOCATIONAL, CULTURAL AND ECONOMIC PATTERNS OF RETAIL TRANSFORMATION IN THE UNITED STATES AND EUROPE.
Abstract ID: 128
Pre-Organized Session: Street Life: Is Neighborhood-Serving Retail Still Viable?

KICKERT, Conrad [University of Cincinnati] conrad.kickert@uc.edu, presenting author

While the neighborhood retailer is commonly lamented as a dying breed, its process of decline has thus far hardly been investigated in a structured manner. This presentation will study the transformation of retail location patterns in the urban cores of Detroit and Cincinnati in the United States, comparing with the inner city of The Hague in The Netherlands. It compares the location of retailers to economic and cultural theories in an effort to explain the rise, fall and rebirth of urban retail. By mapping the location of retail establishments over the past century, the presentation also seeks to venture beyond measuring decline by aggregate numbers – which all three case studies demonstrate – as it reveals the geographic pattern of decline at the establishment level. The presentation finds that in times of decline, retail distribution optimizes along lines of connectivity, corroborating geographical theories of retail agglomeration (Brown, 1994; Christaller, 1933; Hotelling, 1929). In other words: as the number of retailers shrink, decline mostly happens in decentral and poorly connected locations, with retailers remaining along the city’s most central and well-connected streets.

By the latter half of the 20th century, the two American case studies demonstrate decline beyond optimization, as inner-city retailers in Detroit and Cincinnati have declined to the level of near-extinction. The presentation describes the rise of a new type of agglomeration, connected to the late-20th century reinvention of the experiential quality of urban cores for entertainment and educated workforce attainment. Rather than adhering to the ‘rational’ agglomeration theories of retail outlined in the previous paragraph, recent retail revitalization in Detroit and Cincinnati instead corroborates theories of cultural capital and the experience economy (Pine & Gilmore, 1999; Zukin, 1991, 2004). However, micro-scale benefits of retail agglomeration persist as consumers seek walkable environments (Kickert & Hofe, forthcoming). As rational transactions have increasingly shifted to out-of-town and online marketplaces, this presentation hence establishes a trajectory for the future of urban retail as an experience.

References
THE “PLACE” OF RETAIL PERFORMANCE: EXAMINING THE RELATIONSHIP BETWEEN WALKABILITY AND THE SALES PERFORMANCE OF RETAIL BUSINESSES

Abstract ID: 129
Pre-O rganized Session: Street Life: Is Neighborhood-Serving Retail Still Viable?

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This work examines the importance of place-making in economic development by evaluating the relationship between specific built environment features – based on Jacobs’ “four generators of diversity” (1961) and Ewing and Cervero’s “Five-D’s” (2010) – and business sales volume. Despite the increased recognition of the importance of walkable urbanism in recent years, relatively little research has assessed the potential economic development benefits of walkable places. While a few authors have assessed the impact of urban design on property values (Leinberger and Alfonzo 2012; Pivo and Fisher 2011), this study fills a gap by examining links between components of walkable built environments and individual business characteristics. This work uses a Hierarchical Linear Modeling (HLM) framework to explicitly look at the relationship between neighborhood built environment features at the Census tract level and the sales volume per employee of individual businesses in 2010. The cities of Phoenix and Boston are used as contrasting urban sites to investigate how regional context influences the built environment-performance link. The results indicate that specific features of walkable built environments are positively associated with business performance. However, the relationship between walkable built environments and business performance varies considerably depending on the type of business and city-level context being studied, indicating that significant nuance must be used when considering place-based economic interventions. For this reason, this presentation examines the results for retail businesses in more detail, providing examples of the specific built environment characteristics of neighborhoods with both high and low retail sales performance in each city. Although no causal statements can be made about the built environment and business performance, the results of this paper indicate that (in some contexts) design-based place-making initiatives could be used to generate sustainable local economic development.

References
ACCESSIBLE AND COMPLETE NEIGHBORHOOD BUSINESS DISTRICTS FOR SUSTAINABLE AND HEALTHY NEIGHBORHOODS

Abstract ID: 130
Pre-Organized Session: Street Life: Is Neighborhood-Serving Retail Still Viable?

MEHTA, Vikas [University of Cincinnati] vikas.mehta@uc.edu, presenting author
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In North America, the demand for urban living is up, particularly due to the changing preferences of young adults and empty-nesters who are choosing neighborhoods that combine living with easy access to places of work, learning, shopping and play. A key component of such neighborhoods is the neighborhood business district (NBD) — the place for amenities, shopping, social engagement, recreation and entertainment. NBDs can be a boon to the local economy (Blackford, 2003); they can reduce the dependence on the automobile, and having walkable destinations in the neighborhood can provide health benefits. Above all, NBDs create opportunities for neighbors and strangers to meet as a part of the daily round, provide opportunities for social interaction, and possibly even reinforce a sense of community. In order to provide all these advantages and be competitive with big box and online retailers, the NBD must be easily accessible to the population and must provide a basic range of everyday goods and services. We examine the network of NBDs in Cincinnati, Ohio for 1) neighborhood residents’ access to NBDs, and 2) the completeness of the NBDs, and develop measures and metrics for the same. Although an existing methodology measures neighborhood completeness (Allen and Farr, 2008), we propose a more detailed tool that targets neighborhood completeness from the perspective of users’ everyday needs.

After identifying all the NBDs in Cincinnati, we generate ¼- and ½-miles walkability buffers (service area) for each using ArcGIS network analysis to determine the walkable access to NBDs. Using U.S. census data (ACS 2015) derived from Business Analyst we determine the businesses on each NBD as well as demographics for properties within the service area. Further, we conduct on-site surveys of the NBDs to cross-check the accuracy of the data and to determine the quality of businesses. We analyze NBD completeness by categorizing businesses into 5 categories (grocery store, primary services, prepared food and beverages, secondary services, and tertiary services). NBD completeness is determined by the number and quality of businesses, and the 5 categories are weighted. We examine how NBD access and completeness correlates with income, employment, race, and age.

Thirty-two of the 52 Cincinnati neighborhoods have NBDs. This translates to over half of the population having access to an NBD within ½ mile. Further, 52% of all housing units in the city are within ½ mile of an NBD, 49% of children and 49% of seniors living in Cincinnati are within ½ mile of an NBD, as are 52% of low-income households. Yet, our analysis shows negative correlations between NBD completeness and low income neighborhoods, neighborhoods with higher unemployment rate, and neighborhoods with higher percentage of African-American population. Further, we find the highest negative correlations between presence of grocery stores (category 1) and prepared food and beverages (category 3) to African-American populations.
Our findings have direct relevance to planning policies for Cincinnati and implications for city planners and policy-makers. For Cincinnati, the findings regarding access to NBDs reveals that the fundamental block and street patterns, land use and zoning supports remarkable access for the residents but also for many vulnerable populations. At the same time, the NBDs in neighborhoods where many from these vulnerable groups reside are lacking basic everyday needs. Cincinnati is a good example of small to mid-sized cities that are transforming their policies to become more livable as they compete for new businesses and a creative population. Our systematic analysis provides cities with a tool that can be used to create policies and programs to support more complete, robust and useful NBDs. Finally, we provide short- and long-term ideas for making NBDs complete to create sustainable neighborhoods.

References

Key Words:
Neighborhood-based retail, Neighborhood business districts, Main Street, Urban design

DEMOPRAGHIC PREDICTORS OF SENSE OF COMMUNITY IN WISCONSIN
Abstract ID: 134
Individual Paper Submission

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New urbanism maintains that creation of a sense of community is attainable through the use of its physical design guidelines, which encourage social interaction. Most notably, creating a pedestrian friendly environment may help create a sense of community (Lund, 2003). However, there are individual level conditioning factors that affect the relationship between public space and social interaction such as length of residence, gender, homeownership, and stage in the life cycle (age, presence or absence of children) (Talen, 2000). For instance, households with children (particularly young children) are more likely to develop a sense of community within their neighborhood (Skjaeveland, Garling, and Maeland, 1996). Additionally, research suggests that individuals from different demographic backgrounds may relate to sense of community in different ways. Some demographic groups may have larger social networks within their neighborhood, whereas others may have more intense social relations with their neighbors and a greater level of social cohesion (Buckner, 1988). Understanding individual level predictors of sense of community may impact the ability for new urbanism to achieve its intended goals. Also, sense of community is important for health because it can play a role in improving mental health and well being by improving social support within communities.

There is a paucity of data describing individual level predictors of sense of community in a well-characterized cohort of adults. The Survey of the Health of Wisconsin (SHOW) is a statewide household survey modeled after the National Health and Nutrition Examination Survey (NHANES). Study participants are representative of the Wisconsin population ages 21-74. Data on health determinants and outcomes are collected at the individual and household level. Since 2013, SHOW has
been collecting data on sense of community using a brief sense of community scale developed by Peterson, Speer, and McMillan (2008). As a first step towards larger goals of understanding sense of community and urban design, the Survey of the Health of Wisconsin data sample offers a unique opportunity to examine the demographic correlates of sense of community.

Using a sample of 2,364 participants across 13 Wisconsin Counties and multivariate regression methods, this study expects to determine which demographic variables are most important to accounting for variation in sense of community. Sense of community will be assessed using SHOW health questionnaire data, which measures four factors: needs fulfillment, membership, influence on others, and emotional connection. Based on findings from existing research on sense of community, I hypothesize that length of residency and homeownership will be the only significant correlates of sense of community within the SHOW sample.

References

Key Words:
Sense of Community, Demographics, Urban Design, Community Psychology

WHAT HAPPENED TO URBANISM: A COMPARATIVE CASE STUDY OF ABU DHABI AND DUBAI NEIGHBORHOODS
Abstract ID: 180
Individual Paper Submission

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Abu Dhabi and Dubai are the most populated and urbanized cities in the UAE. Their history shows a continuous paradox: collaboration and competition aimed at receiving global recognition. Both cities emerged from a desolate desert landscape and evolved through several phases of urban growth: slow expansion, compact development followed by suburbanization and globalization (Elsheshtawy, 2004). This path towards modernity has been emulated by several Gulf cities including Doha and Manama. The story of Abu Dhabi and Dubai became somehow a model signifying urban dominance and primacy in the Gulf region. After more than 60 years of growth, the two cities, although fall under one constitution and are driven by similar political and social motifs, they have distinct urban morphologies and neighborhood layouts.
Low-rise, detached single-family residential communities make up a large swath of both cities expressed in the form of public housing, gated communities and subsidized lands. Since the 1960s, the UAE government has been subsidizing thousands of plots sponsoring the construction of neighborhoods for the indigenous population (Khalaf, 2006). Public housing programs and land use planning led to the proliferation of sparse and disaggregated neighborhoods which cover up 55.2% of built-up land in Abu Dhabi and 30% of developed areas in Dubai. Although suburban neighborhoods in Abu Dhabi and Dubai were subjected to the same doctrine, the urbanization process and its underlying ideologies are clearly different between the two cities. Contrasting ideologies, shifting power structures, and competing economic imperatives shaped their built environment and neighborhoods. This study aims to map and analyze these residential neighborhoods through answering the following questions:

1. What urban design ideological traditions shaped the built environment of Abu Dhabi’s and Dubai’s neighborhoods?
2. Are there multiple urban designs, and if so, which ones had greater influence on the human settlements in both cities’?
3. How Abu Dhabi’s and Dubai’s neighborhoods are similar or typical, and how are they exceptional in terms of their physical structure?
4. What are the current modes of urban design practices and ideals manipulating the neighborhood structure and planning?

While previous research on Dubai and Abu Dhabi focus on urban history and environmental concerns (Elsheshtawy, 2004; Al Awadi, 2016; Crot, 2013), this study analyzes and interprets the transformation and physical attributes of neighborhoods in both cities. While this type of geospatial and morphological analysis is common in the North, it is rarely conducted in the Global South. By selecting a representative neighborhood in each timeframe (decade) from each city, and using the four ideals: Density, Diversity, Destination [+Distance], and Design addressed as the ‘4Ds’, the analyses enabled us to understand the implications of political power, local planning policies, foreign expertise, economical directions, and cultural nuances that drew the structure of each city throughout its transformation. This research utilizes historical data, geospatial data, government reports, and archival aerial photos to document the consistencies and differences in the urban layout of Abu Dhabi and Dubai neighborhoods.

In both cities, political and socioeconomic factors prove to be one of the main key players in maneuvering the general thought of neighborhood design. In the 60s and 70s, both Abu Dhabi and Dubai experienced compactness, which was inspired by the harsh climate and daily life necessities. Conversely, in the 1980s until 2000s, due to economic affluence, the two cities steered wheels towards dispersion and massive sprawl. Abu Dhabi being highly influenced by the concept of Neighborhood Planning Unit (NPU), managed to develop large neighborhoods (35.8 km² being the largest) with a monotonous design and an obvious neighborhood structure. On the contrary, Dubai, adopted a much smaller neighborhood scale (16.4 km² being the largest), with no evident planning unit. Late 2000s, Abu Dhabi in aims of paving the path to a sustainable future, redeemed itself by adopting nostalgic ideologies like neo-traditional principles. Dubai on the other hand continued its suburbanization process along the same ideology: sparse, splintering urbanism.

References
CHILDREN’S RESIDENTIAL SATISFACTION IN DIFFERENT MASS HOUSING ESTATES IN ANKARA
Abstract ID: 234
Pre-Organized Session: Planning Cities for Children

SEVERCAN, Yucel [Middle East Technical University] csevercan@yahoo.com, presenting author

Although residential satisfaction is an important indicator of environmental child-friendliness (Chatterjee, 2005), few studies have been conducted to investigate children’s satisfaction with their environments (e.g., van Vliet, 1983; Severcan, 2015). These studies show that living in a single-family detached house with one bedroom for each child and a garden, as well as recreational and leisure places nearby, and having many friends and good neighbors in the community increase children’s residential satisfaction. To the best of the author’s knowledge, no study has ever examined the role of neighborhood design, the location of the housing development (peripheral versus inner-city), quality of the municipal services and neighborhood safety in children’s residential satisfaction. This research aims to understand the predictors of residential satisfaction among children in different mass housing estates in Ankara, Turkey.

Data is drawn from a recently completed research project entitled “Living in the Turkish Housing Development Administration’s (TOKI) mass housing developments.” TOKI is a governmental institution tasked with the mission of alleviating the country’s housing shortage. It is also the primary institution in the country responsible from the implementation of urban regeneration projects. TOKI adopts a property-led redevelopment approach. This entails the demolition of squatter houses and replacing them with high-rise apartments, which are usually constructed on the same site and at a higher density (Karaman, 2013). Between 2003 and 2013, TOKI built approximately 565,000 mass housing units in Turkey. This number is projected to increase to 1 million by the year 2023 (TOKI, 2013).

In this study, the author focuses on four TOKI mass housing estates, which were built in the context of squatter housing regeneration in Ankara. While two of these developments are located near the historic citadel of the city, and hence are surrounded by informal and/or contemporary housing developments, others are located on the edge of the city. There are also some differences between the selected projects in terms of the availability of cultural and recreational facilities. Next, the author asked 9- to 12-year-old children from these developments to fill out a residential satisfaction questionnaire. 186 children participated in the activity. In this paper, the author will present the results obtained from this research. Initial findings show the specific features of the dwelling and neighborhoods that were critical in predicting children’s residential satisfaction: for example, beauty of the rooms, quality and quantity of neighborhood open spaces, social capital and safety. The results of this work will assist planners and designers in the creation of child-friendly environments.
This project was supported by two grants, one from the Scientific and Technological Council of Turkey (TUBITAK) [114C056], and the other from the Middle East Technical University Scientific Research Projects (ODTU BAP) [BAP-08-11-2016-041].

References

Key Words:
residential satisfaction, mass housing, urban design, child-friendly neighborhoods, children

PLANNING ACROSS GENERATIONS
Abstract ID: 235
Pre-Organized Session: Planning Cities for Children

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As population ages, increased attention is being given to the need of seniors. At the same time, support for children is also critical. Traditionally planning and economic development has focused on economically active working adults. Are planners and city managers beginning to turn their attention to building communities for all generations? We conducted a national survey of city and county managers in 2013. Surveys were sent to all counties and all cities over 25,000 in population and a third of those with a population between 2,500 and 24,999. We also surveyed a 1-in-2.5 sample of towns and townships over 2,500 in population. Of the total sample, 38% were rural and 57% were under 25,000 in population. So much of the research and policy recommendations for age friendly planning are urban biased. Our sample allows us to assess urban, suburban and rural community responses.

The survey asked about local government leaders’ attitudes toward the importance of multigenerational planning; obstacles to and motivators for planning across generations; services available in communities; cross-agency partnerships, planning, and participation; and aspects of the community’s built environment. We assess physical environment, planning and zoning, service delivery and attitudes using a structural equation modeling approach. Based on 1478 responding communities we find that political pressure is not significant but engagement of elders and families with children in community planning processes does lead to more services and planning processes sensitive to the needs of children and elders. Attitudes were not significant, nor were values articulated in comprehensive plans. What matters for a more age friendly built environment is building and zoning codes that address the needs of children and elders. While history matters in determining the service mix and built environment in a
community, zoning and building codes create the framework for future development more conducive to meeting the needs of all residents across the life cycle.

This survey is the first ever national survey that looks at both the needs of children and elders and does so with a focus not only on built environment and zoning but also on citizen engagement and service delivery. It points a way forward for creating cities that better meet the needs of children and elders. The key is participation, and building and zoning codes that plan for their needs. These are areas where planners are especially well positioned to make a difference.

References


Key Words:
Child and Age Friendly, Planning and Zoning, Services

IS GUIDELINES-BASED DESIGN REVIEW WIELDY? EVIDENCE FROM PORTLAND (OR)

Abstract ID: 267
Individual Paper Submission

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Design review is an integral component of the development control process. Processes featuring the use of design guidelines and review by design boards are particularly notable for their emphasis on deliberative practices. Jurisdictions that utilize a guidelines-based process however tend to use the same set of guidelines for both administrative and deliberative review, raising questions about how the use of extensive guidelines can be made to be ‘wieldy’ in the context of the latter. Using data from the City of Portland (OR), this paper aims to evaluate the efficacy of one such process in the context of practical constraints on time and scope typical of a deliberative setting. Using review transcripts for an eight-year period from 2008-2016, the mixed-methods methodology consists of parsing, coding, and categorizing review determinations to evaluate a guidelines framework along three primary criteria of frequency of guideline use, meaningful use, and effective use, as well as an analysis of guideline use cluster patterns. The evidence suggests that although most primary guidelines were consistently invoked, those pertaining to a general concern with the theme of ‘streetscape’ were some of the more meaningfully and effectively used. More interestingly, most of the guidelines were invoked in combination, in the context
of more general discussions. While some of the more frequently observed pairwise associations were
featured in a large variety of combinations, a general pattern of stronger association among guidelines
that are thematically related is identified. Furthermore, the use of guidelines in combination tends to be
less faithful to guideline intent. These results reinforce the conclusion that design review tends to be
more focused on questions of the public-realm. They however also indicate that determinations are
seldom attuned to the finer distinctions between closely categorized guidelines, and tend to consider the
merits of development in more general themes of context compatibility, pedestrian orientation, and
building design. The findings raise interesting questions about the tradeoffs between specificity and
practicality in guidance, and suggest that innovative approaches to the parsimonious utilization of
guidelines frameworks merit investigation.

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Key Words:
Design governance, Design review, Design guidelines

DOES PEDESTRIANS’ WALKING BEHAVIORS EXPLAIN THE RISE AND FALL OF
SHOPPING DISTRICTS? - A STUDY WITH GPS EXPERIMENTS
Abstract ID: 291
Individual Paper Submission

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Shopping districts in a city experience the rise and fall, in that some districts have attracted
customers and flourished, and others have not and declined. Diverse reasons may explain this differing
economic performance of shopping districts, and one of those is known as their physical environments.
General atmosphere created by shops, streetscapes and the arrangement of those encourages or
discourages visitors’ longer stay in the shopping districts, recreational browsing multiple shops and
potentially induces their consumption.

Under this circumstance, public authorities have implemented landscape or architectural projects
to improve shopping environments for certain retail districts undergoing declination. Some studies have
been conducted to reveal the relationships between pedestrians’ choices of walking routes and their
surrounding built environments through interviews and questionnaires. This approach, due to the
limitation of stated-preference methods, only helps an understanding of the relatively weak and indirect
link between customers’ recollection of itemized locational factors of the subject retail districts and their
satisfaction on the general shopping experience.

Therefore, in this study, using Global Positioning System (GPS) experiment, we investigate how
pedestrians and potential customers walk and behavior in react to physical environments in the two
different outdoor shopping districts (Sinchon and Konkuk) in Seoul, South Korea - one achieving healthier economic performance and inviting higher number of visitors, and the other in the opposite condition. The two rising and declining retail districts were selected, based on contrasting level of pedestrian volume, rent fee, and sales revenue. However, they are similar in terms of the combination of retail types, the number of retail shops, and the overall size of the area.

The two-fold analysis is as follows: First, we compare the pedestrians’ behavior in the two districts, using indicators such as duration of the visit, average walking speed, average number and types of retail shops to visit, the level of browsing (ratio of the visited streets to the total number of the streets), and ratio of main streets to backside streets in these two districts. For this part, GPS experiment will be conducted to observe the direct and precise pedestrians’ behaviors with supplementary questionnaire survey including participations’ sociodemographic information, the purpose of visit, and the information on the retail shops that are visited. Second, we compare the physical environments that are preferred by pedestrians in the two districts, using indicators such as width of street, distance to transportation, and street design, controlling for attributes of stores such as their scales and types. For this part, Multi-group Structural Equation Model is the main methodology to analyze these data.

This research will shed light on planning retail districts, emphasizing the role of pedestrian walking in the success of retail business, and providing a clue on how to revitalize retail districts by improving physical environments.

This work is supported by Basic Science Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Science, ICT & Future Planning (No. 2015R1C1A2A01055615)

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Key Words:
rise and fall of shopping districts, revitalization, pedestrian behavior, GPS, multi-group SEM

HOW DRIVERLESS VEHICLES MAY IMPACT BICYCLE TRANSPORTATION: FRAMING THE FIELD
Abstract ID: 313
Pre-Organized Session: Urbanism Next I: Autonomous Vehicles, Effects on Urban Design and Development

SCHLOSSBERG, Marc [University of Oregon] schlossb@uoregon.edu, presenting author
Over the last two decades, bicycle transportation has encountered a renaissance in many U.S. cities. Robust infrastructure is being created beyond the simple bike lane or failed ‘vehicular cyclist’ approach, bike share systems continue to be successfully installed, and many communities now see bicycle transportation as part of an economic strategy, in addition to an approach to meet changing lifestyle preferences, climate change goals, and equity concerns.

At the same time, autonomous vehicles are now predicted to be a mainstream form of transportation somewhere between 10-40 years from now. How they will alter city form and function is still unknown, although in some scenarios it is predicted that the need for parking will be reduced by 90%, the amount of roadway space will be lessened as vehicles travel closer together, and the safety of the driving environment will be radically improved. In terms of the sprawling or urbanizing tendencies of this new technology, that largely depends if autonomous vehicles will be utilized via a shared system or continue as a primarily individually-owned form of transportation. At the same time, continued changes in e-commerce and the sharing economy will influence the presence and location of traditional storefronts and other pillars of commercial activity that leads to community place-making.

So, what is the future of bicycle transportation in an era of driverless vehicles and shifts in e-commerce? There are many dimensions, from use of street space to interactions between modes to legal and regulatory frameworks that may significantly influence role of bicycle transportation in the overall transportation mix of the future. This paper will frame that issue and provide a roadmap for policy, planning, and research to help guide that future.

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Key Words:
bicycle transportation, autonomous vehicle, urban form, sprawl, parking

SECONDARY EFFECTS: A FRAMEWORK FOR URBAN DESIGN IN THE AGE OF AUTONOMOUS VEHICLES
Abstract ID: 314
Pre-Organized Session: Urbanism Next I: Autonomous Vehicles, Effects on Urban Design and Development

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Autonomous vehicles (AVs) are a near future reality and the implications of AVs on urban form, design and development, while potentially widespread and dramatic, are not well understood. Both the lopsided focus on the technology itself (Rosenzweig 2015) as well as its quick shift from a futurist vision to an imminent reality has resulted in surprisingly scant research on the secondary effects this technology will have on urban design and overall metropolitan development. While predicting specific outcomes is near-impossible, urban designers and planners would be well served to understand what aspects of AVs will most affect urban form and how these aspects are linked to potential shifts or secondary effects in cities.

This paper presents a research-based framework that identifies the pertinent aspects/parameters of AVs that will most directly influence urban design and then, based on this, describes the potential effects on key features and structures of the built environment. Key parameters include the evolving role of transit (especially in relation to ride-sourcing), whether AVs are shared or individually owned, the cost of AV trips, and general desires for residential dispersion or concentration. These parameters are critical in that they are linked to parking needs, mode choice, and trip generation rates (Bierstedt 2014, Childress 2014, Fagnant 2015, 2016, International Transport Forum 2015, Schoettle 2015) which in an AV future will in turn have direct effects on land use, street and district design, the metropolitan footprint/sprawl, and the location and magnitude of urban vitality.

The proposed framework offers designers and planners guidance on which aspects of this emerging technology to pay most attention to, helps them consider needed flexibility in near-term and longer-term plans, and – relatedly – helps identify the regulatory structures which will be most critical in shaping this future.

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Key Words:
Autonomous Vehicles, Urban Design, land use, street design, parking

WILL AUTONOMOUS VEHICLES PROMOTE URBAN SPRAWL?
Abstract ID: 315
Pre-Organized Session: Urbanism Next I: Autonomous Vehicles, Effects on Urban Design and Development

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The coming autonomous vehicle revolution will reshape the built environment. Beyond changes in the way that we travel, AVs will influence roadway design, parking locations, and site planning for new development. Among the many unknowns related to AVs is the impact of this technology on the location decisions for households and businesses. Given that AVs allow all riders to be productive, or at least engaged, while traveling, there is the possibility that the technology will promote further decentralization and sprawl. In this paper we review the scant evidence on this topic and investigate the impact of AVs on development patterns.

Fundamental to the emergence of AVS is the question of whether the widespread adoption of this technology will serve to promote population decentralization (potentially fueling sprawl) or act as a re-urbanizing force. As transportation systems become more efficient, it may be possible for households and firms to locate farther from existing urban centers, and gain additional productivity during travel because individuals no longer need to control vehicles during their trips. Alternatively, AV technology could make urban centers more attractive to households and firms due to more efficient and safer transportation systems, leading to greater centralized employment and housing densities, yielding a greater mixing of activities and land uses.

We are utilizing a multiple-pronged approach to investigate the potential impacts of the widespread adoption of AV technology on land use patterns. The research team will:

- Complete a literature review examining existing academic and industry literature on AVs potential impact on land use patterns, sprawl, and travel demand;
- Undertake a Delphi exercise to gather input from a team of land use and transportation planning experts from Florida and around the United States to arrive at a consensus view of how the adoption of AVs will likely affect urban form and travel behavior in the coming decades;
- Interview large-scale developers, large landowners and consulting firms to uncover how they are integrating AV considerations into their long-term development plans.

References


Key Words:
Autonomous vehicles, Urban form, Sprawl, Future city, driverless cars

WILL CITIES GET RUN OVER BY SHARED AUTONOMOUS VEHICLES?
Abstract ID: 316
Pre-Organized Session: Urbanism Next I: Autonomous Vehicles, Effects on Urban Design and Development
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The disruption that shared autonomous mobility will bring to municipal budgets, public works planning, street standards, parking requirements - as well as employment categories - will occur faster than most cities expect. On top of that, the infrastructure we are putting in place right now will be obsolete within a decade or so, far sooner than the end of its useful life. This talk will look at adaptive strategies to deal with this transformation of our transportation system.

References

Key Words:
autonomous vehicles, land use, transportation

DO WATER FOUNTAINS AND ACTIVE STREETS IMPROVE PLAZAS’ VISITABILITY?
Abstract ID: 341
Individual Paper Submission

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A Splash and A Crowd: Do Water Fountains and Active Streets Improve Plazas’ Visitability?

Building on William Whyte’s work on livable places (1980, 1988), the present study uses a four-item scale of visitability to test whether two design attributes identified by Whyte—the presence of water fountains within the plaza and access to active streets—increase visitability. Using Photoshop, the study manipulates 2 scenarios for street access (presence of street with retail fronts, no visible street), and 4 scenarios for fountains (accessible fountain whereby people can touch the water, floor fountain that children can play with, elevated fountain that people cannot reach, no fountain). To study the interaction between the two design attributes (fountains and access to active street), the study uses color slides of three plazas each altered for the 8 different scenarios (4 for fountains*2 for street access):

1. Accessible fountain / street with retail fronts
2. Accessible fountain / no street
3. Floor fountain / street with retail fronts
4. Floor fountain / no street
5. Elevated fountain / street with retail fronts
6. Elevated fountain / no street
7. No fountain / street with retail fronts
8. No fountain / no street

Sixty participants rated slides of the plazas on the Perceived Visitability Scale (PVS). The four items of the scale had high inter-item reliability. The visitability ratings show preference to the presence of a particular water feature and its interaction with street access. Despite their long-standing tradition,
Whyte’s recommendations have not been examined through experimental research. This study attempts to do so. The implications of design decisions of water features (design, functionality, as well as location) and the plaza’s access to the street are discussed in terms of plaza's livability. The study is part of a larger research project that attempts to facilitate community interaction through accessible and universal design.

References


Key Words:
livability

DEFINING A CULTURAL URBAN FORM AND STRATEGIES FOR RE-URBANIZATION IN EMERGENT IMMIGRANT COMMUNITIES

Abstract ID: 344
Individual Paper Submission

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This purpose of this presentation to define, analyze, and evaluate the role that placemaking can have with respect to Latino communities in the context of contemporary urban planning, policy, and design practices. Particular stress is placed on recognizing the importance of the interrelationship of the notions of place and identity as a theme for retrofitting cities and neighborhoods. Cities evolve and adapt continuously, and whereas the essence of local culture, people, and place is so important in this continual adaptation, it is routinely ignored when master plans or design guidelines are adopted and implemented. Everyday urban activities can help to mitigate the impacts of urban change. When immigrants come to the United States they carry with them cultural traits and characteristics that influence how they, in turn, use public spaces, conduct their social lives, and create dynamic urban spaces. In many cities across the United States, Latino entrepreneurs have succeeded in dynamically transforming the urban fabric and public infrastructure in ways that are more conducive to cultural adaptation.

This presentation explores case studies of ethnic commercial corridors with focus on the physical qualities, building typology, and the development of entrepreneurship identifying the signs of socioeconomic revitalization which can appear in the urban landscape of new Latino immigrant communities that are integral for revitalization. Latino families are central to the happiness and resilience of Latino communities everywhere. Daily activities such as gathering for a meal, playing and watching sports, shopping, taking walks, and enjoying the outdoors are examples of how Latinos actively engage in sustaining relationships with their friends and family. In Latino neighborhoods the need for spaces where these activities can take place has driven a bottom up adaptation and conversion of former offices and residential and historic buildings into ethnic food markets, bars, restaurants, bridal shops, beauty salons, and specialty stores where residents can interact and connect with others while simultaneously contributing to the social and economic revitalization of the area. Cultural entrepreneurs and ethnic minorities are part of a bottom-up urbanism process that is giving new meaning to abandoned urban landscapes once characterized by derelict strip malls and deteriorating urban and
suburban residential neighborhoods, while also positively contributing to the economic development in those areas. Immigrant businesses often grow out of underserved markets, generally starting as microenterprises: i.e., businesses with low start-up costs and low economies of scale. These enterprises tend to be adept at providing goods and services in neighborhoods where demand is uncertain, and socialization, leisure activities, and commerce have all been influenced by their efforts.

References

Key Words:
Latino Urbanism, urban design, economic development, urban revitalization, adaptive re-use

WILDERNESS AS A MYTH: IMPROVEMENT, PROFIT, HEALTH, AND SELF-AFFIRMATION IN FRAMING SUSTAINABLE URBANISM
Abstract ID: 385
Individual Paper Submission

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A key factor in Sustainable Urbanism is human-nature integration. The definition, interpretation, and role of nature in our cities is critical especially as landscape considered for non-human needs. Western conceptualization of this landscape modality uses the expression 'wilderness'. Wilderness is a culturally constructed philosophical concept typically presented as a contrast to urban development factors like density and congestion. Following historic Western culture and religious heritage, wilderness is interpreted as a space (often termed beautiful, bountiful, and dangerous) lacking improvement and civilization (Graber 1995, Rosenthal 1978).

Divergent to imported European attitudes linked with sublimity and Judeo-Christian religious beliefs, wilderness concepts in the United States are rooted in the notion of frontier and violence against the “others” (non-humans, wild animals, native Indians, unfaithful pagans, lawless, and even Black slaves) (Schneekloth 1996, Dew 1836). The 19th-century American frontier narrative is often mythologized as being anti-urban with Arcadian notions of development. Rosenthal (1978), however, contended that the “Great City” was the sense of destiny for American life. Rosenthal’s urban contention is further reinforced by approaching wilderness not as an issue of natural resource preservation for “use and enjoyment of people” framed by a right to public health (1964 Wilderness Act), but a matter of right to private property and right to self. (Marshall 1930; Ewert et al. 2014, 48).

Through a correlation of concepts of legal movements of property ownership (Ludwig von Mises 1949), history of privacy rights (Warren & Brandeis 1890), urban design zoning and land use control history (Fischel 2001, Olmsted 1997), and semantic indicators found in formative American wilderness literature (Abbey 1968, Burrough 1871, King 1872, Leopold 1948, Stener 1954, Muir 1894), it is
illustrated that the underlying concepts of wilderness, philosophically and politically, are shaped by self-identity and individual non-economic right to privacy, the same forces at the core of the city building process. Wilderness is not, in fact, about nature but a projection of urban values centered on private ownership, human benefit and human control. Wilderness can be seen as the extreme manifestation of the American notion of land control, management, and development. Such discussions highlight human struggle with ethical debates in imagining future of urban nature and its human design response. The consideration of wilderness as a specific and limited human construct underscores important pragmatic implications for design practices. If the privacy and individual private needs are dominant underlying drivers of North American urban development, the evolving definitions and roles of the public realm in cities need to be clarified and addressed. In terms of urban sustainability, growth management policies, infrastructure planning, and zoning regulations have traditionally been used as tools for exclusion and separation (between humans as well as humans and non-humans) as demonstrated by the privileged construction of wilderness. Cities being fundamental sites of proximity and heterogeneity, analyzing, understanding, and even undermining this false constructed human-nature dichotomy are imperative for imagining and speculating future of our urban environment. We need to re-examine our current discussions and re-evaluate our policies and proposals for value judgments in sustainable urbanism. Larger questions remain related to idealistic notion of urbanity and social-cultural construct of nature.

References

Key Words:
sustainable urbanism, human-nature relationship, wilderness, self-affirmation, public health

PSYCHOLOGICAL WELLBEING AND URBAN DESIGN: THE KNOWN KNOWNS
Abstract ID: 505
Individual Paper Submission

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At the 56th ACSP conference, Nico Larco (2016) proposed a framework for analyzing the elements and topics that should be considered when addressing sustainability in urban design. He categorized urban design topics by scale to serve as a basis for comparison and synergy. This matrix can serve well to researchers and practitioners to better understand the multi-layered consequences of urban design projects and policies. However, there is a missing topic in his matrix: mental health and psychological
wellbeing. According to the U.S. Centers for Disease Control, only about 17% of U.S. adults are considered to be in a state of optimal mental health, and according to numerous studies, built environment has a role in the current undesirable situation. This research is an attempt to fill this important gap through the analysis of relevant studies with similar approach as Larco’s study. The impacts of urban form on mental health correspond to two general categories: a) biological conditions and diseases, and b) psychological well-being. This paper discusses an on-going research project that investigates the relationships between urban form and psychological wellbeing by focusing on four types of measurable impacts: stress reduction, cognitive restoration, mood enhancement, and social connectedness.

An analysis of fifty two studies identified twenty-four elements of the built environment that correlated with one of the four psychological outcomes. For convenience, these elements are broken into eight categories: 1) density, and perceived crowdedness, 2) access and perceived access to services and amenities, 3) nuisance such as noise, and pollution, 4) greenness and perceived greenness, 5) housing characteristics, 6) travel mode and time, and 7) aesthetics and design qualities, 8) safety and perceived safety.

Our study's goal is to propose a new practice-oriented protocol/tool to measure the impacts of urban form on psychological well-being, which would contribute to direct planning and urban design efforts, and help open new areas of research.

References

Key Words:
Mental Health, Psychological Well-being, Urban Form, Urban Design

SIGN LANGUAGE: PUBLIC SPACE AND THE VISUAL SEMIOTICS OF COMMERCIAL GENTRIFICATION
Abstract ID: 533
Individual Paper Submission

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Dundas Street West in Toronto, Canada has gentrified rapidly over the past decade, with an array of hip bars, restaurants, galleries, and shops replacing many of the ethnic businesses long associated with this
neighborhood commercial street. This study examines the specific sets of visual markers deployed on the signage, window displays, and facade treatments of these new businesses, identifying these signifiers as intrinsic to the social and cultural displacement associated with gentrification. We use the storefronts as a means to examine issues of identity, appropriation, and exclusivity, and to test the suitability of visual landscape analysis to capture the ways in which these dynamics operate in and through the public streetscape (Krase, 2011).

Primary data for this study was gathered through systematic field observation and structured photography of storefront treatments along a 25-block segment of Dundas Street West. Additional retrospective images from Google Street View were examined to identify the substantial changes to the streetscape over the past decade. A visual content analysis of facade elements was used to develop a typology of storefront styles associated with consistent sets of aesthetic and cultural signifiers. The resulting storefront types were then compared against neighborhood demographic trends and retail uses, and mapped to investigate patterns of spatial distribution and temporal change.

This process of visual analysis led us to identify a plurality of hipster storefronts corresponding to two distinct aesthetic types: minimal storefronts that efface overt business identification by often replacing existing signage with abstract patterns and confining the store name to discrete, almost imperceptible lettering on the window glass; and retro storefronts that use anachronistic elements to convey an ersatz sense of age and working class authenticity, often appropriating prominent vintage signs that ironically identify the new upscale businesses with those they replaced. In both instances, the cultural and aesthetic signifiers deployed on the storefront treatment grant the businesses an air of exclusivity, identifying them as privileged spaces of consumption for the neighborhood’s growing population of young urban professionals. Given the higher prices and more limited retail uses typically associated with these businesses, hipster storefront aesthetics can also be read as signs of exclusion for the traditional ethnic and working class communities along Dundas West. The proliferation of hipster storefronts and concomitant displacement of ethnic-affiliated storefronts over the past decade is changing both the sense of place and the nature of public space along this traditional community-oriented retail street.

Adding to a small body of existing literature, this study connects commercial gentrification to the appropriation of not only space, but culture, whereby gentrifiers commodify and fetishize the “authentic” cultural signifiers of the communities they serve to displace (Dovey, 1985; Langegger, 2016; Zukin, 2010). Attention to the visual semiotics of commercial storefronts allows us to consider how they might not only reflect, but also affect neighborhood change, raising questions about the cultural determinants of gentrification and offering planners a new lens through which to examine the resulting transformations of public space. The study thus also foregrounds the role of urban design and planning in the preservation of cultural landscapes and the management of vernacular public spaces (Carmona de Magalhães, and Hammond, 2008).

References
INNOVATIVE STREET DESIGN IN A CITY WITHOUT FREEWAYS: THE CASE OF VANCOUVER
Abstract ID: 588
Individual Paper Submission

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In the mid-20th century, the city of Vancouver, British Columbia, considered building freeways but elected not to do so after citizens revolted. Although freeway proponents advocated them on the grounds of modernizing the city and helping its growth, having no freeways has not hindered the city. Over the course of the last 30 years, Vancouver has grown steadily through the construction of high-density residential neighborhoods in and around the downtown and infill development in targeted outlying areas and corridors well served by public transit. Today, Vancouver is considered to be a highly walkable and livable city. The city’s fine-grained urban fabric and the lack of freeway barriers are often pointed to as important contributors to making it walkable. Since Vancouver is the only major city in Canada and the United States that does not have freeways, and since it is deemed pedestrian friendly, questions arise about what strategies are used to move traffic around the city on surface streets and yet not create pedestrian barriers.

Vancouver has a network of arterial streets but did not compensate for not building freeways by widening these streets. Rather, the city has sought to move traffic efficiently on its major streets by adopting an unusual intersection design for minor crossing streets. These intersections have different controls for the arterial street traffic than for the cross street traffic: signal lights control arterial street traffic and stop signs control cross street traffic. This design allows longer green phases on the arterial street, because the signals only turn red when a pedestrian or bicyclist wanting to cross the street pushes a button. Conversely, drivers on the minor cross street must always stop at the intersection and then must act with caution to enter or cross the arterial, which helps calm traffic on the cross street. Having both stop signs and signal lights at the same intersection is distinctly discouraged by widely adopted traffic engineering standards, but in Vancouver this approach is commonplace and seems to work.

This paper presents research that explores how these “multi-controlled” intersections have been deployed in the city, how they work in practice for vehicle drivers, pedestrians and bicyclists, and how their safety records compare with normally controlled intersections. Mixed research methods were used including on-site empirical observations and traffic counts, quantitative analysis of traffic flows and accident data, and spatial mapping. Preliminary findings suggest that: 1) these intersections are not less safe than normally controlled intersections if they are used in appropriate locations, such as where cross street traffic is relatively light; 2) driver frustration of cross street traffic is reduced and safety is increased if the pedestrian and/or bicycle traffic flow on the cross street is frequent enough that a red signal is triggered relatively frequently; and 3) pedestrian and bicycle movement is well accommodated when the arterial street signals turn red relatively quickly after the button is pushed.
A primary implication of the research for planning and urban design practice is that the unique “multi-controlled” intersection control design used successfully on Vancouver’s arterial streets might be a viable option for arterial streets elsewhere where communities are interested in increasing arterial street efficiency while not creating pedestrian unfriendly conditions, including communities considering freeway removals for the purpose of re-knitting the urban fabric but also having concerns about what the impacts would be on surface street traffic flow. In addition, the research also suggests that street design standards should be constantly reassessed and reformulated to make sure they include innovative street design approaches, supported by research, that are conducive to walkability.

References


Key Words:
urban design, pedestrian-friendly street design, questioning street design standards, multi-modal street intersection design

PLANNING FOR STRESS REDUCTION AND ATTENTION RESTORATION
Abstract ID: 589
Individual Paper Submission

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As the world becomes increasingly urbanized, significant concerns about environmental, social, and public health issues have emerged. Mental health is one of these concerns. According to the U.S. Centers for Disease Control, only about 17% of U.S. adults are considered to be in a state of optimal mental health. Stress reduction through environmental design can be an answer. Research from a variety of fields, namely environmental psychology, has demonstrated the restorative potential of natural environments. Exposure to natural settings can reduce stress (Ulrich 1984), promote recovery from attentional fatigue (Kaplan & Kaplan 1989), and even improve overall health (Laumann, Gärling & Stormark 2003). On the other hand, some studies suggest that certain urban settings have a perceived restoration potential that is equivalent to, or even greater than, natural environments (Herzog et al. 2003, Nasar & Terzano 2010, van den Berg, Jorgensen & Wilson 2014). Empirical
evidence from many disciplines has supported the development of restorative urban environments, though there is little guidance for the incorporation of various restorative places at different settings. The purpose of this study is to propose the typology of places (combination of natural and urban settings) that can have restoration potentials, and compare their popularity and effectiveness at different contexts.

While controlling and modeling all the internal and external factors influencing individuals’ stress is difficult, limiting samples to relatively similar demographic group with similar occupation can reduce the impact of these factors and make it easier to focus on the environmental characteristics. Therefore, this project has focused on campuses of the California State University (CSU) system as its sample. Comprised of 23 teaching-oriented campuses, CSU is the largest four-year public university system in the United States, which makes it a manageable scale for this study, while being broadly representative of comparable institutions and settings. We acknowledge the issue of external validity of findings. However, having relatively homogenous respondents at the same type of environment is an important advantage for this research.

Campus form dimensions were measured for all 23 CSU campuses according to the 10-item scale of Hajrasouliha and Ewing (2016), using spatial analysis tools in ArcGIS. In addition, an online questionnaire and its paper version were created covering demographic characteristics (gender and age), previous and current student academic status (SAT/ACT scores, perceived grade point average and year of study), number of enrolled credits, and how often they are stressed and mentally fatigued on campus. The questionnaire includes five-item Perceived Restorativeness Scale (PRS) adapted from Berto (2005) measuring four domains of Fascination, Being Away, Coherence, and Scope in regards to each campus. Open-end questions such as “where would you prefer to go on campus when you feel low or depressed?” and “What would you prefer to do on campus when you feel stressed” have been included.

Preliminary results suggest nineteen types of places that have restorative qualities on all campuses. An interesting result was that those who prefer more private places such as their dorms or large natural areas such as trails, expressed higher level of stress and mental fatigues, compared to those who preferred small pockets of green on campus, or social settings such as coffee shops. There was not consensus among students about the restorative quality of each campus. Those who had opinion that is more positive also had more satisfaction with their academic experience and performance. There was not a significant difference between urban campuses and green campuses on their perceived restorative score. However, social settings were more popular on green campuses, and green settings were more popular on urban campuses. These findings can inform urban designers about the diversity of places that can have restorative quality and the importance of providing choices to achieve restoration goals.

References
The temporary pedestrianization experiment on Broadway in New York in 2008 has inspired similar pedestrian oriented interventions, on public streets such as VIVA Vancouver (2009), and Pavement to Parks (2010) in San Francisco. These ‘tactical’ interventions are touted as a new wave of urban design and planning for public space. However, city officials and retail merchants utilized temporary pedestrianization concepts in the post-war, beginning in the 1950s, as a way to test pedestrian mall projects with little capital investment. Post-war architects and planners such as Victor Gruen cautioned that temporary strategies did not comprehensively address circulation and revitalization goals associated with comprehensive pedestrianization planning, and that pedestrianizing a street should only be the final element of a larger-scale traffic reorganization (Gruen, 1966). Despite the warning, some cities implemented temporary experiments, taking a more tactical approach to pedestrianization in contrast to planning theory at the time that advocated for comprehensive master planning to achieve downtown retail revitalization. Before the first permanent North American pedestrian mall was built in Kalamazoo, MI in 1959, both Oxnard, CA in 1957 and Waco, TX and in 1958, implemented one-week pedestrian mall trials before going forward with permanent pedestrian mall plans that were implemented years later (Blinkhorn, 1958; "Oxnard Pedestrian Mall Given One-Week Test," 1957). Likewise, Toledo, OH and Eugene, OR also piloted temporary pedestrian mall experiments during the summer of 1959 ("Broadway Jubilee- a Hit, or a Miss," 1959; Newkirk, 1959). Through newspaper articles and archives, this research examines the historic and contemporary use of temporary pedestrianization as a planning strategy and analyzes how temporary experiments influenced decisions to build or not to build more permanent projects. Demonstrating that historically temporary approaches to pedestrianization of streets were used to test and promote the idea of pedestrianization for retail development, much like contemporary pedestrian street projects are aimed at developing public space.

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Key Words:
pedestrianization, tactical urbanism , pedestrian malls, post-war planning
THE EVOLUTION OF HOUSING FOR SMART CITIES
Abstract ID: 716
Individual Paper Submission

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This paper will present research being conducted to develop sustainable and affordable housing that leverages Population Health strategies for Smart Cities. We are currently developing a multifamily prototype housing unit that demonstrates best practices in aging-in-place strategies and telehealth technology. (1) We are also investigating prefabricated construction methodologies that will be utilized to bring plug-and-play technology infrastructure to the exploding senior housing demographic. (2)

Gigabit networks allow Smart Cities to collect and analyze vast amounts of data. (3) This data is like a new kind of natural resource; one that will have as much impact on the way we plan cities as water and electricity did one hundred years ago.

Sensors embedded in the built environment are able to collect such information as:
- Human Vital Signs (heart rate, breathing, body temperature, weight, blood pressure, hydration)
- Physical Activity (Activities of Daily Living, falls, gait, sleep)
- Environmental Factors (temperature, humidity, air quality, water quality, weather)
- Pharmaceutical Regimens (over dosing, missing doses)

Population Health strategies utilize the collection and analysis of such data to deliver health care more affordably, affectively, and sometimes before we know we need it. (4) Some of the more advanced technologies will include: Motion Sensors/Fall Detection, Gait-Analysis (determination of early onset Alzheimer’s and Parkinson’s), Automated LED Smart-Spectrum Lighting (optimizing circadian rhythms), Smart Mirrors, Smart Toilets (hydration monitoring/diuretic dosage), Sleep Sensors (ballistic cardiogram), and Automated Medicine Dispensers (coupled with Smart Toilet for heart medication).


References
WHAT MAKE PUBLIC ARTS BEING "GOOD" IN THE URBAN CONTEXT?
Abstract ID: 741
Poster

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Public art is being considered as a catalyst for urban redevelopment or revitalization in old downtown areas in Korea. Successful public arts attract numerous visitors from the outside and help improve the local living environment, atmosphere, and image. Some public arts are, however, blamed to be “ugly”, and some are reduced to scrap after being abandoned without care and maintenance. Kevin Lynch suggests seven performance dimensions for the spatial form of cities in his book of Good City Form (1984), which dimensions are claimed to make city forms or city’s physical elements “good”. This research aims to identify the characteristics of the physical public domain where public arts are to be staged. E. Sternberg’s 2000 research, “An Integrative Theory of Urban Design”, helps understand the concept of the domain. Based on the understanding, K. Lynch’s seven dimensions are to be revisited to explore basic requirements or minimum guidelines for public arts in the urban context.

References

Key Words:
Public Art, Urban Design

PARTICIPATORY PLANNING AND DESIGN PROCESS FOR BROWNFIELDS REDEVELOPMENT
Abstract ID: 760
Individual Paper Submission

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The deindustrialization and negligent past of many North American and European cities have left scars on their urban fabric and landscapes in the form of Brownfields and vacant lands. Although Brownfields negatively influence natural and built environments and socio-economic conditions of a community, redeveloping Brownfields may face barriers such as lack of interests among investors, lack of agreement among decision makers, and never-ending consumption of greenfields around cities. Researchers have provided overviews of Brownfields features from the real estate development perspective, focusing on the physical, legal, and financial aspects of a site and property (Glumac et al, 2011), discussed network
structures and performance of public-private partnerships around Brownfields redevelopment (Alexander, 2012), analyzed the success of Brownfield redevelopments in environmental health, finance, livability, and socio-economic conditions (Wedding et al, 2007), discussed the gentrifying effects of Brownfields redevelopment (Essoka, 2010), and explored how Brownfields redevelopment may produce new geographies of environmental injustice through the displacement of toxic waste to newly waste-able spaces (Dillon, 2014). The connection between Brownfields redevelopment planning and urban design, community participation, and placemaking are scarce, especially in environmental justice (EJ) communities. This paper attempts to fill this gap.

We examine whether and how Brownfields redevelopment plans (i) use community design or public participatory design as a tool in the plan development process, (ii) perceive urban heritage and plan for development in the future, and (iii) address environmental and social justice issues in post-industrial communities. We review the plans developed through a grant program started by the U.S. Environmental Protection Agency in 2011, titled Brownfields Area Wide Plan (AWP). The objective of many Brownfields AWP is to create spaces and places for disadvantaged populations living in post-industrial EJ communities. We focus on the connection of these plans with urban design, placemaking, public participation, and neighborhood history and culture in EJ communities.

Our methodology includes content analysis of 20 plans developed under the program and open-ended phone interviews with city officials of those 20 communities. Our findings suggest that while most plans address EJ communities and are consistent with local identities, values, and history; many plans do not focus on community design or public participatory design. We expect to contribute to this line of research by not only analyzing the gap exists in published plans but also developing strategies to address such gaps in future plans.

References


Key Words:
Brownfields, redevelopment planning, participatory planning and design, community design, content analysis

DESIGNING FOR DIVERSITY: AN EMPIRICAL STUDY OF URBAN PARKS IN CINCINNATI, OH
Abstract ID: 831
Individual Paper Submission

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Concerns about equal access to the public realm and inclusion of groups with different viewpoints, race and cultural backgrounds are growing in contemporary societies. In this context, public spaces, such as urban parks, play an important role in fulfilling the needs and rights of diverse population and maintaining the symbiotic existence of various social groups in the city. However, contemporary design and management of urban parks tend to cater to certain activities often failing to address the needs of several groups (Loukaitou-Sideris 1995; Cranz 1982; Forsyth, Musacchio, and Fitzgerald 2005).

We address the issue of inclusivity and diversity by identifying the user groups, their activities, and territorial uses of two urban parks in Cincinnati, OH – Washington Park and Riverfront Park. The aim is to understand and evaluate diversity accommodation of these parks and to provide useful insights for inclusive and equitable park design and management. We ask, based on location and access to these parks, 1) Who are the existing and potential user groups? 2) What are their activities and territorial patterns in the parks? and 3) What park design aspects and facilities serve or do not serve the needs and expectations of the different social groups?

These questions are addressed by empirically evaluating park design and management using behavioral and territorial mapping, ethnographic observations, and field notes. The process is divided into three phases: first, we conduct systematic on-site observations and document user-activity patterns using codes differentiated by age, gender and race cohorts for every active park hour during the weekday and weekend over a period of 10 weeks. Second, we use the observations to generate territorial maps of each cohort using Kernel Density tool in ArcGIS. Finally, we synthesize and analyze the observations by creating matrices that identify the distinct users of the parks, their activities, facility usages and territorial patterns. This helps to understand the utility of the park designs and facilities that serve the needs (or not) of the diverse social groups.

Comparing the findings shows that even though both these parks are contemporary city parks, designed to serve everyone in the city and beyond (as compared to neighborhood parks), Riverfront Park is more inclusive and diverse than Washington Park which mostly serves the needs of some specific users, such as Caucasians, millennials and adults. We also find a discrepancy between the observed users and those who live in the vicinity. In Washington Park, the park facilities cater to the observed social groups at the expense of nearby residents, such as the African Americans, teenagers and seniors. In contrast, observed users in Riverfront Park are more diverse in terms of age, gender and race, and include neighborhood residents as well as city and regional population.

Taking Riverfront Park as a good model of diverse and inclusive urban park design, we conclude that lack of inclusivity is a result of compartmentalization of park facilities – reducing flexibility of uses and diversity of users. There is a dearth of “loose” spaces, overemphasis on programmed spaces and disproportionate provisions for both active and passive uses failing to attract diverse social groups. Inclusivity and diversity in urban parks is highly dependent on balancing between programming and flexibility of park space and facility design. We recommend tools and guidelines for flexible and multipurpose park design and management that can cope with diverse and changing demography of heterogeneous urban populations.

References
Cities as systems as a proposition has its long-term intellectual history. Herbert Simon’s idea of system thinking influenced the way planners and designers conceive cities as a complex system that is composed of subsystems, components, objects and their interactions. The subsystems tend to be organized in a hierarchical structure, a way that nature and society develop their robustness and resiliency (Batty, 2013). The proposition of Urban Systems Design addresses questions of how cities functions and performs better ecologically, as well as how urban change can be made through transformative knowledge network and actions that will lead us to a greener, ecologically sound and resilient urban future. Urban Systems Design as a new system approach of urban design is grounded on urban analytics and city science that connect systems performance and design.

The paper reviews a smart city project design process at Misono, one of the Tokyo 2020 Olympics sites in Japan. It demonstrates how emerging technologies and computational planning tools such as Internet of Things (IoT) infrastructure, real time sensing environment, urban building energy modeling and performance metrics can be incorporated in urban design processes for a project that aims to build a smart and ecologically sound community before and after the Games. A Geodesign model is taken as a hypothetical framework to integrate system thinking, digital technology and geographic context (Steinitz, 2012 & 2014). Three ways of designing including constraining, participatory and anticipatory methods are to be tested. Due to the complexity of the three-dimensional urban context in Tokyo, Steinitz’s Geodesign model is modified to address issues of finer-grain data and complex urban design problems across a hierarchical structure of scales ranging from street blocks, neighborhoods to a city. To achieve this goal, a framework of urban systems design is proposed to conduct iterations of design and modeling. Key performance indicators are determined to focus on mobility, energy performance and outdoor comfort. Future urban forms are derived from constraining, participatory and anticipatory processes to form alternative scenarios for testing the performance to move design decisions. The proposed GIS-based urban design support system will make use of real time data generated from sensors deployed in both indoor and outdoor environments when the IoT infrastructure is available. A comprehensive framework of eco urban performance metrics is suggested as a policy tool for benchmarking the progress the city would make incrementally, in which the design for change as an interventional approach of making future urban system is a key.
OPEN CITY: EMERGING PARADIGMS IN PLURAL, MESSEY, AND DEMOCRATIC URBAN DESIGN
Abstract ID: 969
Roundtable

RYAN, Brent [Massachusetts Institute of Technology] bdr@mit.edu, organizer, moderator

Following two decades in which traditionalist and ecological visions of urban design battled for primacy, new paradigms of urban design are emerging in which the discipline is perceived through the multiplicity of actors who participate in it rather than as an esthetic derived from either architecture or landscape. Additionally, the ‘strong state’ required for implementation of previous iterations of urban design is increasingly nonexistent or in retreat, leading to partnership, semiformal, and nonformal iterations of the discipline. But can this new understanding of urban design as a “plural” or “messy” art generate esthetics as convincing and persuasive as those of previous urban design ideals? This roundtable will feature four emerging and established urban design scholars, all of whom have recently published books outlining their understanding of urban design. Roundtable participants will explain and debate their new perspectives on urban design through multiple lenses. Participants will include University of Washington assistant professor Manish Chalana, co-author with Jeff Hou of “Messy Urbanism: Understanding the ‘other’ cities of Asia” (HKU Press, 2016); University of Washington assistant professor Rachel Berney, author of “Learning from Bogotá: Pedagogical urbanism and the reshaping of public space” (U of Texas Press, 2017); MIT associate professor Brent D. Ryan, author of “The Largest Art: A measured manifesto for a plural urbanism” (MIT Press, 2017); and UCLA professor and department chair Vinit Mukhija, co-author with Anastasia Loukaitou-Sideris of “The Informal American City: beyond taco trucks and day labor” (MIT Press, 2014). The session will be moderated by one of the four participants.

References


Key Words:
urban design, informality, governance, pluralism, Asia
EVALUATING THE DEVELOPMENT PERFORMANCE OF FORM-BASED DISTRICTS: A CASE STUDY OF FORM-BASED APPROACHES FOR WEAK MARKET CITIES
Abstract ID: 983
Individual Paper Submission

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Form-based codes (FBCs) pursue alternative built environment integrating design focused approaches that are intended to complement the limitations of conventional zoning with a goal of fostering predictable design outcomes and reinforcing the aesthetic elements of the urban streetscape. The emphasis of FBCs on the instrument of legitimate building types and design standards, in lieu of strict permitted uses, may provide land use authorities new opportunities to incent a variety of sustainable urban design features. FBCs have been widely adopted particularly in thriving regions, where strong market demand has fueled development activity so additional form-based regulations are less likely to the detriment of private sector investments. There is emerging evidence that increased efficiency and transparency of the development process enabled by FBCs may be also conducive to struggling regions such as St. Louis, the case study area of this study. Ensuring a consistent quality of investment over time throughout a designated district or municipality (Sitkowski and Ohm, 2006) can keep property values stable potentially associated with a positive externality from neighboring development projects.

Little research has explored the usefulness of FBCs. Existing research on the expected benefits of form-based approaches in theory is strong (e.g., Talen, 2013) but weak on evaluation, especially for programs currently operating. Proponents suggest FBCs have the potential to improve neighborhood walkability and encourage sustainable urban design (Jabareen, 2006). Critics point out that FBCs unnecessarily increase project design costs, complicate the development review process, and fail to produce meaningfully different results (Walters and Read, 2014). These issues take unique significance in weaker development markets where FBCs could discourage new project creation due to increased design regulations. This research aims at identifying the extent to which the FBCs adopted by weak market cities lead to better development capacity in addition to managed design results. The Form-Based District of Central West End (FBD CWE) neighborhood in St. Louis adopted in 2013 is selected to find evidences for testing this hypothesis. This is an illustrative case for downtown redevelopment initiatives implementing FBCs and such approaches are recently increasing nationally (Garde, 2017).

The first part conducts a comparative analysis of the FBC regulating plans from comparable cities to identify any distinctive characteristics of the FBC in St. Louis. The Form-Based District of Central West End (FBD CWE) neighborhood in St. Louis adopted in 2013 is selected to find evidences for testing this hypothesis. This is an illustrative case for downtown redevelopment initiatives implementing FBCs and such approaches are recently increasing nationally (Garde, 2017).

The first part conducts a comparative analysis of the FBC regulating plans from comparable cities to identify any distinctive characteristics of the FBC in St. Louis. The Form-Based District of Central West End (FBD CWE) neighborhood in St. Louis adopted in 2013 is selected to find evidences for testing this hypothesis. This is an illustrative case for downtown redevelopment initiatives implementing FBCs and such approaches are recently increasing nationally (Garde, 2017). The second part evaluates the development performance within FBD CWE by using a difference-in-difference approach with suggested proxies including assessed property value, new development permit, and building density. FBD CWE allows a greater amount of building type diversity, defined as the integration of residential and mixed-commercial building types in one or more districts, enabling more flexible development types at the block level compared to other codes reviewed. In addition, more aggressive density restrictions such as mandating minimum building heights are used for certain districts to maintain or increase the block level density, which can lead to spatially more concentrated economic activity along with increased foot traffic. The findings of the development performance evaluation suggest that FBD CWE improves the capacity for investment in a neighborhood’s non-residential property compare to residential units. Some evidence indicates that FBD may have improved perceptions of the district for investment in non-residential properties, potentially due to the presence of a community-supported plan or enhanced capacity to approve mixed use developments, but the post-recession rebound in real estate market evidencing this is far from conclusive. Increased rates of investment and appraisal may reflect a pattern of appreciation that was occurring in the neighborhood predating FBD. The value of this research is the development of an integrated evidence-based approach, combining design assessment
tools with non-design quantitative data to be used for the analytics of land use valuation that is transferable to other areas with comparable development context.

References

Key Words:
form-based codes, design regulations, built environment, development performance

RESTORATIVE QUALITY OF GREEN ROOFS AS URBAN GREEN SPACES: AN ANALYSIS USING AN EYE-TRACKING SYSTEM AND THE PERCEIVED RESTORATIVENESS SCALE (PRS)
Abstract ID: 1001
Individual Paper Submission

LEE, Narae [University of California, Irvine] narael1@uci.edu, presenting author

Introduction
Urbanization has isolated people from natural environments and instead subjected them to artificial environments, which may induce psychological and physiological stress (Moore et al. 2003). Given that natural environments enhance human emotional and psychological well-being, open green spaces, such as urban parks, may be crucial behavior settings for urban residents (Stigsdotter and Grahn, 2004; Yi and Yi, 2006). However, the limited number and unequal distribution of urban green spaces across cities prevent people from having equal access opportunity to access them and enjoying them in daily lives (Oh and Jeong, 2007). As viable alternatives to urban green spaces, roof gardens may allow urban residents to enjoy the benefits of green space with relative ease. Cities—which may face difficulties in securing green space due to high population density and land price—can adopt roof gardens to increase the access opportunity to green space. Accordingly, city governments in South Korea have been funding projects to expand roof gardens. Though the benefits of roof gardens have been identified by previous studies (Lee et al., 2005), the psychological and physiological benefits have been under-studied. Therefore, the present research may lend support to city governments expanding their funding for promoting the installation of roof gardens.

Methods
In this study, two research methods were employed to assess the restorative quality of roof gardens: surveys and a low-cost eye-tracking system. Three different types of landscapes were presented to research participants: urban parks, roof gardens, and city environments. Photographs of these settings were shown to them. In terms of the survey method, three surveys were utilized: a revised version of the Perceived Restorativeness Scale (PRS), a survey which gauges respondents’ preferences for these
settings, and a survey which taps into restorative and non-restorative factors in these settings. A low-cost eye-tracking system was adopted to measure participants’ attention in these settings. The psychological and physiological responses were measured by the survey questionnaires and the low-cost eye-tracking system, respectively.

Results
This study’s findings suggest that green roofs may be a viable alternative to urban parks. The preferability and the restorative quality of green roofs were found to be similar to that of urban parks, according to the results from the preference and PRS surveys. The results of the low-cost eye-tracking system showed similar view patterns of participants when they were shown the photographs of the green roofs and urban parks, and their attention was mostly focused on restorative factors. On the other hand, when they were shown the city landscapes' photographs, their attention mostly focused on non-restorative landscape factors. These results provide insight into the idea that attention may be relevant to restorativeness of environments and that restorative environments are more likely to attract people’s attention to restorative landscape factors.

References

Key Words:
Restorative environments, Roof gardens, Eye-tracking system, Urban green space, Mental health

STREET LIVABILITY, HEALTH AND HUMANITY IN THE ERA OF DRIVERLESS CARS: ROUNDTABLE FOR THE FUTURE
Abstract ID: 1006
Roundtable
APPLEYARD, Bruce [San Diego State University] bappleyard@mail.sdsu.edu, organizer, moderator
RIGGS, William [California Polytechnic State University, San Luis Obispo]
MILLARD-BALL, Adam [University of California, Santa Cruz]
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SCHLOSSBERG, Marc [University of Oregon]
AL, Stefan [University of Pennsylvania]

As the world drives toward driverless, many questions remain as to the possible impacts this new wave of transportation innovation will have on the livability and safety of our streets and our communities, and arguably aspects of our humanity.
As the rise of automobile use and sprawl in the mid-20th century faced a then nascent planning profession, we are now perhaps better prepared, but we are still seeking answers on how to best deal with this significant technological transformation before us. This roundtable will include, and welcomes all scholars, working on and interested in research and practices to best guiding this new wave of transportation innovation to ensure we support community livability, health, and humanity. We will examine approaches from multiple perspectives, including transportation, land use, and urban design. This roundtable will help inform the work being done on Livable Streets 2.0, and many other efforts underway by roundtable participants.

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Key Words:
Automated Vehicles, livability, Transportation, Urban Design

WALKABILITY AND TRAVEL BEHAVIOR IN COMPACT URBAN NEIGHBORHOODS: THE IMPACT OF PEDESTRIAN, TRANSIT AND AUTOMOBILE INFRASTRUCTURE ON WALKING
Abstract ID: 1020
Individual Paper Submission

MCASLAN, Devon [University of Michigan] dmcaslan@umich.edu, presenting author

Pedestrians are a vital component of urban life as they are important for the social, economic and environmental well-being of cities. Urban planners promote compact urban forms because they encourage sustainable modes of travel other than driving – public transit, biking and walking. Two decades of research has shown how various physical features of the built environment influence travel behavior – the often discussed 5 Ds: density, design of the street network, diversity of uses, the distance to destinations and to transit. Walkability has become a central planning issue in both scholarship and in practice, but has been heavily influenced by literature on travel behavior and the built environment and less influenced by urban design and livability literature. This paper examines macro scale neighborhood and city characteristics (the 5 Ds) as well as micro level characteristics related to the block and neighborhood – specifically pedestrian infrastructure, public transit options, and automobile infrastructure.

This paper uses the emerging “theory of urban fabrics” to examine the role of walking and public transit in compact walkable urban neighborhoods. This theory argues that each city is a combination of pedestrian, transit and automobile cities and that each one needs different planning approaches in terms of land use and transportation planning. A real world exploration and evaluation of the theory of urban fabrics helps us understand how each urban fabric prioritizes different modes of transportation and the problems that arise when they are not adequately planned for. To highlight this mismatch in planning
efforts, I explore in depth the relationship between walking and transit as both related modes of transport and as distinct modes of transport. Specifically, I ask: how do residents and workers in the urban core of Seattle travel around their neighborhoods and the city? What is the role of walking and public transportation in the daily movement of people within and between neighborhoods? How can the theory of urban fabrics help us explain current travel behavior in cities and plan better neighborhoods?

I answer these questions using a mixed methods case study approach, using the urban core of the City of Seattle as my case study. The study area is comprised of eight distinct neighborhoods, is highly walkable, and offers a range of transit options, including bus, light rail, streetcar, monorail, ferry, and bike sharing. The City is actively engaged in pedestrian planning, has multiple community groups advocating for walkability and safe streets, and is actively seeking ways to improve and expand public transport throughout the city. My methodology includes: (1) neighborhood mapping and morphological analysis, (2) non-participant observation, (3) travel behavior surveys of Seattle residents, and (4) in-depth interviews with Seattle residents.

Based on conventional planning wisdom, in the urban core of Seattle, we would expect walking and transit to be the dominant modes of transportation, but this is not necessarily what we see in these dense neighborhoods. While each neighborhood is relatively similar on the 5 Ds attributes, they vary significantly at the neighborhood and block level in terms of pedestrian, transit and automobile infrastructures, which corresponds to the overall number of pedestrians in each neighborhood, differences that would not be detected by only examining the macro scale D-variables. The theory of urban fabrics helps explain why transit in particular is not utilized as much as it could be. The theory of urban fabrics also helps identify ways we can improve walkability, increase transit use and reduce automobile dependence, which is supported by both quantitative and qualitative data presented in this paper.

References


Key Words:
walkability, urban form, travel behavior, pedestrian environments, public transportation

IS SMARTER, MORE ATTRACTIVE? DO SMART TECHNOLOGIES MAKE PUBLIC SPACES MORE ATTRACTIVE? CASE STUDY OF DALLAS
Abstract ID: 1036
Individual Paper Submission
Well-designed connected public spaces build a social cohesive base for a vibrant culture and democracy, accommodating diversity of users with various needs. As Mehta (2014) argues, good public space is a platform for engagement and conversation, for happenstances and learning.

In today's digital era, cities have applied technology-based solutions to improve the interconnected network of citizens, businesses, transportation, services, utilities etc. Intelligent technologies generate smart cities, smart communities, smart transportation system, smart citizens and smart public spaces. Paolo Neirotti et al. (2014) tried to provide a comprehensive definition for smart city initiatives. Collecting data from 70 cities around the world, they characterized these initiatives based on six main domains, natural resources and energy, transport and mobility, buildings, living, government, and economy and people. They also provided sub-domains and definition for each category to classify smart features which define smart city (Neirotti, De Marco, Cagliano, Mangano, & Scorrano, 2014).

A great body of research has explored physical and functional qualities influencing the attractiveness of public spaces. Several characteristics such as size, design layout, diversity of activities, circulation, safety, physical condition and maintenance have been recognized as important factors in attracting users (Valentine, 1990; Hille, 2002; Sullivan, Kuo, & Depooter, 2004; Giles-Corti, et al., 2005; Mehta, 2014). Reviewing the literature of public space quality and smart cities, we found a knowledge gap specific to the relationship between smart technologies and attractiveness of public spaces. In order to study this relationship, we used the definitions provided in the aforementioned study by Paolo Neirotti et al. (2014) to develop a smart public space index with four different categories; smart energy, smart management, smart mobility and smart entertainment. These smart features data were collected from the City of Dallas and the Dallas Parks and Recreation Organization. We hypothesized that there is a statistical relationship between smart features in the index and attractiveness of public spaces. In this study, as a proxy for attractiveness, we counted the number of people present in different times of day, weekdays and weekend in 10 randomly selected public spaces in city of Dallas, Texas.

In addition, significant qualities of public spaces which are related to attractiveness of public spaces were measured in selected areas through self-data collection and observation. These qualities include site amenities, micro program elements, size, circulation, percentage of green space and etc. Moreover, secondary data from The Trust For Public Land and NCTCOG (North Central Texas Council of Government) refined and used in the model to control for the public space qualities. Both and qualitative methods such as interview, survey and participant observation and quantitative were used in data collection and study of the relationship between intelligent technologies and public space attractiveness in smart city planning. Using linear regression, the results shows the significant influence of smart technologies in attractiveness of public spaces. However, some features such as video surveillance in the management category and event information distribution system in the smart entertainment category displayed a stronger relationship with public space attractiveness. The results of this study aim to contribute to the literature of application of smart city initiatives in urban planning. This study shows how the use of intelligent technologies in public spaces may enhance their quality and make them more responsive and more attractive public spaces.

References

Key Words:
Public Space, Quality and Attractiveness, Smart City, Smart Technologies, Smart Urban Planning

ARE NEW URBANIST DEVELOPMENTS MORE INVITING IN TERMS OF SOUNDS?
Abstract ID: 1041
Poster

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Over the last decades, New Urbanism (NU) has constituted itself as one of the principal urban planning and design approaches in the United States (Hirt, 2009). New Urbanist developments are expected to provide social, economic, and environmental attributes. One of the main aims of NU is to create buildings and neighborhood that supply a high quality of life for inhabitants. To do this NU suggests a set of strategies for land use, public, spaces, walkability, etc… Even though many of these attributes are covered in the literature, New Urbanist soundscapes and its amenities are not investigated in the literature.

Even though new urbanism literature and practical aspects are providing many expanded point of views, what if one of the new retail spaces promotes live music to go along with the street segment? Or what if one of the new proposed downtown plan offers some sound activities in the middle of the neighborhood? Sound was only involved as an unwanted version –noise- in some of new urbanism charrettes (Morris and Kaufman, 1998). The only research suggests that sound is a nuisance. However, sound takes many forms and cannot be reduced to level. As Wissman highlighted sound is measured for its physical characteristics while human reaction is also crucial for residential neighborhoods, green spaces, and mixed land use areas (Wissman, 2014). New Urbanism would likely offer a diverse soundscape that may or may not improve resident quality of life.

Density is one of those elements and it refers to development density based on land consumption by population and dwelling units (Park, Huang and Newman, 2016). So, it is anticipated that the denser the area is, sound sources are higher because of anthropogenic factors. Another key feature of NU development is a mixed land use by promoting places where people can eat, play, shop, and work (Park, Huang and Newman, 2016). New Urbanist developments is also expected to generate various sound sources (compared to traditional development styles). The other element is the street grid which is an essential factor of connecting the built environment (Park, Huang and Newman, 2016). Last but not least, proximity to transit provides diverse transportation modes such as walking, biking, and train rather
than car. Rather than unwanted sound sources by vehicular traffic, sound levels and even sound sources could be transformed into a neutral or more preferable sounds.

This research uses mixed methods to investigate the implications and elements of New Urbanist developments on sound level, sound sources, and sound preferences in one development in the Dallas-Fort Worth metropolitan area. I objectively measure sound using a psychoacoustic factors measure. I also conduct interviews to assess people’s sound preferences and sound sources in the area to enrich the objective measure (Kang, 2004).

By investigating sound preferences and sources, we will have a richer understanding regarding the relationship between diverse soundscapes and residents’ quality of life in various development types. The reason is that the implications of sound in the urban environment are still less considered in planning field with many aspects. This research is leading a role to initiate the importance of sounds for how people perceive the quality of place.

References


Key Words:
soundscape, new urbanism, quality of life, sound preference, urban design

NEIGHBORHOOD CONTRIBUTION TO PUBLIC SPACE ATTRACTIVENESS
Abstract ID: 1065
Poster

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Public spaces are shared destination of happiness, unity, socializing and are part of a system that creates a platform for individuals’ daily outdoor activities. And for optional activities such as an afternoon walk or social outdoor activities the quality of environment is highly important (Gehl, 2011). Besides, the vibrancy of public spaces is highly depends on integration of such spaces in the city, their relationship with surrounding communities and how attractive they are to the residents with different ages, backgrounds, cultures, gender and groups. Lord Rogers (1999) states “to achieve urban integration means thinking of urban open space not as an isolated unit—be it a street, park or square—but as a vital part of urban landscape with its own specific set of functions. Public space should be conceived of as an outdoor room within a neighborhood, somewhere to relax, and enjoy the urban experience, a venue for a
range of different activities, from outdoor eating to street entertainment; from sport and play areas to a venue for civic or political functions; and most importantly of all a place for walking or sitting-out. Public spaces work best when they establish a direct relationship between the space and the people who live and work around it”.

A Great body of research shows the importance of proximity to parks and public spaces in increasing walking, physical activities and individual’s mental and physical health (Cohen, McKenzie, Sehgal, Williamson, Golinelli, & Lurie, 2007; Wolch, Byrne, & Newell, 2014). Giles-Corti et al. (2005) suggest that access to attractive, large public open spaces that provide different activities and amenities for multiple users’ increases the walking among local residents up to 50%. Also, distance to public spaces affects frequency and type of the uses. For example, study of public space users in Chicago shows that users living in walking distance to public spaces use the space more frequently. Besides, built environment characteristics have been recognized as important factors influencing walkability. Quality of public spaces has been studied extensively in recent decades (Carr & Lynch, 1979; Forsyth, Musacchio, & Fitzgerald, 2005; Mehta, 2013). The Qualities such as design, circulation, safety, diversity of activities, maintenance, accessibility and etc. are factors that play an important role in attractiveness of public spaces. Accordingly, we found the relationship between neighborhoods built environment and attractiveness of the public spaces as the gap and hypothesized that different features of built environment influences the attractiveness of public spaces. In order to test our hypothesis, we created a neighborhood characteristics index which includes urban design, distance to transit, type of housing, number of businesses, etc. We measured urban design qualities related to walkability (Ewing & Handy, 2009) in 10-minute walk (1/4 mile) buffer in randomly selected 3 public spaces in city of Fort Worth, Texas. Other variables in our index achieved from City of Fort Worth, NCTCOG (North Central Texas Council of Government). Because of nested structure of our variables in neighborhood and public space level, we used HLM (Hierarchical Level Modeling) to control for dependency of variables in different level. In addition, we also include public space qualities such as size, site amenities, micro spaces and neighborhood demographics. The result from the initial model shows the importance of the surrounding neighborhood in attractiveness of public spaces. The result of this study can be used by urban planners, designers and developers to improve the quality of surrounding neighborhood along with the public spaces to create attractive spaces for all residents.

References

Key Words:
Public Space, Neighborhood Design, Urban Design, Quality and Attractiveness, walkability

URBAN DESIGN QUALITIES IN DOWNTOWN DALLAS: EXAMINING THE RELATIONSHIP BETWEEN URBAN DESIGN QUALITIES AND WALKING BEHAVIOR IN DOWNTOWN DALLAS
Several studies have recognized the importance of perceptual qualities in influencing walking behavior through physical features of the built environment. A recent study by Ewing and colleagues (2013) have developed measurement protocols to quantify urban design qualities related to walkability. They have successfully operationalized five urban design qualities (imageability, enclosure, human scale, transparency and complexity) and validated them in New York City, NY and Salt Lake City, Utah. Researchers have yet to attempt this kind of analysis in a large auto dependent context. This paper aims to understand the impacts of urban design qualities as on walking behavior in downtown areas of the City of Dallas. We chose Dallas because while the city has the potentials to experience growth in providing walkable neighborhoods (and streets), it is one of the least walkable cities in the nation (Leinberger and Rodriquez, 2016). To the best of our knowledge, this is the first comprehensive walkability study in Downtown Dallas.

For the purpose of this research, we collected data on urban design features, pedestrian counts and built environment variables for 409 street block faces in Dallas Downtown Improvement District (DID) over a six-month period. We gathered the urban design quality indicators through the field observation accounting for the time of the day (peak vs. non-peak hours). Also an extensive GIS analysis was done to measure D variables (density, diversity, design, destination accessibility, and distance to transit) as built environmental factors previously identified in the literature to be significant (Ewing and Cervero, 2010). Specific to this study, the team also identified employment concentration and number of parks. Controlling for spatial autocorrelation, we apply two regression methods, Poisson and negative binomial, to test the relationship between urban design qualities, D variables and the pedestrian volume in each street segment in downtown Dallas.

We expect to find that urban design qualities, when taken together, add significantly to the explanatory power of the pedestrian activity. Our research identifies which urban design and land use features lead to the higher volume of pedestrian activities at the street level. Policy makers may apply the results of this study to create high quality places through implementation of diverse urban design features. Additionally, it helps them to recognize the configuration capacities and infrastructure demands that make walking more enjoyable.

References
THE EFFECTS OF VISUAL PROPERTIES AND EVALUATIVE FEATURES ON WALKING BEHAVIOR

Abstract ID: 1081
Individual Paper Submission

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Scholars in many fields, transportation, land use policy, public health, community sociology, criminology, urban design, and environmental psychology, have sought to understand ways in which the physical environment can encourage people to walk. For many sprawled suburban and urban areas in the US cannot create the densities and reduction in car use that would encourage walking. However, at street scale, design may affect the travel mode for commuters and non-commuters. The present research mixed a correlational and experimental study to find out ways in which attributes of streets might encourage walking. The correlational study sought to derive the manipulated those salient properties to find out if they had an effect on walking choices.

The correlational study used the data collected from eleven projects in StreetSeen from The Ohio State University. It extends Google Street View, OpenPlans Beautiful Street Project, and MIT’s Media Lab Place Pulse Project to provide platform for evaluation of environmental perception. The eleven small projects asked similar questions about walking preference or choice between paired real scenes. The selected 148 scenes consisted of a group with favor rates above 75% (85 pictures) and a group with favor rates below 20% (65 pictures). I decomposed fifteen salient visual properties for each scene based on measurement protocols. Using standardized values (from 0.0 to 1.0), I conducted multidimensional scaling and cluster analysis. The analyses revealed that five kinds of perceived properties stood out in people’s choice of streets as desirable or undesirable for walking. These perceived aspects of the street included: 1) walking facility and diversity of buildings; 2) vacant field, upkeep and nuisance element; 3) diversity of land use, landmark, accessibility to public space; 4) diversity of landscape and proportion of greenery; 5) amount of human activity, street decoration and furniture, signage, proportion of parked vehicle, traffic control element, and lighting. Comparison between the most and least favored scenes showed that the facility, proportion of greenery, diversity of buildings, and street furniture and decoration had the largest differences. Two additional features, measuring the enclosure, the ratio of street height and width and the proportion of street wall also emerged as differentiating the desirable and undesirable streets for walking.

The experiment manipulated in virtual reality two of the properties that had the largest effect: diversity of buildings and greenery. Participants saw pairs of environments in random order and for each pair were asked to choose the one they preferred to walk on. The analysis counted the frequency of choice for each attribute to find out if there were an effect and to identify the size of the effect. As expected, the salient aspects of the environment did affect walking choice. Future research could explore the effects in different environment and in real environments. The resulting findings can help communities to improve the character of streets to encourage the walking.

References

Key Words: walking environment, perception

HUMAN SCALE IN URBAN DESIGN: THE DILEMMA OF SOCIAL CONSTRUCTION VERSUS UNIVERSALITY
Abstract ID: 1090
Individual Paper Submission

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In leading guides to urban design, such as Gordon Cullen’s Concise Townscape, a recurrent theme is human scale, as applied to relationships between the street and buildings along it. (Other uses of “human scale” for relating parts of whole cities, parts of a building to each other, and dimensions of objects such as windows, are not considered here.) A common prescription recommended at least as far back as Camille Sitte’s work is that the breadth of a street should be at least that of the height of the buildings alongside it, and no more than twice their height. One can make sense of this seemingly arbitrary guideline by examining the observer’s vision from across the street: by typical vertical angles of sight ranging from 27° to 45°, the observer’s field of vision across the prescribed distance intercepts the prescribed building height (plus margins of ground and the sky that properly frame the building). Such reasoning also seems to verify Jane Jacobs’ call for fine grained buildings: the moving observer’s horizontal field of view for a 40-60 foot wide street would sequentially take in one small-sized building at a time (plus margins of its neighbors). Researchers in human vision and visual ergonomics have not studied the specific urban design question. However, as this paper will document, their empirical results do suggest that the proffered angles of vision are in the reasonable range for normal, comfortable human attention. This result poses an intellectual problem. Many theories of urban form, urban space, and cultural geography hold that objects of spatial awareness ought to be seen as cultural constructs. The prescriptions for human scale would seem to imply the opposite: that with respect to human experience of urban form, there are human universals, and that these ought to some extent guide design. Perhaps, crudely understood, the human-scale prescription can even be reduced to a kind of neurophysiological determinism. Or can it? Do we really need to subject urban design to such theoretical contentions? The paper argues that culturally varied interpretations of the world depend upon universal principles by which human beings visually bring forth the experience of space and built form. It is by reason of this shared humanity that we can come to appreciate scale—and stimulating or provocative or offensive or
deadening violations of scale—and communicate about them with each other, across extents of educational preparation and across cultures.

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Key Words:
urban design, human scale, visual perception, social construction, theory

EVIDENCE BASED RECOMMENDATIONS FOR IMPROVING WALKABILITY OF A COMMERCIAL AREA: THE CASE OF CITY OF SAN FERNANDO

Abstract ID: 1094
Poster

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In an effort to improve physical activity in cities, especially in lower socioeconomic status neighborhoods, active transportation, such as walking and biking, are promoted increasingly in the last decade in the United States. Although these combined efforts towards sustainability are in abundance, when interventions to improve active transportation infrastructure are based on communities’ preferences, the outcomes are more successful (Rave and Goetzke 2011, Hass-Klau 1993; Cavill et al 2008). This project is an example of a process to prepare evidence based design recommendations to improve walkability.

The purpose of this project was to complement the efforts of Safe Routes to School program, which are executed through the County of Los Angeles PLACE program, with suggestions for further improvements in the commercial area of the city of San Fernando. The study was designed to help better understand the opportunities and constraints in relation to streetscape on these streets from the perspective of pedestrians and the business owners in order to make evidence based design recommendations improving walkability.

The city of San Fernando is located in the northwest side of the San Fernando Valley and is home to approximately 23,645 Los Angeles county residents (factfinder.census.gov). The city is 92.5% Hispanic and lives at a slightly higher density level then the city of Los Angeles. The city is divided by three freeways the 118, 210 and Highway 5. Due to recent efforts to make the city more walkable, several design elements have been implemented in their downtown area. The project site includes several arterial roads with a variety of commercial use including restaurants, dental offices, and retail shops.
The process of data collection included conducting questionnaires and observations. One questionnaire was designed for business owners in the area and the other for pedestrians. A total of 61 questionnaires were conducted with business owners and 67 with pedestrians. The businesses questionnaire included questions on how they thought customers accessed their business and the improvements they would like to see in the area. The pedestrian questionnaire included questions on their regular walking habits and their perception of what should be improved on these streets. Observations were conducted on pedestrian, bicycle, and traffic circulation, crosswalk use, nighttime and daytime safety elements such as street lights and buildings’ façade openings, and elements of streetscape including the sidewalks and the roadbeds.

The outcomes of questionnaires and observations were categorized into three categories: circulation, safety, and streetscape. Based on this evidence, we have developed a set of design guidelines to improve walkability on these commercial streets. The guidelines aim to remove the impediments to walking such as poor quality sidewalk surfaces and crosswalks, insufficient daytime and nighttime visibility, poor façade openings, and to foster the positive characteristics of the area, such as a healthy volume of pedestrians in the area and already slowed down traffic speed.

References

Key Words:
walkability

DESIGN CONTROL AND THE CREATIVITY CONUNDRUM: BALANCING REGULATION AND DESIGN INNOVATION IN VANCOUVER AND LOS ANGELES

Abstract ID: 1120
Individual Paper Submission

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At its heart, design is a creative process which sets up a particular challenge and conundrum for design governance. How can public sector actors engage and regulate urban design to shape and coordinate beneficial outcomes while allowing for, and enabling, creative solutions and innovation in the built environment? Often, design review and control (a subset of design governance) is seen as a counter to individual creativity and a potent critique holds that design review reinforces conservative tendencies and frustrates creative expression. This critique, to the degree that it is accurate, poses a challenge for cities seeking to develop complex built environments but also with regard to the need for innovation in addressing wicked problems including affordability and sustainability. In response, many public agencies seek to allow for creative solutions through flexible design governance frameworks (often through the use of variance) or by curtailing design control to minimize interference with creative solutions. In both cases, the solution is to have the capacity to ‘stay out of the way’ of creativity.
This paper seeks to challenge this critique and the typical construction of solutions by exploring the potential of public sector to be an active player, and partner, in the design and development process. It builds on an in-depth exploration of the design review and regulatory frameworks of Vancouver and Los Angeles and the interaction of creative designers and public sector regulators. The primary methods used are semi-structured interviews of key actors, document review, and analysis of representative projects that illustrate the tension between regulation and innovation. Vancouver and Los Angeles are useful cases as both cities support exemplary design while Vancouver is a city with a high degree of public intervention (and discretion) in design and development and Los Angeles is a city with a highly varied approach to public intervention in design and development. Both cities illustrate the challenges and opportunities for creative solutions to navigate the design review and control systems and have lessons for the active engagement of the public sector to redirect creative design efforts towards public goals and objectives.

References

Key Words:
Design Governance, Urban Design, Creativity

ENHANCING CULTURAL ASPIRATIONS IN URBAN DESIGN: THE GRADUAL TRANSFORMATION BY INDIGENOUS INNOVATION

Abstract ID: 1186
Individual Paper Submission

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The last two decades have provided significant evidence that planning systems have both directly and indirectly marginalised and oppressed Indigenous peoples (Awatere et al. 2013). The degree of Indigenous involvement in planning and urban design is stunningly revealed in the ongoing relative invisibility of Indigenous histories and values in the built environment. Conventional planning processes continually fail to acknowledge, respect and understand Indigenous knowledge, values and interests appropriately (Matunga, 2013). Ongoing colonial practices have restricted the rights of Indigenous groups to plan, protect and participate in urban design, decision-making and policy-making (Durie, 1998). Of late, there has been some increasing recognition of the need for greater cultural sensitivity in planning and urban design processes and outcomes (Stuart & Thompson-Fawcett, 2010). Recent years have seen examples of meaningful effort in urban design thinking and practice to understand Indigenous values and, sometimes, enable Indigenous communities to work towards their own planning and design aspirations.
In this paper, we present the results of our research in Christchurch, New Zealand. Indigenous elders in this city have spoken often of the lack of visible Māori identity. However, following serious earthquakes from 2010-2011, the city’s reconstruction is consciously including a cultural recovery that offers opportunity to make visible a bicultural identity for the first time in the city: formally identifying landmarks in the Māori language; constructing a cultural precinct; planting native shrubs valued by local Māori; making shared histories evident; introducing a locally specific Māori symbolism and design ethic; and making space for Māori ceremonies and events. This is an attempt to reflect the Indigenous people in the city and landscape as a normal feature of the Christchurch identity. Shockingly, it has taken the devastation of a natural disaster to effect a shift like this in the city. But it is indicative of the marginalisation of Indigenous voices in the design of the city (Puketapu-Dentice et al. 2017).

In our research, we track the evolution of design priorities and opportunities of an Indigenous urban development company based in Christchurch, from their origins in the mid-1990s to the present day. As a result of land claims and Treaty settlement processes many Indigenous groups are in a position to acquire significant amounts of land in urban areas. The sites commonly enable the development of large Master-planned residential communities or commercial hubs. But these Indigenous developers operate with a difference. Not only do they need to return an economic profit to the Indigenous community, but they also have a clear and growing responsibility to demonstrate cultural values in their design and operations. In the Christchurch context, this has meant that the Indigenous developer has not only had to cultivate a working relationship with the municipality, but also develop engagement processes with the various subtribes to which it is ultimately responsible, to ensure that cultural values are not only being incorporated into residential developments but are being enhanced through them for the long term strength and vitality of local Indigenous culture and heritage. This has not happened over night and there are definitely challenges, however, there is increasing pride from the tribe in urban developments for the cultural landscape and natural environment benefits being produced.

References

Key Words:
Indigenous urban design, Indigenous values, master-planned communities, New Zealand, Cultural landscape and identity

ENGAGING COMMUNITY AND YOUTH IN CITYWIDE SCHOOLYARD PLANNING AND DESIGN
Abstract ID: 1199
Pre-Organized Session: Planning Cities for Children
Finding common ground can be a challenge when faced with budget shortfalls, political differences, and policy limitations but where there’s a will, there’s a way. Schoolyards provide an enormous opportunity for civic engagement in a multitude of ways. Schools own more land in most cities than any other industry. And these school properties are at the very heart of neighborhoods, located in evenly dispersed patterns with the most diverse populations either attending or living near them. Schools do more than provide places to learn. Schools provide common ground.

This paper provides several examples of citywide schoolyard planning and design initiatives within the United States which have engaged community and youth at various stages and in a variety of ways (Whelpton, 2009; Brink & Yost, 2004; Lopez, Campbell, & Jennings, 2008). In 2008, KaBoom! commissioned the Sheridan Group to conduct a national survey and analysis of municipal best practices promoting community play space for children (Whelpton, 2009). Findings from this research resulted in increased awareness nationwide about successful play initiatives adding to a growing discussion about the many benefits of designing play areas with community and children. Of these examples only two cities, Denver, CO and Boston, MA, have rebuilt all of their schoolyards with community and youth engagement (Yost, 2017; Brink, 2016).

In this session, two citywide case studies will be discussed in detail: Denver Learning Landscapes (http://www.learninglandscapes.org; Brink & Yost, 2004) and the recent grassroots efforts in greening Philadelphia Schoolyards spearheaded by a number of nonprofit organizations and community groups with a primary focus on The Big Sandbox (https://www.thebigsandbox.org), a relatively new non-profit modeling the Learning Landscapes in Denver’s success. These two initiatives showcase a range of research methods with community and youth as well as a variety of strategies to build capacity and to increase funding momentum and political and policy-based change. A comparison of the similarities and differences between the Denver Learning Landscapes and Boston Schoolyards Initiatives will also be shared.

Research has shown that community-based schoolyard initiatives with well-designed playgrounds and significant community and youth involvement can increase test scores (Lopez, Campbell, Jennings, 2008), increase physical activity (Brink et al, 2010; Anthamatten et al, 2011), increase socialization and decrease bullying (Brink and Yost, 2004; Center for Research Strategies, 2003), increase community engagement and parental participation (Brink and Yost, 2004; Center for Research Strategies, 2003; Yost, 2004 and 2006), and more. Participatory research methods used over the last 17 years to be shared include: photosurveys, children’s drawings, design charrettes, online Facebook and Survey Monkey surveys, small focus groups, questionnaires, mapping with children, photovoice, photo preferences, and more. Community members and youth who are actively engaged are more likely to be more active in other areas of civic engagement, especially when the participation is authentic and the goals are achievable. Strategies to work with children so that they feel empowered and heard will be highlighted in particular.

This research is important. Engaging community and youth in citywide schoolyard planning and design can do more than simply transform these schoolyards, it can transform entire communities around green infrastructure to produce meaningful community spaces. These spaces matter. Finding common ground matters. Schoolyards are a great place to start.

References
In recent months, there have been interesting discussions regarding the effect of the built environment on the travel mode decision (Stevens, 2017; Ewing, Cervero, 2017; Clifton, 2017). It is established that the built environment has an effect on travel patterns and mode choice. However, policy-makers need more precise data and projections for making decisions about the built environment and active transportation infrastructure. This paper takes a complex estimation tool, built for Portland, Oregon’s METRO, simplifies the tool, examines the effect of a larger spatial scale, and measures its effectiveness in different metro areas. This research will lead to simpler and easier tools for use in MPOs nationwide, allowing modelers, planners, and decision-makers more information and guidance when considering the built environment and infrastructure.

Recently, advances in the field of non-motorized planning tools have increased the use and usefulness of non-motorized transportation models. The Model of Pedestrian Demand (MoPeD) (Clifton et al., 2016) uses demographic and built environment information to predict walking activity at a small scale (1/20-mile grid cells). MoPeD’s Pedestrian Index Environment (PIE) used this small spatial scale data to estimate an index of how the environment induces walking by estimating the relationship between built
environment characteristics and travel mode choice. MoPeD has been successfully applied in the Portland, Oregon area, using state-of-the-art data collected by the metropolitan planning organization (MPO) at this small spatial scale. In addition, other cities have also shown an interest in predicting active transportation patterns. The benefits of increased walk trips have motivated MPOs to pursue development of new tools to assess how policy and environmental changes would affect the amount of walking in their communities. Additionally, other regions do not have access to the same types of quality data as exist in the Portland metro region, creating a challenge of transferability. Thus, advances to MoPeD (especially regarding PIE) that make the model more transferrable to regions that have more limited data resources would have great utility to the planning profession.

This study investigates the transferability of PIE in a number of different ways. The appropriate spatial scale for PIE is examined. Although small-scale built environment data (1/20-mile grid) may not be available in other cities, national efforts have been made to create standardized datasets at a reasonable scale. One of the most well-known datasets is the EPA’s Smart Location Database (SLD), which includes nationwide data and standardized measures at the Census block group level. The SLD includes built environment information such as intersection densities by design, and socio-demographic data such as population and employment densities. The available built environment measures from the SLD are selected so as to match the original Portland-specific components of PIE as closely as possible. Finally, this new PIE and its association with walk trip-making are estimated using binary logit models and travel survey data for several different regions throughout the US.

By taking this approach to the reconstruction of PIE, we can compare a larger-scale and more transferable measure of PIE with the original PIE, as well as compare the structure of PIE between different regions. Preliminary results suggest consistency in the effects of PIE, its structure, and its components across different cities. They also illustrate the different effects that the built environment produces in pedestrian travel pattern for suburban vs. urban contexts. The new PIE is shown to have statistical significance in the decision of walking and in capturing the effect of the built environment on travel mode choice. This study is an important first step to assess the transferability of the index, reconstruct MoPeD, and deliver a new tool to assess policy changes. These outcomes are consistent with previous literature and support the identification of a range of the effect that built environment have in the walking behavior.

References


Key Words:
Pedestrian, Travel demand models, Walking, Built environment, Active transportation

SPATIAL DISTRIBUTION OF RETAIL AND FOOD ESTABLISHMENTS IN URBAN ENVIRONMENT: CASE OF AMSTERDAM, THE NETHERLANDS
The presence of retail and food establishments in the neighborhood has been associated with a range of identified benefits. For instance, it fosters neighborhood’s walkability and boosts residents’ health (Forsyth, Hearst, Oakes, & Schmitz, 2008), encourages transit and bicycle trips (Frank, Bradley, Kavage, Chapman, & Lawton, 2008), as well as augments community’s social cohesion (Jacobs, 1961). Considering these identified benefits, this study aims to investigate the location characteristics associated with the presence of retail and food establishments. Evidence from the literature indicates that location that offers convenient access or enables reductions in the cost of travel for patrons are expected to draw more stores (Sevtsuk, 2014).

I analyzed the spatial distribution of retail and food establishments using open data from the city of Amsterdam and Open Street Maps. Based on a geocoded dataset of non-residential functions, I developed a complete dataset of 182,781 buildings that represents the spatial distribution of retail and food establishments across the city as one aggregate model and for distinctive store categories. A set of built environment attributes ranging from the accessibility to bus, tram, and Amsterdamse metro stops as well as to parks and monuments was also developed. In addition, a range of neighborhood-level socio-demographic variables was included to account for potential confounding factors that may have influenced retail and food establishments’ location decisions.

The results of the analyses indicate that retail and food establishments location decisions are influenced by the location characteristics. Consistent with evidence from the literature, the findings of this study suggest retail and food establishments tend to locate in areas that provide better transportation accessibility. However, the extent of the location effects varies across different categories of retail and food establishments. This study might inform planners and policy makers in planning retail and food establishments.

References

Key Words:
retail, food establishments, accessibility, Amsterdam

THE PARADOX OF INFORMAL SETTLEMENTS: MAPPING THE MOST COMMON AND UNMAPPED FORMS OF URBANIZATION FINDINGS FROM AN ATLAS OF INFORMALITY.
Informal settlements are the most common form of urbanization on the planet, accounting for one-third of the total urban form, they are the home to up to a billion inhabitants (Davis, 2006). It is expected that by the middle of the twenty-first century up to three billion people will live in these urban environments. However, we lack consistent mapping of where that informality is or how it is expected to go through the process of growth at the local scale. The paradox of informal settlements is that it is common and known, however invisible regarding acknowledgment as a form of urban development and territoriality. What the planning discipline requires are tools to understand the complexity of such phenomena.

Scholars study urban informal development at two scales: One at the national level based on data gathered by nations or international agencies that measure informal settlements as a percentage on state indexes (Gilbert, 1996; Roy & AlSayyad, 2004). Studies at this scale happen because most developing nations do not have the capacity to map such areas in detail and even when the capacity exists some governments are impeded by their regulations or values to map and record such populations. The second scale tries to overcome the problem on national scores with low detail by focusing on case studies at the city scale. This way scholars concentrate on few cases in which time can be dedicated to record that what the state has not been able to do (Perlman, 2010). This case selection presents traditional problems of generalization of findings. What the disparity between this two measurements create is a blindness on the measure of this urban condition at an urban scale and of its relationship with global trends.

New sensing technology has opened a window to map informal settlements using remote tools (Taubenböck & Kraff, 2014). However, we still lack a comprehensive database that presents these cases globally. The Atlas of Informality is an attempt to open a window into such overlooked phenomena. This research presents the findings of a collection of standardized measurements of 160 informal settlements across the world. The main research goal is to provide a clear tool to find, at the neighborhood scale, each one of these places. It then focuses on urban mapping growth with remote sensing and direct mapping tools. The third stage of the research selects a standardized sample of each settlement to evaluate three main urban features: building typologies, urban density, and open space.

The first set of findings from the research presents block patterns of urban informality across geographies more consistently than the expected model. The survey of growth, on the other hand, corroborates the idea of informality as an expanding geography. However, at lower rates than quoted in the literature. Mature informal settlements seem to grow at a lower rate or to stop growing altogether. This finding raises important questions about the value of comparison of multiple cases across the world to test main assumptions of the theory. The collection of cases here presented would help researchers to compare informal urban areas across the world in a more accessible manner. This information is key to resolve important questions about the role of informal urban development in the context of accelerated global population growth.

References

HOW DOES DOWNTOWN INFILL DEVELOPMENT AFFECT STREET SECURITY?
EVIDENCE IN INNER-CITY NEIGHBORHOOD REVITALIZATION
Abstract ID: 1304
Individual Paper Submission

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Streets exert a structuring impact on the urban environment by providing the patterns of access to and connections between different locations. As such, they have a fundamental importance for urban design. The changes in different modes of transport have therefore shaped urban form in history, as the impact of the motor car on the modern urban form shows. The pendulum, however, swung back, and the paradigm shift of streets-to-roads was reversed. Urban design is part of the campaign for pedestrian friendly urban environments, taming the cars, and support for the development of public transport. Over the past decade, the world has witnessed growing threats to the safety and security of cities and towns. This is also a heavy burden for city increasing its resiliency. Streets, the public space where people commute, walk, go shopping, stay, and live, has played a key role in making our cities safe and secure for generation to come.

On the other hand, among the globe, infill development of commercial and retail functions in old downtown cities has being contested as an effective revitalization approach to promote the vitality of neighborhood with various functions, but also as a growing threaten to local safety as well as an overburden to streets according to increasing tourist and traffic flows. This paper challenges our understanding of commercial impacts and community development by applying an urban safety framework to suitable commercialization debates. It analyzes and maps the impact of commercialization on streets safety in local community of Shi-Cha-Hai Lake District, Beijing, China, through a novel integration of site investigation and data analysis. Shi-Cha-Hai Lake District, a typical historical conservation residential area in inner city of Beijing, is an exemplification of downtown revitalization in recent decades with its typical fabric of streets and public space. Nowadays this area is mixed with local residents and a large amount of boutiques, bars, retails, and restaurants. Based on understanding of local circumstance through tracing back the evolution of this area, this paper conducts an analytical framework of street security consisting of traffic safety, crime prevention, and psychological security. It also develops a series of indexes on the safety performance respectively through ground survey on physical environment, questionnaire survey of residents and tourists, and traffic data. It then compares security performance before and after commercial infill development in a couple of selected streets and blocks in this traditional residential area.

The research finds that while the infilled development adds traffic pressure to inner city and increases complexity of users in this area, the retails and shops serve as monitors and guidance on streets for local...
communities by applying lighting, re-defining public space, well-organized management, and remodeling users’ cognition of this place. Approaches of revitalization in inner cities has brought a series of changes to local communities with regard to activities along streets, daily lives in public spaces, social atmosphere in neighborhood, and transportation flows. The paper argues that these changes have transformed streets in local neighborhood from an original enclosed, reserved place toward an open, inclusive public place for both residents and tourists. A mix-use community environment that is both vital and livable is possible if planners and urban designers incorporate elaborated urban safety issues into street design guidelines and if local society can adopt new management approaches on commercial and public space.

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Key Words:
Street Safety, Neighborhood Revitalization, Infill Development, Urban Design

RUSTBELT INSURGENCY AND PRESERVATION: HOW GUERRILLA PRACTICES SAVED THE BLAST FURNACES AND THE AUTOMOBILE FACTORY
Abstract ID: 1316
Individual Paper Submission

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The postindustrial landscapes of America’s Rustbelt cities provide a broad canvas for insurgent and guerrilla practices. Copious plots of vacant land and vacant structures of cities that have lost 40 to 60 percent of their populations (since 1950) and even larger portions of their industrial job base, including Buffalo, Cleveland, Detroit, Flint, Pittsburgh, St. Louis, Syracuse and Youngstown, offer opportunities to engage with formerly productive or inhabited urban landscapes, even if these engagements are unsanctioned, subversive or illegal. With their often extensive ruins, former factory complexes and industrial works have been a particular target of guerilla actors, including explorers, naturalists, gardeners, scrappers, artists and those engaged in a variety of other creative and recreative activities. I have previously argued that opportunities for unauthorized engagement with vacant industrial places offer Rustbelt cities a rare competitive advantage over cities on the coasts and across the Sunbelt. It is in these declining cities that residents have significant and widespread opportunities to freely construct, deconstruct and alter urban landscapes in a way that generally alludes those cities tightly constrained by real property markets, including New York, Boston, Washington and San Francisco. Yet little is known about how sustained occupation, engagement and creative actions at postindustrial sites impact more official urban design practices over longer periods. Can unauthorized actors be sustained agents of insurgent design that not only inform but break the trajectory of technocratic or growth coalition dominated development practices? Can guerrilla actions alter Rustbelt redevelopment paradigms, which typically view vacant industrial sites as “brownfields” – to be cleared, remediated, and prepared for
eventual private sector development supported by public sector subsidies? And will these guerilla practices continue to impact design and administrative practices at these sites while staying true to their insurgent or countercultural spirit or will they be coopted by more dominant practices?

This paper examines two postindustrial factory sites that have long histories of guerrilla activity, the Carrie Blast Furnaces just outside of Pittsburgh, Pennsylvania and the Packard Automotive Factory in Detroit, Michigan. Arguably two of the most iconic industrial works of the 20th Century (the blast furnaces were part of Andrew Carnegie’s U.S. Steel plant that spanned both sides of the Monongahela River), they have in the decades since their closure evolved into places of exploration and creative, recreative and social activities, even as multiple plans to redevelop these sites have been proposed and partially initiated. Both sites are presently in transition towards more conventionally-structured and administered uses. The 168-acre site of the Carrie Blast Furnaces is being incrementally improved as a Rivers of Steel National Heritage Area site operated by Steel Industry Heritage Corporation in partnership with the National Park Service. At the 40-acre Packard Plant, a new owner has proposed a creative economy-oriented, mixed-use development project.

This paper is built upon observations and analyses from a series of field visits over several years, interviews with both guerilla actors and conventional urban development stakeholders, and an exhaustive review of plans, initiatives and media related to each site. Chronicling insurgent activities and examining their intersections with local development practices, this study seeks to understand the contribution that guerilla actors have played in the evolving reuse plans for these historic places, while assessing the potential for more transformative change in urban planning and design practices at largescale postindustrial sites. While the outcomes at each of these sites are quite different, preliminary findings suggest that insurgent actors have played a significant role in the physical preservation of places otherwise destined public sector funded demolition, and as such, the preservation of distinctive material culture that defined these regions in the 20th Century. Yet their impact beyond physical preservation may be limited as global capital flows back towards these vacant places and well established administrative procedures stymie or tame otherwise more radical or democratic notions of urban development at these sites.

References


Key Words:
Informal and Do-it-yourself Urbanism, Historic Preservation, Pittsburgh, Detroit, Brownfields

ENVIRONMENTAL DESIGN DECISION SUPPORT WITH MULTIDISCIPLINARY DESIGN OPTIMIZATION (MDO)
Abstract ID: 1362
Individual Paper Submission

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Environmental performance of our cities has been a greater concern as cities are experiencing more frequent and severe environmental problems. The disastrous events such as Sandy Hurricane in New York City in 2012, urban flooding and smog in Beijing in recent years and fatal heat waves in India in 2015 showed how vulnerable our current cities are and how limited knowledge and methods our current planning and design have to address these environmental challenges. In prevailing Planning Support Systems (PSS) or GeoDesign methods, at best environmental concerns are addressed through evaluation of environmental performances of design scenarios in the decision making process (Geertman, Ferreira Jr, Goodspeed, & Stillwell, 2015; Steinitz, 2012). However, such after-design evaluation has limited influences on improving environmental performance of the final design because many important design decisions have already been made before the evaluation. Can we integrate the environmental performance evaluation into the design process from the early stage, as echoes with discussions on the integration of “science” and “design” (Batty, 2013)? Although there are many explorations on this topic in architectural and engineering design (Gerber & Lin, 2014), few literature addresses this question in the urban planning and design field. The reasons include the lack of environmental performance modeling tools at the urban scale, the difficulty for planners to understand the engineering specific knowledge and use the modeling tools, and the complexity of the planning and design process that deals with multiple and competing criteria (Lynch, 1981).

This study aims to fill this research gap by developing an Environmental Design Decision Support System with the Multidisciplinary Design Optimization (MDO) method (MDO-EDDSS). MDO is a method to solve design problems with different objective functions in multidisciplinary domains, originally emerging in the aerospace engineering field. Such MDO-EDDSS has six models: objective definition, modeling selection, design parameterization, MDO evaluation, trade-off visualization, and decision making. The MDO-EDDSS is demonstrated in the design case of a hypothetical Shanghai residential neighborhood. In the objective definition model, four objectives with their potential trade-offs are defined: better building energy efficiency, better outdoor human comfort, more sunlight availability hours, and lower construction costs. In the modeling selection model, advanced urban environmental performance modeling tools are selected to assess the performances of energy, human comfort, sunlight and cost. These tools are the Urban EPC building energy modeling system, TEB/UWG microclimate engine, Solar Analyst tool, and construction cost analysis tool. In the design parameterization model, following Martin and March’s approach and based on local contexts, the neighborhood design is assumed to have 3 x 3 identical parallel slab-shape buildings with their height, width, length and distances in between as changing parameters and density as the constraint. The ranges of parameters are determined based on common characteristics of Shanghai residential neighborhoods. In the MDO evaluation model, the generic algorithms are used to generate design scenarios through optimization, and identify the Pareto front scenarios that represent best design solutions for different performance criteria. Then the trade-offs between performance criteria in those solutions is visualized in a multi-dimensional coordinate space in the visualization model. Finally, in the decision making model, stakeholders can make informed neighborhood design decisions based on the trade-offs between different environmental performances.

This MDO-EDDSS provides a new approach for planners and designers to integrate environmental performance evaluation into the design process from the early stage. It can explore the design space quantitatively and efficiently to identify best design solutions and visualize their trade-offs between performance criteria. It can then support decision making with these performance trade-offs. Although
the case study in this paper is relatively simple, with the development of more sophisticated urban environmental performance modeling tools and design parameterization methods, the MDO-EDDSS can support more complex planning and design processes with a more comprehensive set of objectives to achieve sustainable urban development.

References


Key Words:
Design Decision Support System (DDSS), environmental design, Multidisciplinary Design Optimization (MDO), urban environmental performance modeling, performance trade-offs

INFRASTRUCTURAL OPPORTUNISM: MOBILITY FOR ALL BY ALL
Abstract ID: 1377
Individual Paper Submission

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In the next decade the St. Louis region could spend over $2 billion on an expansion of its Metrolink light rail system. Though multiple alignments are under consideration, the Northside/Southside alignment of the St. Louis Metrolink expansion is purposefully intended to help stabilize and revitalize the most challenged neighborhoods in the city while better connecting their residents to jobs and services. Once thriving areas, these neighborhoods now see declining population, degraded property conditions, high poverty rates, and one of the lowest car ownership rates in the city. This lack of literal mobility results in some of the longest commute times and greatest separation from amenities and necessities in the region. That literal lack of mobility, however, is symptomatic of a much more insipid and destructive economic and social stasis. Decades of displacement combined with disinvestment in neighborhood resources have resulted in a city where the access gap is as stark as the nearly twenty year gap in life expectancy, and where trust in developers and government agencies is deservedly low. Our interdisciplinary team of urban designers, communication designers, GIS-experts, artists, and scholars are partnering with the Bi-state Development Research Institute and Citizens For Modern Transit for this year-long project focused on strategies of developing community agency in infrastructural planning and production.[1]

This project has three components. The first is to develop, refine, and test a metrics framework based on GPI+ (Genuine Progress Indicator Plus) that evaluates success by measuring holistic socioeconomic outcomes rather than simple economic output.[2] The second phase of the project enlists three interdisciplinary teams at three planned station locations to work with communities to envision and determine broader, community-desired impacts out of the transit planning process. Phase three includes the development and execution of collaborative community projects (CCPs) that spatialize the location-
specific critical questions and build agency and ownership among residents through the production of site-specific creative work.

This combined research, design, and community engagement effort will attempt to dissect the fuller range of systemic property conflicts imbedded in North City St. Louis development (former home of Pruitt Igoe and new site for the future, highly controversial National Geospatial Agency headquarters) through partnership with impacted and generationally-silenced communities.[3] With a new Mayor in office and a certain battle over transit expansion on the horizon, we seek to show how large-scale infrastructure investment can be leveraged to improve equity conditions by developing alternative metrics that favor holistic community health over profit-only investment and by creating new agency for community groups through interdisciplinary thinking and creative, site-specific and site-embedded production.

[1] This project is funded by a grant from the Mellon Foundation / Divided Cities. Though the project will be in process during the conference, the development of our version of GPI+ (currently called T3P – transit plus justice, resilience, and humanities) will be in a testing phase when feedback will be extremely useful.


[3] This is both a specific reference to generations of contested property battles in North City, St. Louis and to Campbell’s planner’s triangle (1996) where the conflict between equity and economic development is heightened. For the former see: Colin Gordon (2008), Mapping Decline (Philadelphia, Pennsylvania Press) and Patty Heyda “Erasure Urbanism” in Architecture is All Over (forthcoming, 2017), M. Trotter, E. Choi, eds.


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- Patty Heyda “Erasure Urbanism” in Architecture is All Over (forthcoming, 2017).

Key Words:
equity infrastructure, community engagement, progress indicators

HYPERLOCAL: SENSING CITIES FOR PEOPLE
Abstract ID: 1378
Individual Paper Submission

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One of the challenges in urban design and planning is developing robust methods for studying citizens’ daily interactions with the built environment. With the increased digitization of analog techniques and advancements in “smart city” technology, researchers are now able to weave technology and analytics into the physical urban fabric and measure almost anything that goes in a city. Our research sets out to test whether we can develop a radically transparent and replicable internet-of-things (IoT) toolkit that allows planners, policy-makers, and citizens to understand public space usage in the lineage of the Gehl method. Our smart urban furniture is designed to increase the quality of public space while simultaneously gathering open data for more informed decision making.

Our approach in the design and technology aspects of the project both emphasize simple, plug-and-play methods that facilitates replication. Our framework is a sensor toolkit embedded in an urban furniture element. The technology behind this research consists of a toolkit that includes wireless packet analyzers and stereoscopic cameras for location detection, GPS trackers for the benches, environmental sensors that can track temperature, light, and sound, and, optionally, LED lights that can be used to create visualizations of the data collected. Data standardization is also a key component of the transferability of the project’s technology, and we have a built a set of standards based on the Open Geographic Consortium’s Sensor Things API.

The physical furniture component of the project is composed of open-source design templates which can be fabricated with easily accessible materials such as plywood and using a CNC router. Templates are optimized to reduce material waste and easily customizable to accommodate different sizes of sensor kits. With the template, an illustrative guideline is provided for the citizens to help putting the furniture together.

Our findings demonstrate the potential for available technology to aid in developing a granular and meaning understanding of pedestrian flows and use of public space. From our findings, we can map patterns of temporality between day and night, weekdays versus the weekends, as well as develop an understanding of the correlative effects of light, temperature, proximity, to pedestrian presence and interaction.

This research follows in the tradition of the Gehl method in evaluating the quality of public space through a variety of on-the-ground survey techniques. As we move into a technological urban era, researchers can go well beyond simple observations of the behavior of city dwellers. We created a participatory tool for engaged citizens to be even more active in the planning processes. By analyzing where people sit, their movement throughout the space and their interaction with the furniture, this work can help city planners and designers to better address questions related to land use, pedestrian flows, and other spatial-temporal patterns programming and physical boundaries. Additionally, it can provide valuable qualitative datasets which can be cross compared to identify how communities from different socioeconomic backgrounds interact in public spaces.

References

ASSESSING BUILT ENVIRONMENT AND ITS IMPACT ON HEALTH: CASE STUDY OF ORLANDO MSA
Abstract ID: 1405
Poster

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Background & Research Question:
Increasing evidence suggests that the environment is a significant contributor to many public health challenges such as obesity, type II diabetes, cardiovascular and respiratory diseases, and depression (Gordon-Larsen, Nelson, Page, & Popkin, 2006; Pasala, Rao, A., & Sridhar, 2010; Malambo, Kengne, De Villiers, Lambert, Puoane, 2016). Further, disparities in health are believed to be associated with the unequal distribution of resources and opportunities in the environment such as access to health care, physical activity and exercise facilities, and healthy food (Macintyre, 2007; Wolch, Byrne, & Newell, 2014). Following the literature, this study examines how health disparity is associated with the built environment and if the environmental conditions that support physical activity and a healthy diet are associated with lower health disparity.

Study Design:
Hypotheses given in this study are to test: 1) areas with supportive built environmental conditions are less likely to be associated with hot spots, and 2) areas with more supportive built environments have a lower mortality rate by cardiovascular diseases and diabetes. A “supportive built environment” is defined by a set of variables identified from the previous literature, and quantified in a raster-base model by using Geographic Information System (GIS). Total ten supportive built environment variables are calculated, including land use mixed level, accessibility to the park, recreational facilities, and grocery stores as well as active transportation modes. These are shown to increase active living, healthy diet, and positive health outcomes, and to reduce health disparities.

Applying Orlando Metropolitan Statistical Area (MSA) as a case study, this study investigates the effects of the built environment on health outcome associated with physical inactivity. This study employs two analytical approaches. First, Getis and Ord Gi* (G-i-Star) statistic is used to detects areas where the significantly high (hot spot) or low (cold spot) prevalence of mortality rate. Second, it uses linear regression models to understand how detailed attributes of the built environment are significantly associated with mortality rate by cardiovascular disease and diabetes. Socioeconomic (SES) status variables are used as acovariate to control variables to assess the impact of SES in the relation to built environment and health outcomes.
The latest 5-year Census (2010-2015) from American Community Survey and 2010 mortality rate by diseases were acquired from Census Bureau American FactFinder and Florida Department of Health, respectively. All dataset is aggregated in census tract level.

Preliminary Findings:
In Orlando MSA, the means of mortality rate by cardiovascular diseases and diabetes at the census tract level is 1.23% (St.Dev=1.81). Overall, tracts in Lake and Osceola counties, further away from the core of Orange and Seminole counties, had higher mortality rate. The result from Global Moran’s I values (0.34) and z-scores (65.40) indicated in mortality rate associated with physical inactivity were clustered (P<.05). Overall patterns of local spatial autocorrelations in the mortality rate from cardiovascular diseases and diabetes were similar with the distribution of mortality rate. According to the Local Indicator of Spatial Association (LISA), hot spots of high mortality rate agglomerate in the northwest of Lake County while cold spots were identified in the core of Orange County, City of Orlando.

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Key Words:
Healthoutcome, Built environment, Cluster
Author Index

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Bollinger, Ian (bolliger@berkeley.edu) ..... 85
Bonnette, Matthew (mbonnn2@pdx.edu) ..... 878
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Born, Branden (bborn@uw.edu) ..... 141
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Bossuyt, Daniel (daanbossuyt91@gmail.com) ..... 845
Bostic, Raphael (bostic@usc.edu) ..... 554
Bostic, Raphael W. (bostic@price.usc.edu) ..... 60
Boswell, Michael (mboswell@calpoly.edu) ..... 417
Botero Fernandez, Veronica (vbotero@unal.edu.co) ..... 1369
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Boyer, Robert (rboyer1@unc.edu) ..... 136
Boyle, Robin (r.boyle@wayne.edu) ..... 423
Brady, Sylvia (sylvia.brady@du.edu) ..... 43
Brand, A. D. (A.D.Brand@tudelft.nl) ..... 810
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Bristow, Timothy (timothy.bristow@utoronto.ca) ..... 533
Britton, Jennifer D.W. (jennifer.britton@montana.edu) ..... 358
Broach, Joseph (jbroach@pdx.edu) ..... 464, 1122
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Buchanan, Emma (emmak8@vt.edu) ..... 1287
Buchanan, Maya K. (mayakb@princeton.edu) ..... 105
Buehler, Ralph (ralphbu@vt.edu) ..... 81, 339, 775,
Proposal ID 7
Buki, Charles (cbuki@czb.org) ..... 1181
Bumbach, Michael (mbumbach@ufl.edu) ..... 1112
Bunten, Devin (devinbunten@gmail.com) ..... 510
Burga, Fernando (hfburga@umn.edu) ..... 1424
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Cahen, Claire (ccahen@gradcenter.cuny.edu) ..... 844
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Calhoun, Molly (calho079@umn.edu) ..... 508
Calvert, Brad (bcalvert@drcog.org) ..... 826
Campbell, Scott (sdcamp@umich.edu) ..... 355, 879,
Proposal ID 57
Campo, Daniel (daniel.campo@morgan.edu) ..... 1316
Campo, Matthew (matt.campo@gmail.com) ..... 105
Cancel Martinez, Yaidi (cancelmartin@wisc.edu) ..... 876
Cao, Xinyu (Jason) (Cao@umn.edu) ..... 84
Card, Kenton (kentoncard@uc.edu) ..... 1015
Caroliini, Gabriella (caroliini@mit.edu) ..... 459, Proposal ID45
Carpenter, Nichelle (Nichelle.Carpenter@moore.sc.edu) ..... 1014
Cassola, Adele (adele.cassola@columbia.edu) ..... 256
Cellamare, Carlo (carlo.cellamare@UNIROMA1.IT) ..... 1368
Chahal, Kusminder (ab7180@coventry.ac.uk) ..... 251
Chakraborty, Arnab (arnab@illinois.edu) ..... 1360
Chalana, Manish (chalana@uw.edu) ..... 1341, 1382
Chamberlain, Jim (jchamb@ou.edu) ..... 447
Chandrasekhar, Divya (D.Chandrasekhar@utah.edu) ..... 200
Chang, Heejun (changhai@pdx.edu) ..... 878
Chang, Stephanie (stephanie.chang@ubc.ca) ..... 734
Chanse, Victoria (vchance@umd.edu) ..... 1264
Chapin, Tim (tchapin@fsu.edu) ..... 315, 485
Chapple, Karen (chapple@berkeley.edu) ..... 520
Charles, Suzanne (scharles@cornell.edu) ..... 473
Charles, Suzanne (slic329@cornell.edu) ..... 342
Nelson, Arthur (acnelson@email.arizona.edu) ..... 416, Proposal ID 50
Nelson, Marla (mmnelson@uno.edu) ..... 693
Nelson, Trisalyn (trisalyn.nelson@asu.edu) ..... 194
Nemeth, Jeremy (jeremy.nemeth@ucdenver.edu) ..... 64, 605
Németh, Jeremy (jeremy.nemeth@ucdenver.edu) ..... 64, 605
Neog, Dristi (neog.dristi@gmail.com) ..... 1213
Nesse, Katherine (knesses@spu.edu) ..... 5
Nevarez Martinez, Deyanira (nevarezd@uci.edu) ..... 523
Newman, Galen (gnewman@arch.tamu.edu) ..... 113, 359, 900, 1059, 1180
Ngito, Kepha (kefja@gmail.com) ..... 366
Nguyen, Mai (mai@unc.edu) ..... 139, 481
Nguyen, Mai (nguyen@unc.edu) ..... 838
Nguyen-Hoang, Phuong (phuong-nguyen@uiowa.edu) ..... 571
Niemeier, Deb (dniemeier@ucdavis.edu) ..... 46
Nirattiwongsakorn, Phannisa (nirattiwong@wisc.edu) ..... 1356
Nixon, Hilary (hilary.nixon@sjsu.edu) ..... 192, 307, 399, 964
Noh, Soo woong (nswscott@gmail.com) ..... 1411
Noh, Soo woong (nswscott@ufl.edu) ..... 14, 1435
Noh, Youngre (youngre.noh@gmail.com) ..... 359
Noland, Robert (mrnoland@rutgers.edu) ..... 93, 557
Norberg, Robert (norrobert@ufl.edu) ..... 818
Norton, Richard (rnorton@umich.edu) ..... 822
Novara, Marisa (mnovara@metroplanning.org) ..... 496
Nurmala, Sarah (snurmela@cityofwestminster.us) ..... 826
Oberg, Angela (angela.oberg@rutgers.edu) ..... 723
Offenhuber, Dietmar (d.offenhuber@northeastern.edu) ..... 145
Ogletree, Scott (sogletr@clemson.edu) ..... 600
Olwert, Craig (craig.olwert@csun.edu) ..... 705
Onda, Kyle (konda@unc.edu) ..... 451
Oren, Michelle (michelle.oren@gmail.com) ..... 45
Orom, Heather (horom@buffalo.edu) ..... 351
Orrego-Oñate, Jaime (jaime9@pdx.edu) ..... 1214
Ortiz, Alisa (alisa.ortiz@upr.edu) ..... 470
Ory, Marcia (mory@sp.h tamhsc.edu) ..... 593, 1358, 1429
Ory, Marcia G. (M ORy@sp.h tamhsc.edu) ..... 593, 1358, 1429
Osman, Taner (tanerosman@ucla.edu) ..... 1355
Ospina Zapata, Juan Pablo (juanp.ospina@gmail.com) ..... 1369
Owusu, Francis (fowusu@iastate.edu) ..... 1002
Ozawa, Connie (ozawac@pdx.edu) ..... 1168
Ozbilen, Basar (basarozbilen@gmail.com) ..... 22
Page, G. William (gpage@buffalo.edu) ..... 146
Painter, Gary (gpainter@usc.edu) ..... 353
Pan, Haixiao (hpark@tamu.edu) ..... 774
Pan, Qisheng (pan_qs@tsu.edu) ..... 275
Park, Han (hpark@tamu.edu) ..... 1109
Park, Hogeun (parkhoge@msu.edu) ..... 683
Park, Jaehyeon (jaehpark@ucla.edu) ..... 1222
Park, Jinhee (ginnypark0715@gmail.com) ..... 738, 1140
Park, JiYoung (jp292@buffalo.edu) ..... 24, 835, 986
Park, JungHo (junghapa@usc.edu) ..... 266, 700
Park, Keunhyun (keunhyun.park@utah.edu) ..... 114
Park, Yujin (park.2329@osu.edu) ..... 980, 993
Park, Yun mi (park.2329@osu.edu) ..... 964
Parker, Robert (rgp@uoregon.edu) ..... 387, 654
Passerini, Chiara (chiara@urbane-dev.com) ..... 1353
Paterson, Robert (rgfp@mail.utexas.edu) ..... 612
Patterson, Kelly (klp27@buffalo.edu) ..... 147
Paulsen, Kurt (kpaulsen@wisc.edu) ..... 1274
Peacock, Walter (peacock@tamu.edu) ..... 900, 917
Pearce, Annie (apearce@vt.edu) ..... 1290
Pena, Sergio (spena@colef.mx) ..... 612
Pena, Sergio (spena2@utep.edu) ..... 1350
Pendall, Rolf (rpendall@urban.org) ..... 494, Proposal ID 8
Peng, Binbin (bpeng91@umd.edu) ..... 1264
Peng, Ke (lvpengke@gmail.com) ..... 870
Peng, Qiong (xqpeng@umd.edu) ..... 1054
Peng, Zhong-Ren (zpeng@ufl.edu) ..... 50, 471, 569
Peralvo, Manuel (manuel.peralvo@condesan.org) ..... 1410
Perera, M.C. (mperera@bsu.edu) ..... 1341
Perera, M.C. (mperera@bsu.edu) ..... 1143
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Piatkowski, Daniel (d.piatkowski@unl.edu) ..... 404, 906
Pimentel Walker, Ana Paula (appiment@umich.edu) ..... 524, 1015
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Pitt, Damian (dpitt@vcu.edu) ..... 1005
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Poirier, Joseph (jpiorier20@berkeley.edu) ..... 292
Pollans, Lily (lilyp@mit.edu) ..... 942
Pollard, Jane (jane.pollard@ncl.ac.uk) ..... 1251
Poplin, Alenka (apoplin@mail.iastate.edu) ..... 946, Proposal ID 61
Popper, Frank (fpopper@rutgers.edu) ..... 242
Potthuckushi, Kami (k.pothuckushi@wayne.edu) ..... 338
Potter, James (czupotter@korea.ac.kr) ..... 738, 1140, Proposal ID 48
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Powers, John (john_powers@sutd.edu.sg) ..... 1320
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Priyani, Rina (priyani@berkeley.edu) ..... 1413
Prochaska, Natalie (prochask@illinois.edu) ..... 1314
Proffitt, David (david.proffitt@uta.edu) ..... 39, 1222
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Yabes, Ruth (ruth.yabes@asu.edu) ..... 1402
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Zhang, Hao (hzhang34@buffalo.edu) ..... 147
Zhang, Hongmou (hongmou@mit.edu) ..... 172
Zhang, Ming (zhangm@tamu.edu) ..... 1048
Zhang, Peigang (271221599@qq.com) ..... 742
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Zimmerman, Rae (rae.zimmerman@nyu.edu) ..... 916
Zitcer, Andrew (awzitcer@gmail.com) ..... 1045, 1147, Proposal ID 64
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Zhibin, Da (zhibind@tamu.edu) ..... 981
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Zhang, Wenwen (wzhang300@gatech.edu) ..... 418
Zhang, Xin (zhang.1977@buckeyemail.osu.edu) ..... 1081
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Zhao, Jane (janezhao@unc.edu) ..... 457
Zhao, Jinhua (jinhua@mit.edu) ..... 172, 173, 1086, 1216,
Keyword Index
The number references the Abstract ID.

1940 Census ..... 163
2015 Seoul Survey ..... 732
311 data ..... 1406
3D Spatial Analysis ..... 607
abandonment ..... 763, 1059
Abu Dhabi ..... 558
access ..... 545
Access equity ..... 595
access to opportunities ..... 596
accessibility ..... 918
Accessibility ..... 171, 175, 444, 583, 894, 1117, 1162, 1174, 1185, 1254, 1369, 1372, 1385
Accessibility Measures ..... 557
Accessory Dwelling Units ..... 1432
action research ..... 1004, 1050
Active commuting to school ..... 1024
Active learning ..... 136
Active Living ..... 14, 1241
Active Living Places ..... 1444
Active transportation ..... 5, 194, 339, 1075, 1214
active travel ..... 775, 784
activism ..... 763
Activist ..... 702
Activity Pattern ..... 1207
activity space behavior ..... 1121
Ad Hoc Planning ..... 286
Adaptation ..... 183, 189, 252, 936
Adaptation planning ..... 569
Adaptive Capacity ..... 788
adaptive governance ..... 105
Adaptive management ..... 987
adaptive re-use ..... 344
Adolescence ..... 354
Advocacy Planning ..... 984
Aesthetic ecology ..... 358
aesthetics ..... 1152
Affect ..... 842
Affordability ..... 353, 803
affordable homeownership ..... 844
affordable housing ..... 10, 165, 239, 240, 373, 376, 380, 495, 496, 554, 575, 685, 990, 1150, 1300, 1318
affordable housing development ..... 401
Affordable Housing Preservation ..... 827
Africa ..... 366, 447, 454, 1427
African American ..... 1299
african american women ..... 629
African cities ..... 1002
afro-optimism ..... 943
age in place ..... 1293
age-friendly communities ..... 712, 755
Ageing ..... 171
Ageing Community ..... 572
agency ..... 303
Agent Based Model ..... 418, 1387
Agent-based model ..... 172
Agent-Based Modeling ..... 1076
aging ..... 576, 1293
Aging in place ..... 881, 1372
Aging-friendly ..... 881
aging-in-place ..... 712
Agonism ..... 317
agriculture ..... 538, 540
Agrifood Distribution ..... 646
air pollution ..... 1, 632, 711, 784, 1087
air quality ..... 427, 471, 1161, 1266
Air rights ..... 244
Airbnb ..... 511, 798
Airport ..... 767
airport planning ..... 836, 852
airport regions ..... 852
Alabama ..... 372
Alternative Credit ..... 95
alternative fuel vehicles ..... 1294
amenity migration ..... 1313
Amsterdam ..... 1254
Analytical methods ..... 405
analytics ..... 58
anchor institution ..... 1149
Anchor Institutions ..... 276
anniversary ..... 485
Anthropocene ..... 199
anticipated travel decisions ..... 492
apartment sales ..... 284
API ..... 1411
apocalypse ..... 936
Apparent Temperature ..... 98
app-based ..... 1117
applied classrooms ..... 139
Architecture ..... 1031
Arizona ..... 30
Artist Illegal Activites ..... 463
artists ..... 1045
arts and culture ..... 52
arts economic development ..... 1044, 1045
Arts-led development ..... 1271
Asia ..... 318, 319, 969, 1143, 1144
Asian Americans ..... 106
Asian Dragons/Tigers ..... 1027
Asian immigrant women ..... 340
Assemblage ..... 1423
Attitudes ..... 1292
Attitudes and preferences ..... 1043
Attractiveness ..... 1024
Austerity ..... 206, 762, 861, 1368, 1390
Authenticity ..... 226, 228, 230
Automated vehicles ..... 416, 855, 992, 1006
Automation ..... 309
Automobile access ..... 354
automobile ownership ..... 596
automobile regulation ..... 173
Automobiles ..... 1251
GIS Safety Tool ..... 1404
GIS-based accessibility analysis ..... 1198
global analysis ..... 1123
Global Economy ..... 1027
global North-South ..... 1341
Global South ..... 460, 1389
good governance ..... 460
Google Earth Engine ..... 962
Google Street View ..... 5
google streetview ..... 1062
Governance ..... 4, 35, 164, 252, 337, 436, 461, 498, 500, 845, 887, 969, 1231, 1357, 1374, 1389
Government actions ..... 860
Government Performance ..... 1303
government policy ..... 393
GPS ..... 291
GPS Trajectory ..... 572, 710
Graph Theory ..... 24, 835
grassroots ..... 956
Grassroots activism ..... 406
Gravity Model ..... 153
gray infrastructure ..... 916
Great Depression ..... 163
Great recession ..... 847
Green Building ..... 640
green economy ..... 1193
Green gentrification ..... 64, 1098
Green space ..... 426, 1392, 1396
Green stormwater infrastructure ..... 987
Greenhouse gas emissions ..... 554
Greenhouse gas emissions ..... 687
groundwater vulnerability ..... 391
Growth and Decline ..... 1202
growth coalitions ..... 1446
Growth Machine ..... 67, 1096
Growth Management ..... 241, 523, 1152, 1291
growth management ..... 485
GTFS ..... 773, 1034, 1125
Gulf Urbanism ..... 180
GWR ..... 705
habitus ..... 281
Happiness ..... 268, 490, 695, 732
Hard-to-Reach Population ..... 787
Hazard Exposure ..... 1235
hazard mitigation ..... 185
hazards ..... 519, 1346
Health ..... 1, 427, 576, 785, 1161, 1240, 1241, 1279
Health care ..... 1430
Health conditions ..... 986
Health Data ..... 1444
health disparities ..... 876, 1310
health equity ..... 1346
healthcare cost ..... 1394
Health outcome ..... 1405
healthy community ..... 150
Healthy housing ..... 1346
heat ..... 272
Heat Vulnerability Indices ..... 1197
Heat waves ..... 880
Hedonic ..... 711, 957, 1035, 1190
hedonic model ..... 457, 972
hedonic price model ..... 293
hedonic pricing model ..... 1138
Hedonic Pricing Models ..... 1300
Hedonic Study ..... 511
Hermeneutics ..... 358
heterotopia ..... 1002
Hierarchical cross-classified linear model ..... 279
High growth firms ..... 777
Hippie-towns ..... 76
Hiring Practices ..... 1014
Hispanic ..... 179
Hispanics ..... 731
historic district zoning ..... 334
historic districts ..... 298, 1248
historic preservation ..... 10, 52, 151, 295, 297, 298, 334, 1044, 1166, 1248, 1316, 1354
historic preservation planning ..... 108
Hi-tech Sector ..... 1355
home affordability ..... 162
home price ..... 162
homeownership ..... 106, 481, 991, 1325
Homeownership Rate ..... 700
Homesharing ..... 798
HOPE VI ..... 873
horizontal curve ..... 549
horizontal curves ..... 1306
Hot spot analysis ..... 1059
Hotspot analysis ..... 1270
Hotspots ..... 713
Household ..... 200
household behavior ..... 560
Household Formation ..... 700
household recovery ..... 981
household solid waste management ..... 1092
housing ..... 34, 90, 171, 189, 335, 353, 374, 382, 383, 393, 481, 497, 518, 522, 523, 649, 712, 730, 753, 773, 795, 802, 815, 904, 1047, 1049, 1073, 1082, 1088, 1116, 1119, 1145, 1181, 1227, 1287, 1296, 1353, 1360, 1390, 1398, 1425
Housing – Code Enforcement ..... 1314
housing abandonment ..... 144
housing affordability ..... 256, 381, 570, 850, 871, 904, 907, 1274, 1311
housing affordability ..... 387
housing affordability ..... 1260
housing and neighborhood environment ..... 876
Housing Choice Voucher ..... 381, 1109
housing codes ..... 1318
housing cost burden ..... 381
Housing Demand ..... 700
Housing discrimination ..... 876
Housing Filtering ..... 266
housing finance ..... 240, 481, 575
housing finance policy ..... 83
housing inequalities; ..... 720
<table>
<thead>
<tr>
<th>Term</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed land use</td>
<td>1054</td>
</tr>
<tr>
<td>Mixed logit</td>
<td>192</td>
</tr>
<tr>
<td>mixed logit model</td>
<td>173</td>
</tr>
<tr>
<td>mixed methods</td>
<td>8</td>
</tr>
<tr>
<td>Mixed-income</td>
<td>873, 1227</td>
</tr>
<tr>
<td>Mixed-Income Neighborhoods</td>
<td>1103</td>
</tr>
<tr>
<td>mixed-methods</td>
<td>538</td>
</tr>
<tr>
<td>Mixed-Ownership</td>
<td>515</td>
</tr>
<tr>
<td>mixed-use development</td>
<td>1138</td>
</tr>
<tr>
<td>Mobile Home</td>
<td>247</td>
</tr>
<tr>
<td>Mobile Phone Signaling Data</td>
<td>109</td>
</tr>
<tr>
<td>mobile sensors</td>
<td>427</td>
</tr>
<tr>
<td>Mobile work</td>
<td>410</td>
</tr>
<tr>
<td>mobility biography</td>
<td>157</td>
</tr>
<tr>
<td>mobility conditions</td>
<td>720</td>
</tr>
<tr>
<td>Mobility-on-demand</td>
<td>172</td>
</tr>
<tr>
<td>Modal Choice</td>
<td>1381</td>
</tr>
<tr>
<td>Mode choice</td>
<td>415, 1010, 1074</td>
</tr>
<tr>
<td>Mode Choice Behavior</td>
<td>1238</td>
</tr>
<tr>
<td>Modeling</td>
<td>806, 853</td>
</tr>
<tr>
<td>Modelling</td>
<td>435</td>
</tr>
<tr>
<td>modern architecture</td>
<td>108</td>
</tr>
<tr>
<td>Mongolia</td>
<td>335, 683</td>
</tr>
<tr>
<td>monitoring</td>
<td>160</td>
</tr>
<tr>
<td>Montgomery, Alabama</td>
<td>372</td>
</tr>
<tr>
<td>Monuments</td>
<td>565</td>
</tr>
<tr>
<td>morbidity</td>
<td>1394</td>
</tr>
<tr>
<td>Morocco</td>
<td>393</td>
</tr>
<tr>
<td>morphology</td>
<td>57</td>
</tr>
<tr>
<td>mortality</td>
<td>1394</td>
</tr>
<tr>
<td>Mortgage</td>
<td>640</td>
</tr>
<tr>
<td>Mortgage Lending</td>
<td>60, 187</td>
</tr>
<tr>
<td>Mottainai</td>
<td>1182</td>
</tr>
<tr>
<td>Mountain rural community</td>
<td>493</td>
</tr>
<tr>
<td>mourning</td>
<td>250</td>
</tr>
<tr>
<td>moving to opportunity</td>
<td>1284</td>
</tr>
<tr>
<td>Moving to Work</td>
<td>1124</td>
</tr>
<tr>
<td>multiculturalism</td>
<td>184, 442</td>
</tr>
<tr>
<td>Multidisciplinary</td>
<td>1407</td>
</tr>
<tr>
<td>Multidisciplinary Design Optimization (MDO)</td>
<td>1362</td>
</tr>
<tr>
<td>Multifamily community</td>
<td>881</td>
</tr>
<tr>
<td>multi-group SEM</td>
<td>291</td>
</tr>
<tr>
<td>Multilevel governance</td>
<td>206</td>
</tr>
<tr>
<td>Multi-level governance</td>
<td>927</td>
</tr>
<tr>
<td>multilevel modeling</td>
<td>49</td>
</tr>
<tr>
<td>multi-level modeling</td>
<td>1295</td>
</tr>
<tr>
<td>multi-level system</td>
<td>1088</td>
</tr>
<tr>
<td>multimodal integration</td>
<td>81</td>
</tr>
<tr>
<td>multi-modal street intersection design</td>
<td>588</td>
</tr>
<tr>
<td>multimodal travel</td>
<td>718</td>
</tr>
<tr>
<td>multimodality</td>
<td>718</td>
</tr>
<tr>
<td>Multinomial Logistic Regression Model</td>
<td>1238</td>
</tr>
<tr>
<td>multinomial logit</td>
<td>1074</td>
</tr>
<tr>
<td>multitasking</td>
<td>103, 339</td>
</tr>
<tr>
<td>municipal encounters</td>
<td>995</td>
</tr>
<tr>
<td>municipal fiscal condition</td>
<td>704</td>
</tr>
<tr>
<td>municipal planning</td>
<td>44</td>
</tr>
<tr>
<td>Myanmar</td>
<td>915</td>
</tr>
<tr>
<td>narrative</td>
<td>940</td>
</tr>
<tr>
<td>Nation Building</td>
<td>565</td>
</tr>
<tr>
<td>National Household Travel Travel Survey</td>
<td>731</td>
</tr>
<tr>
<td>National Park</td>
<td>1035</td>
</tr>
<tr>
<td>Natural disasters</td>
<td>221</td>
</tr>
<tr>
<td>natural hazards</td>
<td>734, 917</td>
</tr>
<tr>
<td>Natural Language Processing</td>
<td>1411</td>
</tr>
<tr>
<td>natural resources</td>
<td>35</td>
</tr>
<tr>
<td>Naturally occurring retirement community</td>
<td>881</td>
</tr>
<tr>
<td>NDVI</td>
<td>1396</td>
</tr>
<tr>
<td>negotiated imposition</td>
<td>551</td>
</tr>
<tr>
<td>negotiations</td>
<td>869</td>
</tr>
<tr>
<td>Neighborhood</td>
<td>140, 187, 592, 1158, 1398</td>
</tr>
<tr>
<td>neighborhood associations</td>
<td>1171</td>
</tr>
<tr>
<td>neighborhood audit</td>
<td>5</td>
</tr>
<tr>
<td>Neighborhood business districts</td>
<td>130</td>
</tr>
<tr>
<td>Neighborhood Change</td>
<td>60, 113, 226, 251, 286, 353, 463, 507, 508, 509, 510, 605, 694, 698, 988, 1103, 1194, 1239, 1248, 1330</td>
</tr>
<tr>
<td>Neighborhood Characteristics</td>
<td>739, 1325</td>
</tr>
<tr>
<td>Neighborhood Decline</td>
<td>900</td>
</tr>
<tr>
<td>neighborhood density</td>
<td>1293</td>
</tr>
<tr>
<td>Neighborhood Design</td>
<td>1065</td>
</tr>
<tr>
<td>Neighborhood Discordance</td>
<td>1286</td>
</tr>
<tr>
<td>Neighborhood distress</td>
<td>1059</td>
</tr>
<tr>
<td>neighborhood effect</td>
<td>511, 1308</td>
</tr>
<tr>
<td>Neighborhood Effects</td>
<td>795, 1087</td>
</tr>
<tr>
<td>Neighborhood Environment</td>
<td>261, 593, 610, 1012</td>
</tr>
<tr>
<td>Neighborhood greenness</td>
<td>993</td>
</tr>
<tr>
<td>neighborhood noise</td>
<td>1406</td>
</tr>
<tr>
<td>Neighborhood Opportunity</td>
<td>1109</td>
</tr>
<tr>
<td>neighborhood outcomes</td>
<td>169</td>
</tr>
<tr>
<td>neighborhood perception</td>
<td>1240</td>
</tr>
<tr>
<td>Neighborhood Planning</td>
<td>30, 218, 268, 421, 697, 712</td>
</tr>
<tr>
<td>neighborhood preferences</td>
<td>379</td>
</tr>
<tr>
<td>neighborhood retail strips</td>
<td>127</td>
</tr>
<tr>
<td>neighborhood revitalization</td>
<td>481, 566, 873, 1194, 1304</td>
</tr>
<tr>
<td>Neighborhood Road Network</td>
<td>797</td>
</tr>
<tr>
<td>neighborhood segregation</td>
<td>106</td>
</tr>
<tr>
<td>neighborhood walkability</td>
<td>1395</td>
</tr>
<tr>
<td>Neighborhood-based retail</td>
<td>130</td>
</tr>
<tr>
<td>neighborhood-based services</td>
<td>126</td>
</tr>
<tr>
<td>Neighborhoods</td>
<td>382, 494, 518, 753, 815, 935, 1279</td>
</tr>
<tr>
<td>neighbour-hood</td>
<td>1252</td>
</tr>
<tr>
<td>neo-classical land rent model</td>
<td>1138</td>
</tr>
<tr>
<td>Neoliberal planning</td>
<td>1002</td>
</tr>
<tr>
<td>neo-liberal urban governance</td>
<td>622</td>
</tr>
<tr>
<td>neoliberal urbanism</td>
<td>1433</td>
</tr>
<tr>
<td>neoliberalism</td>
<td>116, 955</td>
</tr>
<tr>
<td>NEPA</td>
<td>767</td>
</tr>
<tr>
<td>net migration</td>
<td>1056</td>
</tr>
<tr>
<td>Network Analysis</td>
<td>74</td>
</tr>
<tr>
<td>Network of plans</td>
<td>810</td>
</tr>
<tr>
<td>Network user-equilibrium</td>
<td>24</td>
</tr>
<tr>
<td>Networks</td>
<td>57, 183, 788, 1271</td>
</tr>
<tr>
<td>New Bedford (MA)</td>
<td>2</td>
</tr>
<tr>
<td>new businesses</td>
<td>778</td>
</tr>
<tr>
<td>New Construction</td>
<td>266, 1150</td>
</tr>
<tr>
<td>New economy</td>
<td>953</td>
</tr>
<tr>
<td>new employment center</td>
<td>774</td>
</tr>
</tbody>
</table>
Physical Condition ..... 795
Pittsburgh ..... 1316
place attachment ..... 9, 1236
Placekeeping ..... 842
Placemaking ..... 1268
Place-making ..... 273
Place-Work-Folk ..... 884
plan evaluation ..... 185, 269, 468, 883, 990, 1180
Plan integration ..... 810
plan quality ..... 877
plan use ..... 185
planetary gentrification ..... 1140
planning ..... 436, 1374
Planning and Zoning ..... 273
planning decision support systems ..... 345
Planning education ..... 149, 346, 609, 614, 644
Planning Evaluation ..... 582, 1253
Planning for Common goods ..... 445
planning for justice ..... 1176
Planning History ..... 124, 298, 355, 372, 578, 940, 1210, 1299
planning in Brazil ..... 1263
Planning in Latin America ..... 1079
Planning in the Black Community ..... 1101
Planning journals ..... 104
Planning Judgment ..... 1259
planning legitimacy ..... 242
Planning mentoring ..... 609
Planning Methods ..... 409
planning organizations ..... 938
Planning pedagogy ..... 338
planning policy ..... 417, 1358
planning practice ..... 67, 938, 955, 960
planning process ..... 477, 952, 1215, 1259, 1282, 1402
PLANNING PROCESSES ..... 612
planning regulations ..... 1263
Planning Relevance ..... 879
planning reports ..... 2
Planning Research ..... 1156
Planning Research Framework ..... 581
planning roles ..... 540
Planning Support Systems ..... 271, 378, 1076
planning theory ..... 42, 123, 257, 306, 355, 581, 727, 1009, 1076, 1088, 1147, 1380
Planning tools ..... 1169
Planning voice ..... 697
Planning/Design Policy Analysis ..... 1338
planning-in-time ..... 257
planning's outside ..... 942
playgrounds ..... 1199
pluralism ..... 969
Police ..... 276
Policies ..... 1335
Policing ..... 152, 153
Policy ..... 406, 488
Policy adoption ..... 1216
Policy implementation ..... 459
policy implication ..... 75
Policy learning ..... 459
policy mobilities ..... 551, 1124, 1412
Policy Outcomes ..... 188
policy transfer ..... 828, 1000, 1124
policymaking ..... 443
Policy-making ..... 1310
political ecology ..... 461, 1037, 1038
Political economy ..... 243, 996
Political Trust ..... 1303
Politics ..... 753, 1147
politics of planning ..... 1263
pollution ..... 1161, 1266
polycentric governance ..... 723
polycentric urban spatial structure ..... 829
population displacement ..... 50
Population Health ..... 716
population projections ..... 901
Portland, Oregon ..... 997
positive utility of travel ..... 103, 339
postcolonialism ..... 1143
post-Independence city ..... 1413
Post-Industrial ..... 67, 999
Post-political ..... 861
post-revolution Tunisia ..... 995
Post-Socialist Urbanism ..... 365
post-war planning ..... 602
Potable water reuse ..... 1184
poverty ..... 165, 224, 518
Poverty reduction ..... 1389
PPGIS ..... 8
Practical Judgment ..... 1282
practice theory ..... 955
Pragmatic planning approach ..... 445
Pragmatist ..... 350
Praxis ..... 584
predictive modeling ..... 549
pre-disaster planning ..... 468
Preferences ..... 16
Preservation ..... 1150
preservation policy ..... 629
Primary Healthcare Provider ..... 1112
private conservation motivation ..... 600
private sector ..... 189, 955
private-public partnerships ..... 393
Private-sector-led densification ..... 1118
Privatization ..... 309, 461, 515, 1390
Probability of viewing ..... 322
Problematic behavior ..... 986
Problematic Performance Value ..... 986
Process Design ..... 483, 913
process efficiency ..... 119
Professional mentoring ..... 609
professions ..... 123
Program Evaluation ..... 346
Program Theory ..... 346
Programming ..... 1424
programming tool ..... 1306
Programs ..... 1335
regional change ..... 904
regional coordination ..... 81
regional economic development ..... 280
regional economy ..... 659
regional evaluation ..... 696
regional governance ..... 520
Regional growth ..... 847
regional growth plan ..... 1260
regional integration ..... 1142
regional planning ..... 105, 112, 252, 254, 255, 280, 477, 495, 520, 771, 821, 826, 887, 985, 1011, 1144, 1263, 1349, 1410
Regional Planning History ..... 997
Regional planning in the United States ..... 615
Regional planning organizations ..... 615
regionalism ..... 912
Regression analysis ..... 957
Regression Discontinuity ..... 327
Regulations ..... 171
regulatory compliance ..... 1256
Regulatory Relief ..... 286
reinvestment ..... 342
relationality ..... 1341
Religious Minority ..... 787
Relocation ..... 564
remediation ..... 488
remote sensing ..... 796, 1005
remote work ..... 776
renewable energy ..... 437, 1051
Rent ..... 382
Rent Burden ..... 353
Rental Assistance Programs ..... 871
Rental Housing ..... 380, 1274, 1300
rental housing policy ..... 381
Rental markets ..... 653
Rental vacancy ..... 380
Research impact ..... 104
research universities ..... 1194
resettlement ..... 1222
resident engagement ..... 761
Residential Area ..... 109
Residential Choice ..... 610
Residential Development ..... 729
Residential Distribution ..... 688
Residential energy ..... 215
Residential irrigation ..... 203
Residential location choice ..... 1043
residential location choice ..... 617, 818
residential mobility ..... 1239
residential mobility ..... 507, 510, 888, 1284, 1308, 1371
Residential Preference ..... 610
Residential Real Estate ..... 1314
residential redevelopment ..... 342
residential relocation ..... 492
residential satisfaction ..... 234
residential sector ..... 739
Residential Segregation ..... 561, 1297
Residential sorting ..... 719
resilience ..... 183, 249, 436, 659, 788, 888, 912, 981, 1077, 1168, 1345, 1398, 1407
Resiliency ..... 221
resistance ..... 64, 166, 605, 856
resource allocation ..... 1295
responsive design ..... 939
Restorative environment ..... 589
Restorative environments ..... 1001
Retail ..... 128, 129, 1203, 1254
Retail Clusters ..... 1202
Retail Location ..... 705
Retail Market ..... 327
Retail Streets ..... 533
Retailing ..... 126
retirees ..... 1313
reurbanization ..... 1056
Revealed preference ..... 980
revitalization ..... 52, 151, 291, 376, 694, 765, 1271
Richmond, VA ..... 1045
ride-hailing ..... 1117
Ridership ..... 194, 899
right to the city ..... 228, 502, 660, 1151, 1233, 1247, 1308
Rio de Janeiro ..... 727
rise and fall of shopping districts ..... 291
rising sea level ..... 50
Risk ..... 247, 906
risk assessment ..... 1180
risk communication ..... 814
Risk Management ..... 735
Risk of falling ..... 1012
Risk perception ..... 539
Road Characteristic ..... 220
road design ..... 156
road diet ..... 399
Road diets ..... 93
road pricing ..... 1443
road safety performance ..... 1306
Roadmap for Change ..... 1155
roads ..... 1427
roadway conflict ..... 158
Roadway safety ..... 549
robots ..... 419
Role-play simulation exercises ..... 944
role-play simulations ..... 717
roles of planners ..... 123
Roof gardens ..... 1001
Rotterdam, the Netherlands ..... 810
route selection ..... 168
RTMLI ..... 419
Rural ..... 629, 1379, 1423
rural areas ..... 1161
rural attraction ..... 1313
rural development ..... 670
rural gentrification ..... 1313
Rural Migrant Workers ..... 1297
Rural Planning ..... 69, 1037, 1268
Rural Planning Process ..... 1139
Rural-to-Urban Migrant ..... 1158
Rural-Urban Migrants ..... 1303
safe space ..... 740
Sustainable and just city ..... 1118
Sustainable Communities Initiative (SCI) ..... 1011
sustainable development ..... 355, 378, 591, 822, 989
Sustainable Development Goals ..... 681
sustainable forms of urbanization ..... 823
sustainable land use planning ..... 452
Sustainable Regions ..... 255
Sustainable Rural Development ..... 62
Sustainable Transportation ..... 205, 558, 1238
Sustainable Urban Water Use ..... 1275
Sustainable urbanism ..... 30, 385
sustainable users ..... 1092
Symbiosis theory ..... 493
Synthesis ..... 799
systemic analysis ..... 549
Tactical Coalitions ..... 317
tactical urbanism ..... 602
TAD ..... 1080
Tax Incentives ..... 1387
tax increment financing ..... 571, 1436
Taxes ..... 192
taxi and ride-sourcing ..... 583
tax-incentives ..... 517
TDR ..... 242
teaching ..... 146, 429
Team-based learning ..... 136
Technics ..... 195
technology ..... 140, 938, 1402, 1434
Technology companies ..... 1265
technology, infrastructure and development ..... 1438
Tel Aviv ..... 489
Telecommuting ..... 310
telework ..... 776
temporalities ..... 257
Tenant Organizing ..... 827
tenants' rights ..... 1318
tenure ..... 1226
Tenure Choic ..... 991
tenure formalization ..... 384
Tenure security ..... 524
Thailand ..... 915
the disabled ..... 1353
The elderly ..... 1372
the Gini Index ..... 1290
The right to live in the city ..... 1118
theory ..... 1090
Theory of Planned Behavior ..... 560
Third Spaces ..... 1143
time of day ..... 400
Time Sheds ..... 773
TOD ..... 424, 1080
TOD typology ..... 718
toilet ..... 446
Tokyo ..... 868, 1182
Toll Road Accessibility ..... 1288
Toronto ..... 127, 237, 533
Tourism Development ..... 565
town-gown ..... 1149
tracking ..... 160
Traditional wood-burning cookstoves ..... 919
traffic ..... 399
Traffic Accident ..... 797
traffic calming ..... 246, 399
Traffic Congestion ..... 679
Traffic Congestioni ..... 205
traffic count ..... 775
traffic crash ..... 1224
Traffic Enforcement ..... 1146
Traffic Safety ..... 118, 1404
training ..... 362
transaction cost economic theory ..... 1138
transboundary ..... 1410
transdisciplinary research ..... 1272
Transfer of development rights ..... 241, 244
Transfer of Planning Model ..... 1027
Transferable Development Rights (TDR) ..... 243
Transformation ..... 161
Transformative ..... 1143
transgender ..... 740
transit ..... 33, 192, 444, 855, 899, 918, 965, 1034, 1125,
1190, 1237
transit access ..... 570
Transit Accessibility ..... 594, 773, 1311, 1342
Transit affordability ..... 1055
transit crime ..... 413
transit equity ..... 168, 1290
transit fare subsidy ..... 1228
Transit oriented development ..... 326, 826
Transit Pass ..... 639
Transit Planning ..... 124, 1232
transit ridership ..... 1342
transit safety ..... 292
transit service ..... 438
Transit stations ..... 1080
Transit Supply ..... 964
transit-induced gentrification ..... 1311
transit-oriented development ..... 39, 554, 671, 718, 985
transit-oriented development (TOD) ..... 438
transnational ..... 88
transnational flows ..... 551
transnational migration ..... 824
transnational urbanism ..... 1140, 1142
transnationalism ..... 1141
TransNIEMO ..... 24
transport policy ..... 597
Transport System Integration ..... 22
transport systems ..... 894
Transportation ..... 97, 125, 316, 404, 406, 413, 464, 579,
735, 803, 937, 963, 992, 1006, 1119, 1162, 1334, 1427
Transportation accessibility ..... 1435
Transportation Affordability ..... 871
Transportation Alternatives ..... 16
transportation and environment ..... 471
transportation data collaborative ..... 1179
Transportation Demand Management ..... 310, 606, 1086
Transportation Demand Management (TDM) ..... 594,
1089
Transportation disadvantage ..... 354
water supply ..... 446
water supply planning ..... 457
water systems ..... 447
Water Use ..... 878
Water utilities ..... 451
watershed ..... 1264
watershed based stormwater management ..... 1256
watershed planning ..... 537, 538
Wayfinding ..... 324
weak markets ..... 1181
weak-market cities ..... 566
web mapping ..... 1221
welfare reform ..... 838
Wellbeing ..... 1279
Well-being ..... 490
wellness ..... 935
white working-class ..... 251
wifi signals ..... 160
Wikipedia ..... 140
wilderness ..... 385
Wildfire ..... 283, 788
wildland-urban interface ..... 283
willingness to pay ..... 454
Willingness-To-Pay ..... 695
women ..... 937, 1413
women in history ..... 1272
women's clubs ..... 1299
Womens Health ..... 919
Work ..... 953
work requirements ..... 838
workers ..... 419
Workforce ..... 804
workforce development ..... 207, 362, 1422, 1425
World Bank ..... 661
world-class large city cluster ..... 181
Yangtze River Delta Region ..... 1379
Yard management ..... 203
young adults(millennials) ..... 617
Zhengzhou city ..... 479
zoning ..... 34, 35, 44, 162, 242, 263, 286, 324, 496, 869, 937, 960, 989, 1005, 1145, 1169, 1229, 1338, 1375