

# eye ON PSI CHI

WINTER 2021 | VOL 26 | NO 2

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Not Lead to Murder:  
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## ABBREVIATIONS

APA	American Psychological Association
APS	Association for Psychological Science
EPA	Eastern Psychological Association
MPA	Midwestern Psychological Association
NEPA	New England Psychological Association
RMPA	Rocky Mountain Psychological Association
SEPA	Southeastern Psychological Association
SWPA	Southwestern Psychological Association
WPA	Western Psychological Association

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## Connecting With Psi Chi to Build a Positive Legacy

**Martha S. Zlokovich, PhD**  
Psi Chi Executive Director

**C**onnecting With Psi Chi is the theme that our current Board President, Dr. Ngoc Bui, has asked us to focus on this year, and I would like to challenge you to find joy in doing so. She wrote that her “goal is to have members (past, present, and future) interact and connect with Psi Chi, the field of psychology, their fellow members, and their community” (Bui, 2021). In addition, she cited research that emphasizes the social, emotional, physical, and mental health benefits of connecting with other people.

First-year students just starting their college careers often find themselves in completely new environments, initially with few personal connections. However, with many campuses restarting in-person classes after a year and a half of virtual instruction, even seniors may feel as disconnected from others as first-years straight out of high school. What to do?

One of the best ways to develop a feeling of belonging in the midst of many people (or from your home via the internet) is to connect with smaller groups within a larger community. Of course psychology majors, minors, and graduate students have the advantage of being able to connect with the people in their university's Psi Chi chapter.

Current chapter members and officers can shape the way their chapter connects to past, present, and future. Most chapters invite nonmembers to attend meetings, social events, and chapter activities. This is a great practice! It gives students the opportunity to meet and befriend current Psi Chi members, learn about the requirements for and benefits of joining, anticipate their own inductions, and develop relationships with people who share a love of psychological science. Engaging the next group of potential members is vitally important for chapters to continue the legacy of their achievements into the future.

The personal connections that current students make build a solid base for their engagement as alumni later, in addition to supporting their personal growth and career development in the present. Has your chapter reached out to alumni? Connecting with your chapter's alumni can open doors to developing mentorships, inviting speakers to talk about their graduate

school experiences or career trajectories, and inviting them to support the chapter's current initiatives with their time, expertise, or donations.

All chapter members, especially chapter officers, advisors, and members serving on committees, are also building their legacy by shaping the future direction of their chapter, and in turn the larger Society. What legacy will you leave behind? Do you feel joy when you think about what you have accomplished as a member of your chapter? How will you inspire future officers and members?

Consider what you can do to shape your chapter's activities and accomplishments to meet the challenges of President Bui's goals. These goals are:

1. **Provide Networking Opportunities** with lifetime members, advisors, faculty, and speakers.
2. **Promote Internship Opportunities** by reaching out to agencies and organizations to build and expand internship opportunities for members.
3. **Prepare Future Psychologists** to lead in the field by offering research/clinical workshops aimed at preparing future professionals and inviting alumni to lead them.

While the Psi Chi Board of Directors and staff are working every day to provide opportunities for members that address these goals, chapter members also have the opportunity to work toward them. Chapters can decide how to address these goals as best fits their member, department, and campus needs and aspirations.

Inspiration will be rolled out over the course of this year. Look for Psi Chi social media posts with #ConnectWithPsiChi. Listen to Dr. Bui's Psi Chi podcast episode (coming January 2022). [Read her column](#) (if you missed it). Plan now to leave a legacy of joy and connectedness.

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# Welcoming Our New Diversity Director and Journal Editor

Psi Chi Central Office

We are pleased to introduce two new leaders in Psi Chi. Thank you both for supporting our Professional Organization and helping our members to advance the science and application of psychology.

## Psi Chi Diversity Director



**Gabrielle Smith, PhD**, is an experimental social psychologist and assistant professor of psychology at Texas Woman's University (TWU). Smith received her bachelor's from Spelman College, a master's degree in Women's Studies, and a master's and PhD in social psychology from the University of Alabama (UA). Dr. Smith's research

examines how experiences at the intersection of multiple identities impact, predict and define the overall quality of life, health outcomes, and success in academic and work domains for marginalized populations. Specifically, Dr. Smith's previous work explores how social identities exacerbate or buffer against social problems for African American women, women in the workplace, and U.S. Black immigrant populations.

Dr. Smith is a previous recipient of the Teacher/Scholar Award from the Society for Personality and Social Psychology (SPSP) to recognize

the establishment of research opportunities for students in a teaching-intensive institution. Dr. Smith also contributes through the creation of several courses which add meaningfully to course diversity (e.g., Global Blackness and Health Disparities which explores Blackness throughout the African diaspora). Also, Dr. Smith teaches courses such as Professional Development, which guides students in creating their professional identity while articulating their career goals. Dr. Smith is also no stranger to service and makes every effort to make her skill-set available to her institution, field, and community.

Dr. Smith is one of the founding members and current president of the TWU Black Faculty and Staff Association; an affinity group designed to cultivate community and curate resources for employees who identify as Black. Currently, she is also coadvisor for the Psi Chi and Psychology Coalition at Texas Woman's University, which won the 2019–20 Kay Wilson Officer Team Leadership Award for outstanding growth and community service. Dr. Smith is also a cocoordinator of the TWU Faculty of Color (FOC) Writing Retreat. The FOC week-long intensive retreat is designed to prepare junior faculty of color for tenure and thrive in the academy. Also, Dr. Smith is the current Fund Development Secretary for the Dallas-Fort Worth Urban League Young Professionals and Interim Vice President of Diversity and International Relations for the Society for the Teaching of Psychology.

## Psi Chi Journal Editor



**Steven V. Rouse, PhD**, is professor of psychology at Pepperdine University (CA) where he also serves as the chair of the Social Sciences Division. Dr. Rouse earned a bachelor's degree in psychology, and a master's degree in counseling and clinical psychology from Abilene Christian University (TX) before

earning a PhD in personality research at the University of Minnesota. In graduate school, his primary research focus was on the psychometric qualities of the Minnesota Multiphasic Personality Inventory–2. He continues to engage in psychometric research, but has also studied topics ranging from religiously based conceptualizations of self-worth to the accuracy of personality perceptions formed through Internet-mediated communication. At Pepperdine University, Dr. Rouse teaches in the undergraduate psychology program, most frequently teaching Personality, Psychological Testing and Assessment, and Introduction to Psychology, and he frequently supervises psychology majors conducting independent research projects. Dr. Rouse was an Associate Editor for *Psi Chi Journal* from 2014 to October 2021. Before that, he was a consulting editor for *Journal of Personality Research*.



# Read All About It! Psychology Explains [Insert Pretty Much Anything Here]

SECTION EDITOR:

Shawn R. Charlton, PhD  
University of Central Arkansas

My life has very few Dr. Seussian moments (despite a great love of his writing). Perhaps the only such moment comes each semester as I explain to our new psychology majors that psychology can help us understand behavior in any context, from airports to zoos, and anywhere, from Afghanistan to Zimbabwe. This breadth of applicability is part of what drew me to psychology and something that I love to share with students and others. I feel that the world is catching on to this as well. The number of news reports that now include a psychological slant—and quotes by psychologists—seems to have grown significantly over the past several years. It seems like psychology has an explanation for, well, everything.

But in working on this column over the past several years—and likely also because I am getting a little older and more curmudgeonly—this tendency toward psychological explanations for every story has me worried. I wonder are we correctly representing the interactive nature of psychology when we provide one-dimensional explanations for behaviors? My observation is that the public mostly welcomes psychological explanations described as main effects between a few variables, while the most accurate psychological science focuses on interactions between many variables (Feldman-Barrett, 2021).

As psychological scientists and practitioners, we recognize the richness of human behavior found in the kaleidoscope pattern of interactions between individual, environmental, social, and cultural factors (Charlton et al., 2020). The strength of psychology as a science, practice, and tool lies in our ability

to recognize and analyze the many simultaneous forces acting on behavior at any given moment (even when doing the science of psychology requires minimizing some of these influences for experimental control). The explanations of behavior we use to share psychology with the broader public should similarly highlight this complexity of interaction.

Perhaps the best model for correctly representing psychology in our conversations, writing, and social media presentation is Adam Grant's (2021) conception of the "humble scientist." Connecting our presentation of psychological science with conditional phrases, such as "one potential factor," "under certain conditions," and "according to our current understanding," demonstrates the dynamic nature of science, the multiple influences that shape behavior, and our (currently) limited understanding of the complexity of these interactions.

So as you read this edition of *Psych in the Headlines*, I hope you will enjoy the sampling of some of the ways that pupil size can influence first impressions, a perspective on how optimism impacts us across the lifespan, a couple of factors that influence our acts of kindness, and some connections between fashion and mental health. Hopefully, you find these bite-size tastes of modern psychological science sufficiently tantalizing to encourage ordering a full-serving of the high-quality, peer-reviewed, empirical research that is the foundation of our science.

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## Yes, First Impressions Count (and So Does Your Pupil Size)

**Seungyeon Lee, PhD**

University of Arkansas at Monticello

Assume you are meeting someone for the first time. Whether in-person or virtually, to which area of the person's face do you attend? The eyes! We try to understand human emotions by observing facial cues and expressions, and eyes may be the most relevant areas.

Brambilla et al. (2019) explored whether pupil size is a good predictor of deeper characteristics of individuals. Some physical attributes are recognized as psychological constructs that are perceived as positive and uplifting, and pupil size is often regarded as one of them. If such is the case, would enlarged pupils be perceived as positive and pleasurable during social interactions? Would the person be perceived as being more likeable and trustworthy? Are those with small pupils be perceived negatively? Brambilla et al. (2019) conducted a study to examine whether observed pupil size influences approach-avoidance tendencies. Participants were asked to complete an approach-avoidance task where they looked at faces with large (40% larger than a standard pupil) and small (40% smaller than a standard pupil) pupil sizes. The experimenters used a joystick to measure whether participants got closer or far away while looking at faces.

What Brambilla et al. (2019) found is that participants were less likely to approach faces with smaller pupils. In contrast, they were more likely to approach faces with larger pupils. They expressed a positive impression when looking into the eyes of those with larger pupils, and the impression later formed their judgement that the ones with larger pupils are more likeable and trustworthy.

These findings suggest that distinctive facial features of

those we socialize with may shape and influence our experience. This finding is extra surprising as there is no scientific evidence explicitly examining the relationship between pupil dilation and individual personality traits. Changes in pupil size are based on a person's unconscious and automatic response, but the finding indicates that such changes may provide a reflection of a person's inner state, which could lead to confirmation bias. Brambilla et al.'s study sheds light on possible contributors to social relationships that may impact society-at-large, such as domains that often use face images. It also makes us aware of first impression bias—a limitation of human information processing in which we are strongly influenced by the first piece of information to which we are exposed. The risk of overestimating facial cues and expression in societies may need to be re-examined, which brings us to the importance of embracing diversity.

For instance, with the Haitian immigrants at the U.S.-Mexican border (Hilliard, 2021; Wolf, 2021), those who are let into the United States may face more difficulty due to first impressions. Fear can shrink pupils (University of Illinois College of Medicine, 2021), which may be why their fear of being in a new country and trying to build a life could influence how they are perceived by American citizens and vice versa. If Haitian immigrants and American citizens are both afraid, seeing the fear in each other's eyes may make these interactions all the scarier.

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## Being Optimistic Has a Long-Lasting Effect That Stretches Beyond Age 85

**Julio I. Agbanyim**

Grand Canyon University

In this global COVID-19 era, people are looking for reasons to stay optimistic in the face of perils to their health. Some critics view optimism as a construct that favors mostly young and middle-aged people who are more resilient when under pressure. It is possible that most people can relate to such a claim, simply because optimism drives positive expectations. Consequently, their perspectives about optimism have health benefits, such as emotional stability, hope, self-efficacy, and social skills (Jacobs et al., 2021). With these positive psychosocial components, young and middle-aged populations tend to live longer than their contemporaries who are not optimistic, although a study by Varma et al. (2021) suggested greater vulnerability of younger people due to the COVID-19 pandemic.

Jacobs et al. (2021) turned their attention to an older age group, examining whether optimism increases life expectancy of people between the ages of 85 and 90, given that depression among this age group is on the rise. The data collected from the participants included gender, marital status, years of education, financial status, body mass index, physical activity level,

loneliness, depression, self-rated health, and personal history of major diseases. The study was conducted in western Jerusalem, Israel, and confirmed that optimism is linked to survival. The researchers also acknowledged that their study was limited to one geographical location, therefore, could not be used as a yardstick to measure other countries and cultures. The authors also highlighted that the participants' earlier life information (i.e., employment trajectories and accumulation of wealth) were not collected, which could mutually influence the participants' views about optimism and how long they live.

Viewing the world through the lens of optimism has a universal appeal, and as Jacobs et al. (2021) emphasized, the positive outcomes of people who are optimistic have nothing to do with how old they are, with positive rewards extending beyond 90 years of age. Although Jacobs et al. acknowledged their study was the first to show that optimism predicts improved survival among the population older than 85 years, they warned not to generalize their result for fear of misrepresenting the role of optimism in other countries and cultures.

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## SUBMIT TO THIS SERIES

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For full submission guidelines, visit [www.psichi.org/page/PsychologyInTheHeadlines](http://www.psichi.org/page/PsychologyInTheHeadlines)

## Misunderstanding the Power of Kindness

Faith Reynolds and Shawn R. Charlton, PhD

University of Central Arkansas

The psychology of kindness made an appearance on the BBC ([The Kindness Test](#)) as part of their discussion of a joint project by the BBC and researchers from the University of Sussex (United Kingdom) exploring the global status of kindness ([thekindnesstest.org](http://thekindnesstest.org); Hammond, 2021).

Although we must wait a little longer for the details of the BBC project, psychological researchers do have some intriguing answers to an important question: Why aren't we more kind, more often? One answer may be that our mental calculations of both the costs and benefits of kindness are poorly calibrated. Boothby and Bohns (2021) provided evidence that individuals who give compliments—a form of verbal kindness—often underestimate the positive influence their actions will have on others. At the same time, they tend to overestimate how uncomfortable the recipient of the compliments may feel and the risk of social rejection (Kumar, 2022). Amit Kumar (2022) indicated that interpersonal barriers such as these underestimations and overestimations often discourage individuals from expressing gratitude—another form of kindness—to others.

Unfortunately, we might have developed a way to avoid the fears of engaging in new acts of kindness, while still enjoying some of the residual benefits of past acts of kindness. Thanks to the power of our memory, we may be able to self-soothe by recalling times when we were kind to others (Ko et. al., 2019). Recalling past acts of kindness allows us to enjoy the personal benefits of kindness (Hammond, 2021), but does not provide the benefit of new acts.

A potential way to overcome our (skewed) perceptions on the costs of kindness may be to look to others. Lady Gaga's [Born This Way Foundation](#) hosts the September #bekind21 challenge, which encourages individuals to perform small acts of kindness for the first 21 days of September. The New York Times bestselling author Jason Wright (Wright, 2021) focuses much of his career writing, recording podcasts, and traveling the world in order to share the message of spreading kindness. And Leon Logothetis demonstrated the power of kindness by literally traveling around the world powered by acts of kindness (Logothetis, 2021). We can use these examples, plus the multitude of other platforms, social media challenges, books, and podcasts to increase our engagement in kind acts. So the next time you are given the opportunity, will you step out of your comfort zone and do something kind?

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## Psychology and Fashion: The 2021 MET Gala

**Carly Breslin**

Connecticut College, BA, and Psi Chi Editorial Intern

The MET Gala is an annual charity red-carpet event usually held at the Metropolitan Museum of Art to raise money for the museum's Costume Institute. This year, the theme was, "In America: A Lexicon of Fashion," and a matching exhibition held by the MET is currently open until May 2022. So what are some psychological effects of events such as this one?

### Body Image and Self-Esteem

A high-profile event such as this one places many different bodies on display, especially through best and worst-dressed lists. Imagine waking up to see that you and maybe ten other individuals were singled out from hundreds of event attendees by someone poking fun at your body and your outfit. Other individuals who look similar to those placed on the worst dressed list and being bullied for their bodies may also be affected. This sends a message to young people seeing the lists of who looked best and worst. It gives the impression that there is something wrong with how they themselves also look, which can impact young people's emotional well-being for the worse. For instance, appearance schemas can affect self-worth (de Lenne et al., 2021). Representation matters, especially in the media. Body image and self-esteem is a constant battle for everyone, but especially for those who are always on display in the press (Yu et al., 2011).

### Size Discrimination in Fashion

Red-carpet and black-tie events can be very difficult for individuals who are not a size zero or a size two—and yet, the average American woman's dress size is 16–18! Many outfits for special occasions, including wedding gowns, cocktail dresses, or specially made suits are not made for individuals over a certain size. Size-discrimination applies to everyone, regardless of

gender, race, ethnicity, or socioeconomic status.

Many celebrities have recently come forward to talk about being turned away from stylists and designers in the past because the designers' sample clothes for events would not fit them. Sample items from stylists are often made around sizes zero through four. Some celebrities, like Ashley Graham, have skipped certain events due to having nothing to wear. Even the band Destiny's Child was refused styling for their body types. Bryce Dallas Howard is one celebrity who admitted to going to department stores for more options, since she was a size 6 (Malivindi, 2021).

### In Conclusion

Fashion has undergone tremendous changes over time, but it still has a ways to go. In the end, an event like this is fun to watch, but behind the scenes, a lot of thought and anxiety goes into the fashion, as well as in the presentation of the people wearing it. Just some food for thought during the next red-carpet event you see on TV.

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**Shawn R. Charlton, PhD**, earned a BA degree from Utah State University (2001) and a MS and PhD from the University of California, San Diego (2006). His research interests explore decision-making in a variety of contexts. Research on professional development in higher education is a growing emphasis for his Behavioral and Social Decisions Laboratory.





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# From Psych Major to Executive Director

## An Alumni Member Shares Her Journey

### Meet Mandy Cowley

**Psi Chi Alma Mater:**

Centenary College of Louisiana, 2008

**Current occupation:**

Executive Director of A Step Ahead Chattanooga

### Please describe what you do at your job.

At **A Step Ahead Chattanooga**, our mission is to remove barriers to contraception through education, outreach, and access to free birth control. We serve an 18-county region across three states. The reason we are so passionate about contraception access is that we know when a woman is able to access the contraception method that is right for her, it allows her, her family, and ultimately her community to thrive. As an Executive Director, my role is to help create an environment where our team can be most effective at fulfilling our mission in the world, to help us have the biggest impact possible, and simultaneously to help move our organization into the future.

### How do you use your psychology education in that context?

Having a foundational understanding of how the mind works and what motivates people to behave in a particular way is such an asset as a leader. It allows me to see beyond someone's attitude, demeanor, and actions to really get at the heart of what's going on. It also helps me structure our working environment in a way that supports the values of our organization.

### In what ways does your career benefit or improve society?

I fundamentally believe that every woman should have ready access to the contraceptive method that is right for her. Deciding if and when to get pregnant allows a person to pursue their educational, career, or other goals. Unfortunately, there are many barriers that make contraception harder to access for

some women than others. A lack of skilled providers in some communities, the cost of contraceptive devices—particularly for the uninsured and the underinsured, and misinformation are just a few barriers we are working to remove.

### What skills are most important to perform your job?

My role requires a lot of skills, but the ones that I use most often are creative problem solving, servant leadership, a capacity for visioning, and an ability to manage multiple high-level demands and shifting priorities. I often think of myself as putting together a complex jigsaw puzzle. My team, board, volunteers, clients, and community partners have the various pieces. I am the one who has the box with the reference image and my work is to make the pieces fit together so that we can effectively serve our community.

### What sort of jobs did you have before you became Executive Director at A Step Ahead Chattanooga?

After receiving my undergraduate degree in psychology, I went on to get a graduate degree in sociology. After graduate school, I managed a biomedical research lab for a few years. Then I had an opportunity to move into the nonprofit sector helping run one of Louisiana's oldest and largest domestic violence agencies. I have stayed in the nonprofit sector since then.

### What did you want to be when you were a child?

Ever since elementary school, I really wanted to be a college professor, hence graduate school. I love research and data and

immersing myself completely in really niche topics. As it is for many, graduate school was a very stressful environment for me, and I ultimately decided that I needed to reshuffle the deck to prioritize my family. It was a challenging decision, but in the long run has been really wonderful for me.

### What sort of student were you?

I was a really committed student. I love learning and it remains an important part of my life. I took every assignment a little too seriously. I particularly loved any learning that helped immerse me in an experience or culture that was different from my own.

### Why did you join Psi Chi?

I joined Psi Chi when I was pursuing my undergraduate degree. I knew that I wanted to go to graduate school and at the time thought I'd likely stay in the field of psychology. Psi Chi was a great opportunity for me to network and meet other people who were on a similar trajectory. It also served as a great resource as I considered graduate school.

### Is there something that you know now that you wish you knew when you were in school?

During college and graduate school, I had my mind set on a really particular career path. When I realized that those goals were no longer right for me, it felt like a personal failure. I wish I had been more open to a wider range of professional opportunities instead of trying to map out every aspect of my professional life at such a young age. My career path has been incredibly enriching, and I am so proud of the work I've done since graduating. In so many ways, I use both my undergraduate and graduate degrees to shape my work every day.

## Fun Facts About Mandy

### Favorite psychology-related book or movie:

Eternal Sunshine of the Spotless Mind

### Favorite band:

Paramore

### Favorite quote:

"If you are free, you need to free somebody else"

—Toni Morrison

### Hobbies:

Reading, hiking, and crafting

### Early bird or night owl:

Early bird

## Biography

Mandy Cowley is a deeply reflective, inquisitive, human who tries to leave things just a little better than she found them. Her hope is for a world where everyone can live with a high degree of self-determination, which means her work is to help build equity so that everyone has ready access to the resources they need to live the life they want to. Mandy is also a mom, wife, daughter, friend, and leader.

## Contact information

For any additional questions for Mandy Cowley, contact her through email at [mcowley@astepaheadchattanooga.org](mailto:mcowley@astepaheadchattanooga.org).



## WHERE ARE THEY NOW?

Psi Chi members go on to accomplish great things. By applying their psychology-related skills, there is little that they cannot accomplish—from becoming esteemed researchers to leading innovative organizations in numerous ways.

Are you (or do you know) a Psi Chi member who has graduated and built a unique and meaningful career? **Share your story and wisdom with our student members!** To get started, send [publishing@psichi.org](mailto:publishing@psichi.org) an email about your top achievements after graduation so we can consider sending you questions for a written Alumni Achievers interview.





# Counseling Psychology: Making Everyday Life Bearable

Ethan A. McMahan, PhD  
Western Oregon University

**H**ello dear readers. Do you mind if I get a little personal for a bit? You don't have to do anything. Perhaps, just listen. There was a time, many years ago, when I was lost. I was in college, but I wasn't sure that I wanted to be there or what I wanted to do with my degree. My parents had just divorced after roughly 20 years of marriage. And my appendix decided that it no longer wanted to be a part of me, opting instead to allow itself to become so infected that it burst, leading to a week-long hospital stay and then several weeks of convalescence. My situation, and the series of events leading up to it, was a lot to process at one time. As I was recovering, eating cocoa-puffs for every meal, because that was the only thing I could stomach,<sup>1</sup> I started to think about my life. I started to think about my past, my current sad state, and my potential future. Picture this in your mind: a downtrodden 20-year-old laying on a couch in their pajamas, eating cereal, while silently questioning every decision that they have made up to that point and lacking the insight to see their way out of their seemingly sorry situation. It's a depressing image. But to be clear, I was not depressed, in a clinical sense. I did not have a diagnosable psychiatric condition. Rather, I was at an inflection point, though I did not know it at the time. I was not happy with the trajectory

<sup>1</sup> Interestingly, because of my extreme cocoa puff consumption during recovery, I am now unable to even look at a box of this cereal without having my stomach turn.

of my life, and I wanted to change its direction. But I didn't know what to do, didn't know where to go, and didn't know how to change. I needed guidance. I needed the counsel of a trusted and knowledgeable other. I needed someone to understand my situation, to listen, to provide perspective, to explain my options moving forward.

I suspect that we all deal with similar situations from time to time. And in these situations, I suspect that many of us would like some help. To state it simply: Life can be hard. Losing a job is hard. Dealing with parental divorce is hard. Managing your own divorce is hard. Having children is hard. Moving across the country is hard. Mediating family conflict is hard. Recovering from injury or illness is hard. Figuring out what you want to do with the rest of your life is hard.

Note that none of the things that I have just mentioned are particularly uncommon. I would bet my last dollar that everyone reading this will experience at least one of the above situations during their lifetime, if not several of them. Here's one that I know, for a fact, that you have all dealt with: Living during a pandemic is hard. Now, I don't want to bum you out, but the fact is that life is not all sunshine and daisies, or rainbows and lollipops, or whatever other positive imagery you can conjure up. Even the most fortunate among us will, at times, experience misfortune. And in the long-run, that is not necessarily a bad thing. Skill

comes from being challenged. Strength comes from facing adversity. Wisdom comes from experience. With that said, we often need help, guidance, and counsel. We might need a counselor. We might need a psychologist who is trained to assist with these types of situations, trained to help us withstand, manage, and recover from the slings and arrows of everyday existence. We might need a counseling psychologist.

## Thank WWII for Counseling Psychology—and Clinical Psychology, and Radar, but Also Counseling Psychology

Let's start with some history of the field. Something that will become abundantly clear is that counseling psychology is very similar to clinical psychology. And this similarity is evident in their history. As you may recall, perhaps the most important historical event that contributed to the development of clinical psychology was World War II. This is because many soldiers returned from the war with psychopathology, and the U.S. government was not prepared to treat these individuals. In result, the United States contracted many clinical psychologists to treat the many veterans suffering from mental illness, but also invested in the development of clinical psychology training programs. The field of clinical psychology took off. Counseling psychology experienced a similar trajectory of growth following World War II (Woolfe, 2003), though the field was not called counseling psychology at the time. In this case, many of the soldiers returning from the war now needed job-placement and employment. To address this need, the United States contracted what were called "vocational psychologists" or "personnel and guidance psychologists" to assist veterans in finding suitable positions that fit their preferences and skillsets. However, because many soldiers needed assistance reintegrating into our nonmilitary society, and this reintegration often required more than just finding the right job, the vocational psychologists found themselves providing guidance on a variety of different issues. Instead of just providing vocational and educational advisement, which was important in and of itself, these psychologists began counseling clients on many different issues relating to everyday functioning and well-being.

In 1951, the APA's Division of Personnel and Guidance Psychologists changed its name to the Division of Counseling Psychology (now called the Society of Counseling Psychology), reflecting this broader scope of issues that counseling psychologists addressed. Counseling psychologists were actively involved in the treatment of everyday issues, but they emphasized (and still do emphasize) that they are not focused on full-blown, diagnosable psychopathology. Instead, they are in the business of providing a supportive therapeutic environment in which individuals who do not have severe or persistent mental illness can work through the various issues that may be causing them distress (Gelso et al., 2014).

## This Still Sounds Like Clinical Psychology

Yes, it does. In fact, please allow me to innumerate the ways in which clinical and counseling psychology are similar. Both are very applied fields with the majority of individuals actively involved in the assessment and treatment of mental health and/or behavioral disturbances. Both clinical and counseling

psychologists can have a private practice (and many do), and beyond this, they tend to work in similar work settings (e.g., clinics, colleges). The licensure process for clinical and counseling psychologists is the same, and once licensed, each can practice independently without supervision. The dominant theoretical orientations of clinical and counseling psychologists is largely similar, with many reporting taking an integrative approach to therapy (i.e., blending different therapeutic approaches to best address client needs), and many others taking a more cognitive approach (i.e., replacing maladaptive thought patterns with adaptive ones). Legally, the two specialties are considered the same, and there is no distinction between clinical and counseling psychology in legislation or in other legal contexts.

*Okay, so how are they different?* Well, clinical psychologists tend to focus on treating serious and/or persistent cases of mental illness, whereas counseling psychologists focus more on everyday adjustment issues, as mentioned above. Counseling psychologists are fewer in number than clinical psychologists. As a group, counseling psychologists are more diverse than clinical psychologists, and they more often utilize feminist and/or multicultural approaches to therapy. Although clinical psychologists focus on the reduction/treatment of psychopathology, counseling psychologists tend to focus on the promotion of well-being across the lifespan. Counseling psychologists also frequently take a humanistic approach to interacting with clients (i.e., focusing on the unique qualities of the individual), and therapist-client interactions tend to be quite intimate. Counseling psychologists are more likely to work in counseling centers, whereas clinical psychologists are more likely to work in inpatient settings (e.g., hospitals). However, it should again be noted that, although clinical and counseling psychology are two different fields, they are more similar than they are different (Hammer, 2018).

## How to Help the Lost Find Themselves

If you are now interested in potentially entering the field of counseling psychology, let me see if I can give you some direction. To be clear, I am not a counseling psychologist, but I do have some experience telling others what to do. In the interest of providing guidance, just ask my daughters.<sup>2</sup> Like clinical psychologists, counseling psychologists typically have a PhD. Interestingly, in the United States, graduate programs in counseling psychology are often located in education departments, rather than psychology departments. The reason for this being that many counseling psychologists work in the school system. Regardless, prior to entering a graduate program, one will want to major in a relevant discipline during undergraduate training (e.g., psychology). Most graduate programs use the scientist-practitioner model of training, whereby students will receive both training in research, as well as practical experience. Concerning practical experience, students can expect to be required to complete internships and practicums. And following completion of graduate training, a budding counseling psychologist will need to obtain licensure to practice and then maintain that license over time.

*Where will you work? And with whom?* These are questions that I can't answer with any degree of certainty. Who you will

<sup>2</sup> Actually, don't ask my daughters. They will indeed confirm that I often tell them what to do, but I suspect that they will view this behavior more negatively than others would. Their report would be biased, and we should avoid bias at all costs. So let's just ignore them.

work with is up to you. And who you will work with largely determines where you will work. Do you want to work with children? Perhaps you will work in the schools or for a government agency (e.g., child protective services). Do you want to work with veterans? Perhaps you will work for the Veteran's Administration. Do you want to treat those going through difficult life transitions (e.g., divorce)? Perhaps you will have a private practice. Broadly, counseling psychologists may provide many different services, serve many different populations, and work in many different settings. Some focus primarily on teaching and research, working in colleges and universities. Others are engaged in independent practice, providing assessment, consultation, and psychotherapy. Others work in larger organizations, such as hospitals, outpatient care facilities, family services organizations, rehabilitation agencies, and so on. Counseling psychology is a big and diverse field, and accordingly, those wanting to join it have many options.

### Moving Forward With Direction

Did this article provide guidance? After reading this, do you feel like you have some direction? If so, great! But you may have additional questions. You may require additional guidance. You might wish to seek further counsel from someone more knowledgeable about this topic than I. If so, I encourage you to peruse the references and additional resources below. With information comes knowledge, and with knowledge comes insight, and with insight comes directed action. Through this, one can avoid sitting on the couch eating cocoa puffs for breakfast, lunch, and dinner. Nobody wants that. Ask me how I know.

ADVERTISEMENT

### Additional Resources

A Career in Counseling Psychology, American Psychological Association. <https://www.apa.org/education-career/guide/subfields/counseling>

Society of Counseling Psychology, Division 17, American Psychological Association. <https://www.apa.org/about/division/div17>

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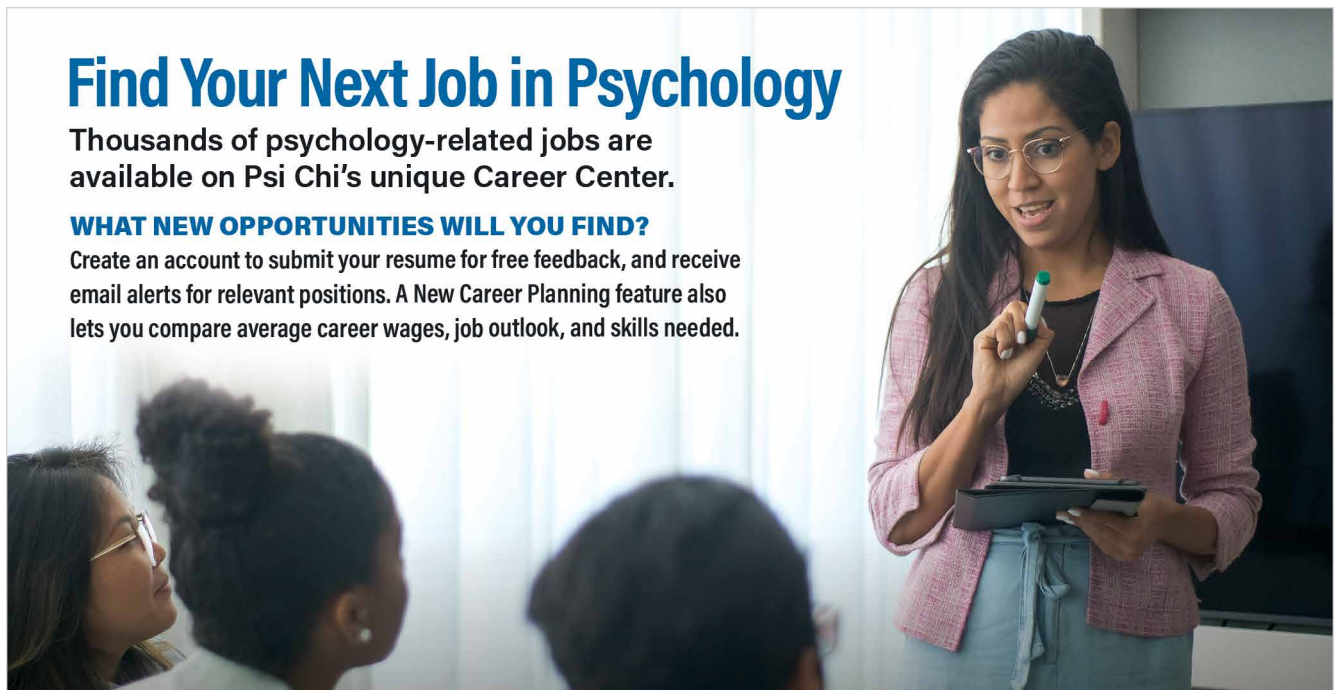
**Ethan A. McMahan, PhD**, is an associate professor in the Department of Psychological Sciences at Western Oregon University where he teaches courses in research methods, advanced research methods, and positive psychology. He is passionate about undergraduate education in psychology and has served Psi Chi members in several ways over the last few years, including as a faculty advisor, Psi Chi Western Region Steering Committee Member, Grants Chair, and most recently, as the Western Regional Vice-President of Psi Chi. His research interests focus on hedonic and eudaimonic approaches to well-being, folk conceptions of happiness, and the relationship between nature and human well-being. His recent work examines how exposure to immersive simulations of natural environments impact concurrent emotional state and, more broadly, how regular contact with natural environments may be one route by which individuals achieve optimal feeling and functioning. He has published in the *Journal of Positive Psychology*, the *Journal of Happiness Studies*, *Personality and Individual Differences*, and *Ecopsychology*, among other publications. He completed his undergraduate training at the University of Colorado at Colorado Springs and holds a PhD in experimental psychology from the University of Wyoming.

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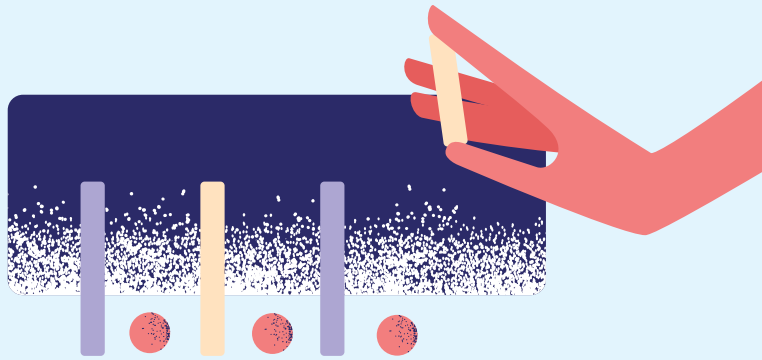
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# The Answer Is Out There: Secondary Data Analysis Research

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**A**lthough there are several ways to conduct a research project, the most common way is for a researcher to collect original data to answer a research question. But what happens if a researcher cannot collect their own data? This can happen if a researcher does not have access to the population of interest. Or, perhaps the researcher faces time or monetary constraints to collect the data they want. In situations like these, researchers may choose to conduct a research project using previously collected data. These projects are commonly referred to, in the field, as “secondary data analysis projects.” This article will address **what** secondary data analysis is, **when** it can be used, **where** data sets can be found, **how to obtain data sets** for use, and **how to use secondary data**.

## What

First, it is important to highlight that secondary data projects are research projects. In fact, they go through the same stages of the research process as original data collection projects! For example, both types of projects start with identifying a research question. For a secondary data analysis project, typically, it is important that these questions are different from the original research project. However, there are secondary research questions that involve trying to determine whether you can reproduce the original findings using the same data. Once a research question has been decided, a researcher using a secondary data analysis will attempt to identify a database to test and analyze the research question from the existing variables.

## When

Knowing when to use previously collected data is often determined by what type of research question a scholar is asking. For example, feasible secondary research questions may utilize common variables that are collected in most datasets (i.e., gender, age, sex, race, ethnicity, social economic status [SES]), plus an

additional measure or two of interest). If a researcher wants to know what data is available to be used from an existing data set, often looking at the project codebook is the first place to start. Codebooks detail the project scope, aims, and the variables available. Sometimes codebooks also include the sample size and detail if variables are missing. Codebooks can be helpful in determining whether a previously conducted research project may be useful to test the research question you have in mind. Codebooks are typically found in the same place as the data and may take several formats such as an Excel spreadsheet, Word document, or a data file (such as an SPSS file). For data sets that do not have a clear codebook, researchers may contact the researcher(s) responsible for that data set to ask about the variables of interest, identify if the data set contains them, and in what format they might be in (i.e., continuous vs. categorical).

Researchers may choose to conduct a secondary data analysis project for a wide range of reasons. However, the most obvious reason is because the data already exists! This expedites the time it takes to complete a data project, which may be useful for honors thesis projects or during a time where data collection has halted (e.g., during COVID-19 pandemic). Researchers may also use previously collected data to ask and answer some initial pilot questions to inform later research projects. Other advantages to secondary data projects are that the burden of deciding on, and obtaining materials, in addition to carrying out the procedure can be alleviated. Furthermore, researchers will not face typical constraints of needing monetary compensation for participants, getting access to a certain population, or getting access to a certain measure (sometimes researchers have to pay for the use of a measure in a study) or access to types of programs and software (e.g., eye tracking data).

One of the disadvantages of using a previously collected data set is that the researcher is unable to control what exactly was collected, how the data was collected, and how frequently the data was collected. This ultimately may limit the questions a researcher

may be able to ask from the existing data set. Another disadvantage is that sometimes the codebooks may be missing, which can create some additional work in order to correctly interpret the data available. It is important to thoroughly check what type of data is available to the researcher before deciding on a data set to use.

## Where

Finding existing datasets may seem like a challenge but several avenues exist! Many research labs have previous projects that can be used for secondary research. In addition, online platforms like the Open Science Framework (OSF) and the Inter-university Consortium for Political and Social Research (ICPSR) host data sets that are open access and free to the public. Some major data-sets available for use are:

- **Research on Pathways to Desistance Series** (ICPSR, 2021; Mulvey, 2004)
- **Emerging Adulthood Measured at Multiple Institutions 2: The Next Generation** (EAMMI2; Grahe, Faas, et al., 2013)
- previous projects from Psi Chi's **Network for International Collaborative Exchange** (NICE: CROWD; Cuccolo et al., 2018)
- **Collaborative Replications and Education Projects** (CREP; Grahe, Brandt, et al., 2013)

As mentioned above, one reason why scholars use previously collected data for new questions is because of the time it takes to collect new data. In addition, when starting a new project, the principal investigator (PI) must get the project reviewed and approved by the Institutional Review Board (IRB). IRBs can vary in how fast they approve new projects. This often slows down the timeline of when a project can begin. When using a previously collected data set, IRBs often process these requests much quicker. In addition, using a secondary data analysis allows access to diverse populations or certain questionnaires. Another reason why scholars may use existing data is because most researchers include a wide range of measures in their research projects. This means that, when researchers go to publish manuscripts from the data, they often cannot use all the measures they have compiled in the research design. This leaves unused data that other researchers may find beneficial to use to test their own research question.

## How to Obtain Data Sets

Obtaining data for secondary research requires a bit of work initially. First, approaching lab owners and relaying your interests may be one avenue in obtaining the data. Talking with lab directors and graduate students about lab owned data sets is also another way. There are also journals (e.g., *The Journal of Open Psychology Data*) that publish works that are readily available to scholars. Looking at manuscripts that come from this journal (and similar ones) is another way to obtain information about data sets. Once a data set is selected, there may be additional paperwork that must be completed through the owner of the data set or through the IRB.

Once a data set has been selected and the data has been obtained, the data can be used! As long as the person follows the scientific method and knows how to conduct the analysis or works with a mentor on how to conduct the secondary data analysis project, anyone can complete a project. This is one of the most important aspects of a secondary research project; it allows for researchers from different backgrounds, fields, and ranks to come together and share data.

## How to Use Secondary Data

How to use an existing database is different and unique, but at the core, it is important that these projects do not stray away from the scientific method! As previously mentioned, the first step in conducting a secondary data analysis project is identifying a feasible question to test with previously collected data and then identify a data source. This process typically involves getting the idea of what the researcher may want to look at (e.g., family dynamic in cross-cultural households) and then formulating a question from this idea. Next, the researcher must begin to search for data sets that exist and examine what variables and constructs are available (typically found in a codebook). From there, a scholar may refine the research question and begin to develop a hypothesis and carry out the project by analyzing the data. Lastly, it is important to write up the findings and mention where the data came from. It is important to not take ownership of the data.

## Conclusion

In conclusion, secondary data analysis projects can be an efficient way to utilize previously collected data and approach research questions. These projects are becoming more prevalent within psychology and are a great way to conduct research if a researcher is facing constraints such as time or access to a certain population. Although not every research question can be answered through these methods, they are a great place to begin (or continue) a project if used correctly. We hope this article was helpful in considering the what, when, where, why, how, and who of secondary data research. We encourage you to think about the many ways a research question can be answered using previously collected data.

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**Shannon McGillivray, PhD**, received her PhD in cognitive psychology from University of California, Los Angeles, and is currently an associate professor of psychological science at Weber State University. She has been a member of the Psi Chi Research Advisory Council since 2016. She is also an award-winning professor who loves being in the classroom and working with students. Her favorite classes to teach (aside from Cognitive Psychology) are Research Methods and Statistics. Her own research interests focus primarily on memory, metacognition, and decision making, particularly within the field of cognitive aging. More specifically, she examines factors such as interest, emotion, and strategic processes that positively influence and enhance explicit memory, decision making, and metacognitive accuracy in younger and older adults. In her free time, she enjoys relaxing, kayaking, and hiking with her husband and her very spoiled dog Lucy.





## Questions (and Answers) About Applying to Graduate School

**Julie Radico, PsyD, ABPP**  
Penn State Milton S. Hershey Medical Center

**Scott VanderStoep, PhD**  
Hope College (MI)

**Mitch Prinstein, PhD, ABPP**  
APA Chief Science Officer and University of North Carolina–Chapel Hill

**E**ach year, a new group of undergraduates and alumni make a decision to apply to graduate school programs in psychology and related fields. The purpose of this column is for three experts to take turns answering applicants' most frequent questions in order to help them achieve the program of their choosing.

In the previous installment of this series, our experts discussed **what to expect when returning to school after a gap year**. For this issue, they return their sights again to answering some of the basics about preparing for graduate school—just in time for winter application deadlines!

Notably, this is the first issue featuring our new expert, Dr. Mitch Prinstein, from the University of North Carolina at Chapel Hill. Welcome to the group, Mitch!

### First question: How early should I start preparing for graduate school?

**Julie:** If you are considering graduate school in psychology, it is often helpful to narrow down what degree (e.g. MS, PsyD, EdD, PhD) and specialty area (e.g. clinical, counseling, school) you may be interested in as early as possible. Having a sense of your area of interest can help you start to look for graduate programs and the requirements of those programs. This would then enable you to target and seek out opportunities during your undergraduate education that could help you be a more competitive candidate.

It is also okay to pursue a more general graduate education and to identify an area of specialization while in a program, however, it is crucial to be certain that you want to go into a psychology focused graduate program.

**Scott:** I would say that you have more time than Julie thinks you have for two reasons. First, the quality of your work in undergraduate matters more than the type of work. If you get good grades in your courses and gain research experience, that will make you competitive in many graduate programs. I would even submit that studying psychology is less important than doing excellent work. First, a student with As in philosophy who has worked with a professor will be very competitive to research-based graduate programs. Second, a lot of students take time after finishing their baccalaureate degree, during which they can refine and clarify their interests. One caveat would be in graduate programs that require volunteer hours in a particular area. This might be the case in practitioner-oriented fields and is true in many allied health fields such as physician assistant.

**Mitch:** Don't prepare early at all! Graduate school is a long-term commitment that will, in part, determine your career path for decades to come. Undergraduate students are advised to take courses in many broad areas of psychology and get experience in many different research activities. Through these experiences, you hopefully will discover a passion—something so interesting and exciting that you would be willing to dedicate effort to it even if you were not getting paid to do so. You can't find your passion on a schedule, and certainly not if you are engaged in activities only for their "vitae-value." This is why a majority of successful applicants now complete a post-baccalaureate research assistant position before applying to graduate school. These positions give you a year or two of full-time immersion in a research project, and some room to think about your interests outside of the pressures of a full course load.

## What skills or characteristics would you look for in potential graduate students?

**Julie:** *Skills and experiences* that appeal to graduate programs may differ based on the program/specialty area. If you are pursuing a graduate program that is primarily research focused, it would be important to have some experience/exposure to research. Most graduate programs understand that it is sometimes difficult to obtain clinical experience prior to graduate school, however there are often volunteer, job, and shadowing opportunities in behavioral-health-focused settings, which can demonstrate your interest in clinical work.

*Characteristics* that graduate schools often look for in applicants include curiosity, commitment, insightfulness, empathy, and genuineness. Strong applicants tend to be individuals who will engage in lifelong learning and appear dedicated. Graduate schools want to know that you have the aptitude to succeed and that you are committed to putting in the work.

**Scott:** I agree with Julie. I will add one more, about which not everyone might agree. But here goes: Although more undergraduate institutions are becoming test-optional for admissions, I have not seen this trend for graduate programs. Graduate schools get the best applicants. Admissions committees have more applicants than available spots. Most of the students have good grades and meaningful experiences. Too often the only factor that can distinguish the top applicants from the very top applicants is with GRE scores. So my advice is this: Give yourself a lot of time to study from the GRE, take practice tests, identify what the range of scores that admitted students to your programs of interest have (for example, through the *Graduate Study in Psychology*), and strive to reach the median or higher score.

**Mitch:** In 2021, a few of us working with the Academy of Clinical Psychological Science surveyed faculty to determine what characteristics faculty are looking for in graduate admissions. Results revealed that these factors were most frequently reported, in descending order of importance (note: many more characteristics did not make this top 10 list, so all of these are likely important).

1. **Scientific curiosity**—interested in many topics, ideas, and intrinsically rewarded by scientific inquiry
2. **Critical thinking**—can recognize divergent/contradictory perspectives and challenge viewpoints/ideas
3. **Good interpersonal skills**—encodes, interprets, and responds to social cues in a typical manner
4. **Analytical thinking**—can recognize patterns, trends, summarize broader concepts from specific details, and demonstrates logic-guided thinking
5. **Problem solving skill**—can identify problems, generate/recommend a variety of solutions
6. **Open-minded**—is open to new perspectives and ideas
7. **Independence and self-guided inquiry**—pursues additional knowledge, independent educational experiences beyond requirements
8. **Works well within a team**—acknowledges others' contributions, cooperates, collaborates, assists others

9. **Takes initiative**—volunteers to do more, takes full advantage of opportunities to expand knowledge, skills, and abilities

10. **Openness to supervision and personal insight**—can reflect upon and review prior learning, solicit feedback, and change behavior

## In what ways do you think expectations for graduate students have changed over the years?

**Julie:** I believe graduate programs want potential students to be thinking about the strengths and weaknesses of the profession; have an awareness of diversity, equity, and inclusion needs within psychology and society as a whole; and have ideas about how psychology can play a leadership role in enacting positive change at all levels.

**Scott:** Besides all of the professional accomplishments noted in question 2 above, Julie is correct that programs are looking for students who have experiences with diverse populations. This is one change that has occurred in the last decade. Another change is a shift in competitiveness. A generation ago, a student who had research experience could guarantee admission into a competitive program. The number of undergraduates who participate in research now is much higher. This makes more applicants with research experience, more students who have been recognized for their research (for example, Psi Chi now offers more Regional Research Awards than it did 15 years ago to keep pace with the number of submissions), and more students who have presented at conferences or perhaps even published. All of this has made for a ferociously competitive admissions process to the top doctoral programs.

**Mitch:** An appreciation for equity, diversity, and inclusion is indeed important, as is substantial research experience. But too many fall prey to myths, such as the perception that successful applicants must have publications, or that the quantity of prior research experiences matters. They don't. It is far more important to demonstrate that your research experience allowed you to think critically (i.e., like a scientist) about psychological questions. Your essay should convey not what you did, but what you learned, how it made you think about the literature, how it inspired you to ask more questions in the field, and how you think a mentor's current work may fit with the training you need and ideas you have. Academically successful applicants (reflected through nonbiased academic indices) who communicate these points successfully do very well in the admissions process.

## How important are grades as compared to out-of-classroom experiences?

**Julie:** An applicant's undergraduate GPA is important. GPAs are often considered more than GRE scores. Some programs do not even request GRE scores. It is impossible to know how much each individual graduate program weighs grades versus out-of-classroom experiences, so I do not think it would be very productive to get caught up in comparing the two. Nevertheless, it is important to think about how these elements combine into your overall application. If an applicant has an average GPA, it will be important for them to have supplemental experiences demonstrating

their overall abilities to graduate programs. Overall, graduate programs will likely consider all components of each application, as they want to know that their students are dedicated and going to put in the time and effort it takes to succeed.

**Scott:** I agree with Julie that modest GPAs will be difficult to overcome without some very impressive out-of-class experiences. Another thing that will cure a modest GPA is the passage of time. A student who takes several years off and gains meaningful experiences in either a research- or practice-oriented job will help dissipate a humdrum GPA. The truth is, sometimes it's easy for admissions committees to eliminate folks with low GPA because they need something to shorten the list. I would mildly disagree with Julie that GPA scores are more important than GRE. Although some programs may be eliminating GREs, the competitive programs will still need something to winnow the list to fit the number of spaces available.

**Mitch:** Admitting faculty are attempting to predict the next few decades of your career from fairly poor metrics of your undergraduate experience. Your GPA depends on your courses, professors, and other potential biases. Faculty know this and there is no set cutoff used for applicants. Lower grades with a great essay is just as good as a 4.0 and a mediocre personal statement. If the GPA is below 3.3 (i.e., a B+), however, it may be important to ask letter writers to comment on whether your grades reflect your true potential and/or consider taking a few masters-level graduate classes to demonstrate that you can succeed in graduate study.

### Should I focus more on acing all coursework that is relevant to my anticipated graduate degree or work on bringing up my overall grade average?

**Julie:** Graduate programs will likely consider your overall GPA but also may pull out your psychology-relevant coursework. It is important to do well in all of your classes, but if you got a C in music theory your freshman year of undergrad, it may not hinder your application. You certainly want to do as well as you can in your psychology-related coursework. If there is something negative on your transcript, it is always helpful to explain what happened, without making excuses, in your personal statement/application. Graduate programs would be interested in hearing how you improved your skills, changed your approach, and utilized support to grow and ultimately succeed.

**Scott:** Julie is correct that bad grades have less impact (a) if they come early and (b) if they are not in your focused area of study. Thus, it is critical to get good grades in your psychology course, particularly your junior and senior years.

**Mitch:** Many faculty will not look at your transcript (i.e., which courses you took) carefully, your Major GPA, or your Jr/Sr year GPA. There are many exceptional applicants, and more time will be spent reading your essay and perhaps even contacting your letter writers. Your ability to convey that you think like a scientist, your familiarity with theories and methods in your chosen area of study, and your ability to generate hypotheses are far more important than grades.



on the American Psychological Association's (APA) Membership Board (2019–2021).



the Soul: Christian Faith and Psychological Research.



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## A Tribute to the Original Three Heads Columnists

This issue is the final installment to be coauthored by Dr. Scott VanderStoep. Scott now joins our first two original experts, Drs. Mitch Handelsman and Eric Landrum, in retirement this year from the Three Heads series.

In all honesty, all three original contributors have been trying to escape from this writing commitment for several years now, but we stubbornly refused to let them go! Together, they have each answered, often quite humorously, more than **eighty questions** about graduate school—answers spanning 10 years and 20 individual articles!

We cannot thank these three enough for everything they have done to support Psi Chi and students interested in attending graduate school. If someone asked us if we would be willing to work with these three again, we would have to flatly say "no!" [Insert laugh track] . . . because in truth we have never seen our experiences with them as "work" at all. [Insert awws]

We hope that you three won't be strangers! If you have an idea for an article, please send it our way. We promise that we won't stretch it out again for another entire decade. (Or will we?)

We wish you all the very best!  
Psi Chi Central Office Staff



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# Eating Ice Cream Does Not Lead to Murder: Association, Correlation, and Causation

Ethan A. McMahan, PhD  
Western Oregon University

Every time I sit down to write one of these columns, my cat comes up and nuzzles my leg. Before you begin to think fondly of my cat (e.g., “Ohhhhhh, that is so cute!”), be advised that his nuzzling is motivated purely by self-interest. My cat is selfish. He doesn’t want my love. He wants food. And he knows that, by showing me love, he is more likely to get fed. He is using affection to get the thing that he wants. He is like a manipulative friend who only calls you when they need something. So what do you think of my cat now? Not so cute, is he? But I digress.

The point is that I have identified an association between my sitting down to write and the cat wanting to be fed. It would be tempting to draw a causal link between these two events: my act of writing causes cats to be hungry. But that doesn’t make any sense, does it? There is no logical reason to think that the act of writing elicits a hunger response in cats. I do, however, have an alternative explanation for this observation. There is not a causal link between these two events. Something else is going on. I write in the morning. The cat has not been fed since the previous evening, has been outside carousing all night, and is therefore likely hungry in the morning ... right when I sit down to do my writing. So it is not my writing that elicits his hunger. It is instead the time of day and, more accurately, the amount of time since he has been fed, which given the regularity of our schedules, neatly coincides

with my writing time. So this association is not causal, but due to a third variable.

Consider this fun fact: Ice cream sales and violent crime are statistically related. As ice cream sales increase, so does violent crime. When ice cream sales decrease, so does violent crime. So it seems pretty clear that eating ice cream causes people to be violent, right? But that seems ridiculous.<sup>1</sup> That can’t possibly be correct, can it? We will return to this example and answer that question a little later. For now, please let me formally introduce our topic. In this edition of my wildly entertaining column on research methods, statistics, and so on, we will be discussing correlation and causation. More specifically, we will discuss statistical associations, correlations, causal relationships, why each of these things are different, and why—repeat this part with me now—correlation does not imply causation. This phrase means that, just because two variables are related, the changes in one variable did not necessarily cause change in the other.

## The Basics

**Association.** Let us begin by defining some terms and outlining some key concepts, beginning with what is meant by

<sup>1</sup> And while the following is only anecdotal, it doesn’t fit with personal experience. If ice cream caused violence, I would have been arrested for multiple egregious acts of violence a long time ago. I love ice cream. Every kind, no exceptions. And, you should too.

“association.” An association is present when dependencies exist between two variables. If there is a dependency, the two variables are associated. If the two variables are independent of one another, no association is present. Easy to say, but perhaps a little difficult to understand. Let me back up.

What does it mean to say that two variables are independent versus dependent? I am so glad you asked. Two variables are independent when the value of one provides no information about the value of another. For example, imagine you flip a coin twice. Does the outcome of the first flip influence the outcome of the second flip? No, it does not. If you get heads on the first flip, that will in no way impact the likelihood of getting a certain outcome on the second flip. In other words, the first outcome (heads) does not influence the probability of a particular outcome on the second flip (heads or tails). More succinctly, the two coin flips are **independent**. Compare that to a situation where you are taking two draws from a standard deck of 52 cards. For the first draw, what is the probability that you will select the Ace of Spades? The probability of that outcome is  $1/52$ , right? Right. Take your card, don't replace it, just set it to the side. Now, for your second draw, what is the probability that you will select the Ace of Spades?<sup>2</sup> Well, that depends on the outcome of the first draw. If you did not select the Ace of Spades on the first draw, then the probability of selecting the Ace of Spades on the second go is  $1/51$ . If you did select the Ace of Spades on the first draw, the card has been removed from the deck, and the probability of selecting it on the second draw is 0. More generally, the probability of a particular outcome for the second draw is **dependent** on the outcome of the first draw.

Okay, how does the above relate to association? Again, an association exists where there is a dependency between two variables. Another way to say this is that an association exists when the value of one variable provides information about the value of a second variable. In the card example, the outcome of the first draw informs your expectations about the outcome of the second draw.

**Correlation.** Now, the terms “association” and “correlation” are often used synonymously, but technically, there is a difference. Correlation is a specific type of association, whereby an increasing or decreasing trend is present. As an example, consider the correlation between standardized test scores and undergraduate GPA. These two variables are associated, but there is also a clear trend in their association. Specifically, higher test scores are associated with higher GPA, whereas lower test scores are associated with lower GPA. So, in addition to being associated, standardized test scores and GPA are correlated. All correlations are associations, but not all associations are correlations.

In research, correlations are often expressed using correlation coefficients, which are numerical indicators of these relationships. These coefficients range from  $-1$  to  $1$  and indicate the direction and strength of a correlation. If the coefficient is positive, the correlation is positive (i.e., the two variables trend in the same direction). If the coefficient is negative, the correlation is negative (i.e., the two variables trend in opposite directions). The strength of the correlation is indicated by the absolute value of the coefficient, with a coefficient of  $0$  indicating no relationship, and those closer to  $-1$  or  $1$  indicating stronger relationships. By far, the most

common correlation coefficient you will come across in the literature is Pearson's correlation, which is typically just called  $r$ .

**Causation.** To wrap this section up, let's discuss causal relationships. A causal relationship is present when one state, event, process, etc. (i.e., the cause) contributes to the production of another state, event, process, etc. (i.e., the effect). Note that the cause needs to be at least partially responsible for the effect, and the effect needs to be at least partially dependent on the cause. Variables that are causally related will be correlated, but there are other important qualities of these relationships. Specifically, there is a time sequence from cause to effect (causes come before effects) and there are often various mechanisms that link the cause and effect. So causal relationships are like associations, in that a dependency exists. Causal relationships are like correlations in that there is often a clear trend in the relationship (e.g., increasing one variable leads to corresponding increases in another variable). But causal relationships are special because changes in one variable *produce* corresponding change in another variable.

## A Brief Interlude

You, dear reader, may now be a bit perturbed with me. Perhaps you feel that you have been tricked. You remember that in my first article, where I introduced this column, I stated that the column would be dedicated to discussing research methods and statistics in a fun and not-boring manner (McMahan, 2021). I said that I would take historically mind-numbing topics, spice them up, and present them in a fashion that is not only informative but also entertaining. Yet, despite me saying this previously, I just had you read the above section, a section that, let's be honest, is a long-winded presentation of three terms: association, correlation, and causation. You were not entertained by this. You believe that reading the above was not fun. You are considering moving on to a different article. Or maybe you will just scroll through your feeds on Instaface, Snapbook, or Tweeter for a while. Let me try to convince you to do otherwise, to convince you to keep reading. First, who do you think you are? The arbiter of fun? Are you the foremost authority on entertainment? If you were, you would know that fun and entertainment are subjective. You might not have enjoyed the previous section, but there are probably lots of people who did. I would be willing to bet that right now, there is some kid in Indiana who is reading the above and having the time of their life. I know that I enjoyed writing it. So take it easy on me, okay? Second, I'm just messing with you. The previous section was a smidge boring, but it is necessary to be familiar with the above in order to understand the fun part, starting below.

## Drinking Whole Milk Doesn't Lead to Divorce

Did you know that the divorce rate in Oregon (the state where I hang my hat) is positively correlated with per capita consumption of whole milk? It's true. Not only is this true, but the relationship is incredibly strong, with the ten-year correlation coming in at a whopping  $r = .90$  (recall that an  $r = 1.00$  would be a perfect relationship). Over the first ten years of the 21st century, consumption of whole milk declined. At the same time, divorce rates in Oregon declined. So it seems pretty clear: if you want to save your marriage, don't drink whole milk<sup>3</sup>. Drinking milk leads to divorce, right? Wrong, so wrong. Here are some other dubious correlations. In the United States, the amount of money

<sup>2</sup> All of you are now singing Motörhead's "Ace of Spades" in your head. You're welcome.



spent on pets is positively correlated with accidental poisonings from alcohol ( $r = .87$ ), sales of new cars are positively correlated with consumption of beef ( $r = .94$ ), and the number of PhDs awarded to women in any field is positively correlated with the total revenue of U.S. ski resorts ( $r = .94$ ). Given the existence and strength of these relationships, should we assume that spending money on your cat puts you at greater risk of poisoning yourself with alcohol? Does buying a new car increase your desire to eat a hamburger, or is the increasing number of female PhDs a windfall for the ski resort industry? No, of course not. Why? Say it with me now, because correlation does not imply causation. Just because two variables are correlated, even strongly correlated, does not necessarily mean that a direct causal relationship is present.

So what else might be going on? For two correlated variables, there are five different explanations for their relationship:

1. X causes Y, also known as direct causation;
2. Y causes X, also known as reverse causation;
3. X causes Y and Y causes X, also known as bidirectional causation;
4. X and Y are caused by Z, also known as a third cause; and
5. although correlated, X and Y are not connected in any meaningful way, also known as a spurious correlation.

Keep in mind that, in each of the above situations, your variables will be correlated, but the correlation by itself tells you nothing about the nature of this relationship other than its strength and direction.

Frequently, people interpret correlations as if there is direct causation (#1, above). But alternative explanations are possible and, in some cases, more accurate. To illustrate, income and self-reported happiness are correlated, and it is often assumed that having more money leads to greater levels of happiness. However, a plausible alternative explanation is that being happy leads to higher income (e.g., happier people may enjoy their job more, be more dedicated, and thus be more likely to be promoted), reflecting reverse causation (#2, above). Drug use is associated with decreased mental health, suggesting that doing drugs compromises one's well-being. Perhaps this is true, but perhaps the relationship is more complicated. Perhaps drug use compromises mental health, leading people to use more drugs to cope with their mental health issues, which then leads to worsening mental health and a downward spiral of functioning. This is a particularly concerning example of bidirectional causation (#3, above). Ice cream sales are correlated with violent crime (told you I would come back to this one). Does consumption of ice cream cause people to be violent? No. What else might be happening here? Well, serious violent crime increases during the summer (for a variety of reasons that are beyond the scope of this article). What else increases during the summer? If you said ice cream sales, you are correct. So ice cream sales don't cause violence. Instead, both ice cream sales and violent crime are associated with a third variable, being seasonality (#4, above).

What about divorce rates and milk? Buying a new car and

eating beef? How do we explain those? Simple: these are examples of spurious correlations (#5, above). They are only related by coincidence. The fact is, if you look hard enough at enough variables, you will find coincidental correlations. Sometimes things go together without rhyme or reason. This is somewhat like two cars traveling the same direction on a highway. Yes, they are going the same direction. But, the reasons for their travel are often very different and unrelated. Consumption of milk has decreased in recent years, for a variety of reasons.<sup>4</sup> Divorce in Oregon has decreased recently, for a variety of very different, unrelated reasons. The trends are similar, but "the why" is different.

## Interesting, But Why Should I Care?

You should care because the above just gave you knowledge, and knowledge is power. A more specific reason is that correlations are one of the most misinterpreted statistics presented in common discourse and the media. By understanding the difference between correlation and causation, you can approach the presentation of research findings with a more critical eye and be a better consumer of information. For example, in one widely publicized quantitative review of research on the relationship between family meals (i.e., sitting down to eat with your family) and adolescent risk behaviors (e.g., drug use and abuse, delinquency), it was found that higher frequency of family meals was correlated with decreased risky behavior in teenage children (Goldfarb et al., 2014). This was then interpreted by news outlets (and, disappointingly, some medical professional and scientists) to mean that eating with the family reduces risky behavior in kids. Parents rejoice! We have found a solution!

Not so fast. The data used in the above review was entirely correlational, so other explanations for the relationship are possible. Maybe there is something else going on. Maybe we have a third cause-type of situation on our hands. It just so happens that families who eat together tend to be closer, more connected, and have more positive relationships (among many other positive qualities). Importantly, closer families tend to also have better-adjusted children. You see where I am going? Indeed, to their credit, the researchers of this study pointed this out, noted that establishing causation was not possible, and further stated that, when statistically controlling for family connectedness (as well as other potentially important factors), the relationship between family meals and risky behavior was less likely to be significant. Still, when the results from this review hit the airwaves, or cyberspace, or whatever, a causal relationship was described. And, in result, millions of parents mistakenly decided to endure regular meals with their petulant children. If you have ever spent time with a typical adolescent, you know how awful that must have been. So much suffering, because a journalist doesn't know the difference between correlation and causation. It's sad.

It should also be stated that, although correlation does not necessarily imply causation, all causally related variables are correlated, and correlations may therefore provide evidence of a causal relationship. This is important because researchers are often unable, for a variety of reasons, to establish causal links between certain variables, so they rely on correlational methods. For example, take the relationship between smoking

<sup>3</sup> Notably, the same trend was observed for skim, 1%, and 2% milk, though the correlations are not quite as large. Perhaps take all milk "off the table" if you want to keep your partner.

<sup>4</sup> I blame our new-found ability to milk an almond.

cigarettes and lung cancer. A great deal of correlational research has found that, if an individual smokes, they are more likely to develop lung cancer than someone who doesn't smoke (United States Department of Health and Human Services, 2014). Why only correlational research? Why hasn't someone determined if there is a causal link? Because to do so in a study would require that researchers make people smoke in order to see if they develop cancer, which is obviously unethical.<sup>5</sup> But that doesn't mean that we should ignore the correlational evidence. In this case, the correlation between smoking and cancer has been found in a multitude of studies, and researchers have diligently eliminated alternative explanations. Indeed, although we have not conclusively drawn a causal link, a massive amount of very convincing evidence strongly suggests that smoking causes cancer. So, although correlation is not causation, strong correlational evidence can establish a likely causal link.

### The Difficulty in Coming to a Conclusion

You might now be confused. First, I told you that one should not assume a causal relationship based on correlational evidence alone. Then, I told you that correlations can provide evidence of a causal relationship. I get it. It is confusing. A good scientist and, more importantly, an educated lay person should always approach the reporting of research with a critical eye and an appreciation of detail and nuance. We, as humans, want things to be simple. But the world is not simple. We want firm answers about matters of importance, but these answers are often not possible. We want things to be black or white. But, alas, there are shades of gray.<sup>6</sup> A good consumer of research recognizes this and never takes a reported finding for granted. I am not suggesting that you should reject all reported research findings out of hand. Instead, when presented with a given result, ask yourself: What is the evidence? How was the research conducted? Does the type of research that was conducted allow for a particular conclusion? If the study was correlational in nature, can we assume a causal relationship? No, we cannot. Does that mean that a causal relationship does not exist? No, it does not. A causal relationship is certainly possible, but it is only one of many different possible explanations of the relationship. Additional research aimed at better explaining the relationship will be required. And the results of that research will be much more interesting, because it is not enough to simply know that two things are related. Eventually, we want to know *how* they are related.

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<sup>5</sup> Experimental studies have found evidence of a causal link between smoking and cancer in nonhuman animal species (e.g., mice). This, of course, raises other ethical issues.

<sup>6</sup> ...and, lots of other colors of varying shades and intensities...many of which we can't perceive directly due to limitations in our visual and neurological systems. That's a metaphor, and a pretty good one.



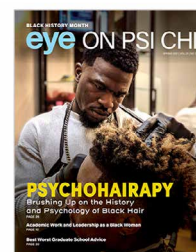
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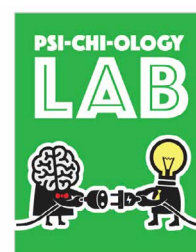
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# NATURE THERAPY

MOVEMENT AND  
MENTAL HEALTH  
FOR KIDS

Cheryl Fisher, PhD, NCC, LCPC  
Alliant International University







Sally, a 5-year-old kindergarten student, continues to get orange marks on her behavior chart at school, which indicates that she has not been making “good choices” in class. On a typical day, Sally arrives at school at 8:15 a.m. and is escorted to the cafeteria, where she can eat breakfast or just sit and wait quietly until it is time to go to class. Once the bell rings, Sally follows along in a straight line to her classroom, where she is to put her bookbag in her locker and take a seat at her desk. On this particular day, Sally sees Katie and begins talking to her about her new puppy. Both girls get a warning for not going straight to their seats. Sally sits in her seat but feels “itchy in her muscles” and begins to wiggle in her chair. She tries to be quiet, but with each twist and turn her chair squeaks. She gets another warning.

Sally is relieved when it is circle time, as she can now sit on the floor. However, her legs get tired in crisscross applesauce, and she needs to stretch them. She stretches right into Adam who yells, “Sally kicked me!” Sally gets another warning. Sally can’t wait for recess when she can stretch her body and not worry about hitting anyone. Only, it is 47 degrees outside, and the school policy indicates that it has to be 50 degrees or above to play outside. Today, recess will be indoors, at tables with games or puzzles. Sally picks out a game and accidentally trips and drops the pieces on the floor. She begins to cry. She is overwhelmed with the need to run, jump, and stretch—and now she must sit still for yet another 30 minutes until lunchtime, where she will sit again. She starts throwing the game pieces all over the room. Sally receives her final warning—and gets an orange on her behavior chart before noon (Fisher, 2019 p. 29).

### Children and Movement

Children are spending less and less time engaging with the outdoors, while the rates of emotional and physical disorders continue to rise (Fisher, 2019; Hanscom, 2016; Jordan, 2014; Louv, 2008, 2016). According to the Center for Disease Control and Prevention (CDC), the average school-age child gets roughly 15–30 minutes of recess per day, often broken into 15-minute increments. Although research suggests that children should engage in daily outdoor play for three to five hours (Hanscom, 2016), they spend at least that amount of time on their digital devices (Fisher, 2019; Hanscom, 2016; Louv, 2016). By no means is technology demonized. However, the increase in device use needs to be mediated with outdoor play (Fisher, 2019; Louv, 2008, 2016).

Children spending hours immobile (e.g., baby seats, bouncy chairs, school desks) and not moving their bodies (Fisher, 2019, p. 30) is resulting in children presenting with developmental delays in basic motor skills of rolling, crawling, walking, and balance (Fisher, 2019; Hanscom, 2016). More children are obese and diagnosed with high cholesterol, hypertension, and type 2 diabetes (Hales et al., 2017; Mayer-Davis et al., 2017). In addition to physical delays and disorders, there is an increase in aggressive and disruptive behavior, resulting in a staggering rate of children diagnosed with attention deficit disorder—inattentive and hyperactive types, oppositional defiant disorder, and conduct disorder (Fisher, 2019). Visser et al. (2014) found a 42% increase in children diagnosed with ADD between 2003 and 2011. Children are not provided ample opportunities to move their bodies in varied ways. Further, children's natural inclination to fidget when their bodies need to move is being punished and pathologized.

Clinical and mental health counseling is a field that can address the mental health needs of children and “involves a professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals” (ACA, 2017). Professional counselors use a variety of creative, innovative and empirically based approaches that promote overall wellness, this includes the integration of nature in clinical practice.

## Nature Therapy: Movement and Mental Health

The natural world provides a multisensory experience that engages the whole brain and whole body in organic ways (Fisher, 2019; Hanscom, 2016; Jordan, 2014; Louv, 2008, 2016). Children need to move. Specifically, children need to move in nature in nondirected ways that allow them to problem solve and navigate diverse terrain and be exposed to multisensory experiences (Fisher, 2019). In addition to improving physicality through movement, engaging in the natural world “enhances the immune system, strengthens the connection between the body and the self, and provides varied physical challenges that build motor skills and self-confidence” (Fisher, 2019, p. 31). Finally, engaging in the natural world

promotes self-regulation and a calm and alert state, organically (Li, 2018).

**Nature Therapy promotes a healthy immune system and a calm and alert state.** The center of the earth functions like a battery, producing and emitting negative ions (Ober et al., 2014). Additionally, green space (e.g., forests) creates phytoncides and terpenes through photosynthesis. When we inhale and absorb the negative ions and terpenes through our interactions in the natural world (e.g., walking on the grass barefoot, swimming in the ocean, inhaling the pungent air in a forest), our bodies respond by lowering blood pressure, cortisol and adrenaline levels, and increasing serotonin, promoting a calm and alert state (Fisher, 2019; Li, 2018). Additionally, exposure to green and blue space promotes the production of Natural Killer (NK) cells that enhance the immune system. Research indicates that just 15–20 minutes of engaging in the natural world will produce these responses that will last up to a week (Fisher, 2019; Li, 2018). Therefore, a walk in the park does so much more than just “clear one’s head.” It reboots the body’s neurology and engages the parasympathetic system, promoting a calmer state.

**Nature Therapy strengthens the connection between body and self.** Navigating the natural world is a multisensory experience, requiring attention to the present moment. The sun feels warm. The water is cool. The body will respond to the external setting with varied responses, such as perspiration or goosebumps. In addition, engaging in nature allows children to experience their embodied self. Running through a meadow, heart beating fast, strong legs powering up a hill. Children begin to connect to the wonderful ways their bodies can move (Fisher, 2019). For example, I was volunteering at a weekend camp for children with disabilities. My buddy was a 10-year-old boy living with cerebral palsy.

While his muscles were contracted and his body was wheelchair-bound, his spirit was fearless. With some accommodations my buddy went swimming in the creek, hiked the trail, and plowed through the fields chasing butterflies. At night he sat around the bonfire with his friends roasting marshmallows, recounting the adventures of the day and gazing at the stars. My buddy’s relationship with his body was one

of awe, wonder, and reverence. He truly knew the meaning of living his embodied self (Fisher, 2019, p. 32).

**Nature Therapy provides physical challenges that build motor skills and enhance self-confidence.** The outdoors provides opportunities to negotiate diverse terrain. Problem solving climbing over a fallen tree on a pathway, catching and releasing tadpoles, navigating slippery hills, all create opportunities for learning new skills and increasing self-confidence (Fisher, 2019; Kahn & Kellert, 2002). Interaction in the natural world allows children to “explore, interact, recognize problems, attempt solutions, make mistakes, and generate more adequate solutions” (Kahn & Kellert, 2002, p. 111). As children master skills, they begin to trust their ability to problem-solve, and navigate their world, both physically and cognitively.

## Nature-Informed Interventions

Engaging in the natural world provides a whole brain, whole body platform that improves immunity, creates a calm and alert state, strengthens the embodied self, and promotes self-confidence. Nature, as a cotherapist, provides sound interventions that are both primal and innovative. There are numerous ways to bring nature-informed work into a counseling practice.

However, here are a few to get you started:

**Prescribe an outdoor activity.** If you are limited in outdoor access with a child, you can prescribe homework that incorporates outdoor time. For example, you can instruct the child to spend 15 minutes outside, two to three times a week, just noticing their natural world. An activity called Sit Spot invites the participant to find a place in nature and just be for a few minutes. The participant should take notice of how they are feeling (inside and outside), as well as what is going on around them in nature. What do they notice? Hear? Smell? Another activity I like is Cloud Spotting where you watch the clouds move in formation. Additionally, I like to invite clients to befriend a tree and spend time with this tree every week. What do they notice? Older participants can take a journal and reflect on their experiences.

**Add outdoor sessions.** If you are fortunate enough to have outdoor space, take your sessions outside. Incorporate



walk-talk sessions, or simply bring a blanket and have sessions in a private outdoor space.

**Incorporate virtual walks or window views into sessions.** Nature therapy can easily be incorporated in telehealth sessions. Invite the participant to look out the window and describe what they see or hear. Kahn and Kellert (2002) discovered that simply looking out at a natural space can aid in self-regulation and improve productivity. Additionally, take a virtual nature walk with the child. Using earbuds for privacy and a privacy screen, invite your participant to take their device outdoors as well and share an outdoor session with the child. You can incorporate such activities as Nature Bingo or Nature Treasure Hunt, while conducting a virtual session.

## Ethical Considerations

It is always important to consider the following when integrating nature activities into your counseling practice:

1. Be certain to add the risks of Nature Therapy (e.g., sunburn, bug bites, allergies) to your Informed Consent form.
2. Discuss privacy and confidentiality issues. Public outdoor spaces cannot easily be regulated. Therefore, remind participants of the restrictions of privacy.
3. Know your participant's relationship with nature. If there are allergies or phobias related to being outdoors, honor the child and do not force the engagement to outdoors. Introduce natural elements slowly and with your client's consent.
4. Seek training. Although we all can include natural elements in our therapeutic sessions, it is imperative to get training in specialized fields. For example, you do not want to "try out" kayak therapy if you have not had training in both the use of a kayak, water safety, and the therapeutic use of a kayak.

It is critical for children to engage in movement, especially nondirected outdoor movement. Yet, they are often restricted due to overscheduling, school policies, lack of exposure, and saturation with digital entertainment. As mental health professionals, we can introduce



therapeutic activities that include natural elements and promote whole body, whole brain engagement. Nature provides the perfect multi-sensory platform for therapeutic interactions to occur that benefit both client and counselor.

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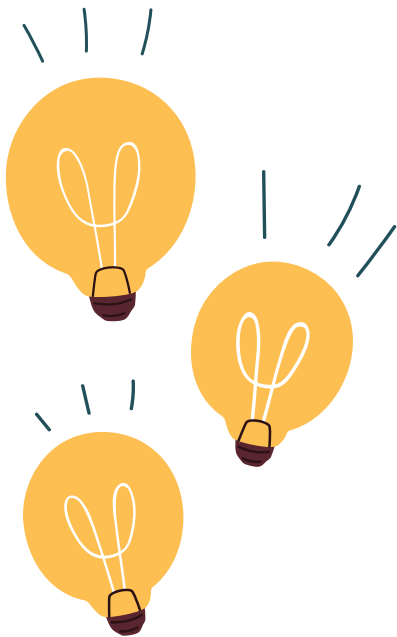
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# Leveraging **Applied Behavioral Science** in Business Settings: **The Field of Organization Development**

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**T**he field of organization development (OD) is a peculiar one for several reasons. The most obvious reason to those of us doing OD work is the fact that the name doesn't give a clear indication of what it means or entails. I was introduced to OD during the final year of my Industrial-Organizational Psychology Master's program at CUNY-Brooklyn College. From the course description, I anticipated that the class had some connection to consulting; it did, but was much more. In fact, if you did a search on the term "organization development" today, you would find a plethora of definitions and still might not fully grasp the meaning. However, one of the most prolific scholar-practitioners in the field of organization development, Dr. W. Warner Burke, a social-organizational psychologist, defined organization development in a way that I believe encapsulates its essence when

he said "[o]rganization development is a planned process of change in an organization's culture through the utilization of behavioral science technologies, research, and theory" (Burke & Noumair, 2015, p.12). The approaches used by an OD practitioner or applied behavioral scientist, like an I-O psychologist for example, allow us to get to the root causes of issues in an organization, which is critical for effective and lasting change. OD is also a collaborative and inclusive process that advocates for involving people in decisions that directly affect them. With this understanding as well as the field's use of particular values and methodological approaches, I embraced the field of organization development as my vocation. This article will discuss the values, methodologies, phases of OD practice, and OD competencies used to support transformations in organizations.



## Organization Development Values

*Use-of-Self.* One of the most important values in the field of organization development is the notion of the “use-of-self.” It means that the person doing OD work embraces and manages their feelings, hunches, biases, perceptions, and interpretations as part of a given OD process. In fact, OD practitioners are encouraged to work on themselves personally and professionally in much the same ways that therapists, social workers, and other helping professionals do. For example, to be an effective coach, one must be coached. In a similar fashion, in my opinion, the best applied behavioral science professionals take the time to understand who they are and how their beliefs could help or hinder the work of supporting change in people, teams, and organizations. Use-of-self in OD removes the false notion of being completely objective. It instead embraces

our humanity and facilitates an opportunity to recognize that our presence will impact and influence the spaces we work in as much as those spaces will impact us.

*Clients Have the Solutions.* Unlike the field of management consulting where solutions are derived from the consultant, OD holds the principle that clients have the solutions and through a series of interventions helps support them in identifying those solutions. This is paramount to long-term change, because when a solution comes from a client, it is more likely to endure than when they are told what to do. This aspect of engaging clients in the development of their own solutions is sometimes referred to as stakeholder engagement. Some of the things involved in stakeholder engagement include formal interviews with people at various levels in an organization to inquire about what they believe is the issue at hand, and then holding brainstorming sessions to capture how to move toward a desired outcome.

The information gathered **may or may not support what the client believes is the actual root of a presenting problem** but will provide **important insight** for the client to determine the **next best steps based on what is.**

### *Collaboration and Inclusion.*

Stakeholder engagement involves several approaches but is ultimately grounded in the OD value of collaboration and inclusion. In so far as possible, OD practitioners who are supporting individuals, teams, and organizations in managing change take steps to involve the people who will be asked to make the changes. This can be done with focus groups, surveys, listening sessions, scenario planning, and alike. It can also look like sharing feedback periodically with people across the organization to inform them of the progress on an effort, or in communicating what has been determined as an approach based on the stakeholder insights that were previously collected.

## Organization Development Methodologies

*Action Research Model.* Like most social science disciplines, OD is known for foundational methodologies that ground our approaches to the work. The first is based on the work of Kurt Lewin's Action Research model. Lewin was a

German-born American social psychologist and his framework for change is captured in a three-step model (Lewin, 1946): (a) unfreezing—planning, (b) changing—action, and (c) refreezing—results. The model also accounts for the OD value that the practitioner is an active participant in the change process. This three-step process is cyclical and makes room for providing feedback in between each step. The first step is where the practitioner gathers initial insights about the presenting issue and comes up with a preliminary action plan. The second step puts the plan into action, and the third step looks to engrain the efforts in a way that will endure. Lewin's work is the basic framework for how many OD practitioners think of change and has been the foundation for many other frameworks used in the field.

*Open Systems.* Methodologies in OD are also grounded in the premise that organizations are systems and we view them as open systems. The essence of this idea is that organizations are affected by their environment and there are several

elements within an organization that impact each other within the system. Lewin's Action Research Model is an example of open systems theory in that there is an input, throughput, and output with feedback loops between each phase. The input stage would start with questions around what is currently impacting the client from the external environment. For example, the economic pressures, competition, business performance, etc. It's helpful to then think about the output. What is the desired outcome? The throughput will help to bridge the input and output with things like leadership and culture dynamics.

*Data Based.* OD work is data based. The action research model gives a basic framework to gather information about a presenting issue and provide feedback to stakeholders on what was found. The information gathered may or may not support what the client believes is the actual root of a presenting problem but will provide important insight for the client to determine the next best steps based on what is. Data is helpful to support the OD practitioner's approaches to designing an intervention instead of relying on their opinions.

## Phases of OD Practice

The actual process of doing OD work requires preparation and scheduling. Burke (2015) summarized OD work as occurring in seven phases:

1. entry,
2. contracting,
3. diagnosis,
4. feedback,
5. planning change,
6. intervention, and
7. evaluation.

Each phase has particular aspects to give attention to, including but not limited to, exploring the match/comfort with the client, evaluating the client's readiness for change, understanding the resources available to do the work, client expectations, ground rules for communication, determining data analysis, evaluation, and feedback, action planning, conflict resolution, determining success, and ending the client engagement. OD practitioners can be internal to an organization or external







to the organization. There are benefits to each, depending on the organization's need, but it is important to know that, either way, an OD professional does not need to be an expert in the business they support. They need only to understand it. Much of the work done by OD professionals is project-based and can be short or long-term engagements. Practitioners can be asked to provide executive coaching, redesign a business unit, or facilitate a meeting between two merged entities. There is endless variety in what the day-to-day work can look like depending on the skills, interests, and unique toolbox of an OD practitioner.

## Organization Development Competencies

If you are intrigued and would like to know more about the skills and competencies that are helpful to being an organization development practitioner, a good place to start is the Organization Development Network (ODN) Global OD

Competency Framework. It has five broad capabilities and 15 competencies to help with career development, professional standards, and a common language for the work of an OD professional. In addition to this, I can't underestimate the value of business acumen. Consider taking a few business classes to strengthen your social science foundation and increase your understanding of the ins and outs of a corporate environment.

*What about qualifications?* There is no single path to becoming an OD practitioner. Many in the field hold graduate degrees in organization development, industrial-organizational psychology, social-psychology, and other related fields. The most important aspect to doing OD work is in embracing the OD values, developing the competencies, and integrating the foundational methodologies in a way that facilitates credibility to the field and those engaging in OD work.

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# TIPS, TRICKS, & INSIGHTS To Ace Your Interview for Doctoral Psychology Admission

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**I**t is early December, and in the last few weeks, you have finished edits on at least a dozen versions of your personal statement, polished your resumé or CV, entered your information on seemingly hundreds of online screens to submit application forms, and nudged your referees to please (please!) send in their letters of recommendation before the deadlines. You are overwhelmed, exhausted, and perhaps even broke. The application season for doctoral programs in psychology is rigorous, tiresome, and laborious, to be sure. If you are fortunate enough to get an interview, or perhaps more than one, you don't have much time to rest however. Within the next few (i.e., 2–8) weeks, preinterviews, or invitations for (virtual or live) campus visits will begin. This brief article will help you get through the next steps and ensure that you survive graduate school interviews, feeling prepared (maybe even excited!), and hopefully with one or more offers of admission. Let's take this step by step, and I believe you will feel even more prepared than you realized.

For instance, you might not have noticed, but the preparation of your application materials actually gave you great training to assist with your upcoming interviews. In particular, the writing of your personal statement was not just a chore, but an educational aid. A good personal statement isn't meant to merely restate your experiences as an undergraduate student, and perhaps as a postbaccalaureate research assistant, but rather it is meant to help you synthesize your thinking about your general understanding of psychological phenomena and reflect on the experiences that resonated with you the most. Consider the reasons why you have developed interests in a specific area of study, and perhaps even propose a general hypothesis or two related to the type of work you would do as a graduate student. These are very important insights because they are exactly what you will be asked to articulate on your preinterviews and interviews. (*Note.* If you don't feel your personal statement helped you achieve a little clarity in these ways, be sure to keep reading articles in your area of interest, so you will be prepared to discuss your ideas soon).

It doesn't take long to start hearing news after you submit your applications.

**Faculty are not necessarily just looking for the person who is the smartest or has the most relevant experience during the admissions process. The interview for doctoral programs in graduate school is like speed-dating, and the result is a mentor–mentee partnership that will last for the rest of their lives.**

Some faculty may start reading applications as they are submitted or very shortly after the deadline, so they can be among the first to make contact with candidates that seem like a potential fit. You may even feel a bit pressured or confused as the universities to which you applied begin to contact you at seemingly random times, all with different expectations, potentially conflicting interview schedules, and varying levels of information about how the process will proceed. If this feels a bit confusing, or even perhaps a bit uncoordinated, that may be for good reason. Before proceeding to explain what the interview process will look like to you as an applicant, let's discuss what the process is like for those reading your applications and making decisions regarding your fate. This insight may help you understand why the interview process may seem somewhat confusing, and also help you to be maximally prepared for success.

### The Faculty Perspective

Faculty who would like to admit a new graduate student are not always permitted to do so. In fact, there may be substantial debate and uncertainty involved on the faculty side, largely having to do with financial matters and where department resources (i.e., to pay for a teaching assistantship) may be allocated. Some faculty may even list on their website an intention to accept a new graduate student, but are not assured they are able to do so until much later in the application

process—maybe even after your interview. As you might imagine, faculty thus may be considerably apprehensive throughout the interview process. Will they find a talented new student? Will they be allowed to make an offer? Will that person accept their offer?

Compounding these fears, faculty receive a remarkably large number of applications for admission to their lab, yet it is remarkably difficult to determine who may be a match and/or a candidate likely to accept their offer. Admissions rates are remarkably low for doctoral programs in psychology. Within clinical psychology, for instance, admission rates are about 8% in the United States, with some programs admitting less than 2% of those who apply. This means that there may literally be dozens of extraordinarily bright, successful, and talented students available for a single admission slot. Faculty often report the agonizing difficulty in selecting candidates for formal interviews. Some of this is due to mostly unhelpful information that is included in application packages. Grade point averages are generally poor indicators of academic potential, since grades reflect variability in universities, course selections, and professors' grading styles. Letters of recommendation are uniformly positive, if not glowing, across the entire application pool, and most personal statements are remarkably similar to one other (see my *Uncensored Guide for Applying to Graduate School* on <https://mitch.web.unc.edu/> for tips on writing an





essay that will stand out). Faculty often read dozens of outstanding applications, but can only select 3–5 applicants for a formal interview. For these reasons, it has become very common for professors to resort to desperate, but perhaps necessary tactics (i.e., using a Google search, reviewing public social media profiles, or backchanneling an applicant's references) to help them make decisions.

By the time interview offers are made, faculty have narrowed their applicant pool from dozens down to only 3–5 applicants whom could potentially fill the available slot in their lab (*Note.* Some graduate programs admit a general class of new students and determine mentor-fit later, but the majority select for a specific lab match during the application process). This is a very small number of students to select from and successfully recruit to accept an offer of admission. This is why the interview process is often less about evaluating the applicants, and more about enticing candidates to accept offers if

they receive one. Of course, it will never feel that way to students—interviews are nerve-racking, unnatural, and students have less power and experience than the faculty. Nevertheless, it is worth remembering that faculty are indeed as anxious about the process going well as the students are.

Faculty are not necessarily just looking for the person who is the smartest or has the most relevant experience during the admissions process. The interview for doctoral programs in graduate school is like speed-dating, and the result is a mentor-mentee partnership that will last for the rest of their lives. Perhaps for that reason, the interview experience includes as much discussion about psychology as it does general topics of small-talk interest (i.e., during receptions, lunches, or even drives to and from the psychology department). Faculty are not necessarily wondering whether the applicants are capable enough to succeed at this stage, as they are wondering, “Do I want to have

a close, professional relationship, and intense interaction with this person for the next twenty to thirty years?”

By the time interview offers are made, faculty have lost all power, and they must sit and wait to hear whether their selected candidate will accept their offer. It's a difficult period of time for mentors; they cannot and should not pressure applicants to make a decision, they do not want their second choice to feel like well, a second choice, and they may have to wait for months before their applicant makes a decision. Professors have imposter syndrome too, and it never feels good to think that applicants are evaluating them, may be talking about their reputations with others in the field, and comparing them and their labs with those of perhaps more senior or acclaimed professors.

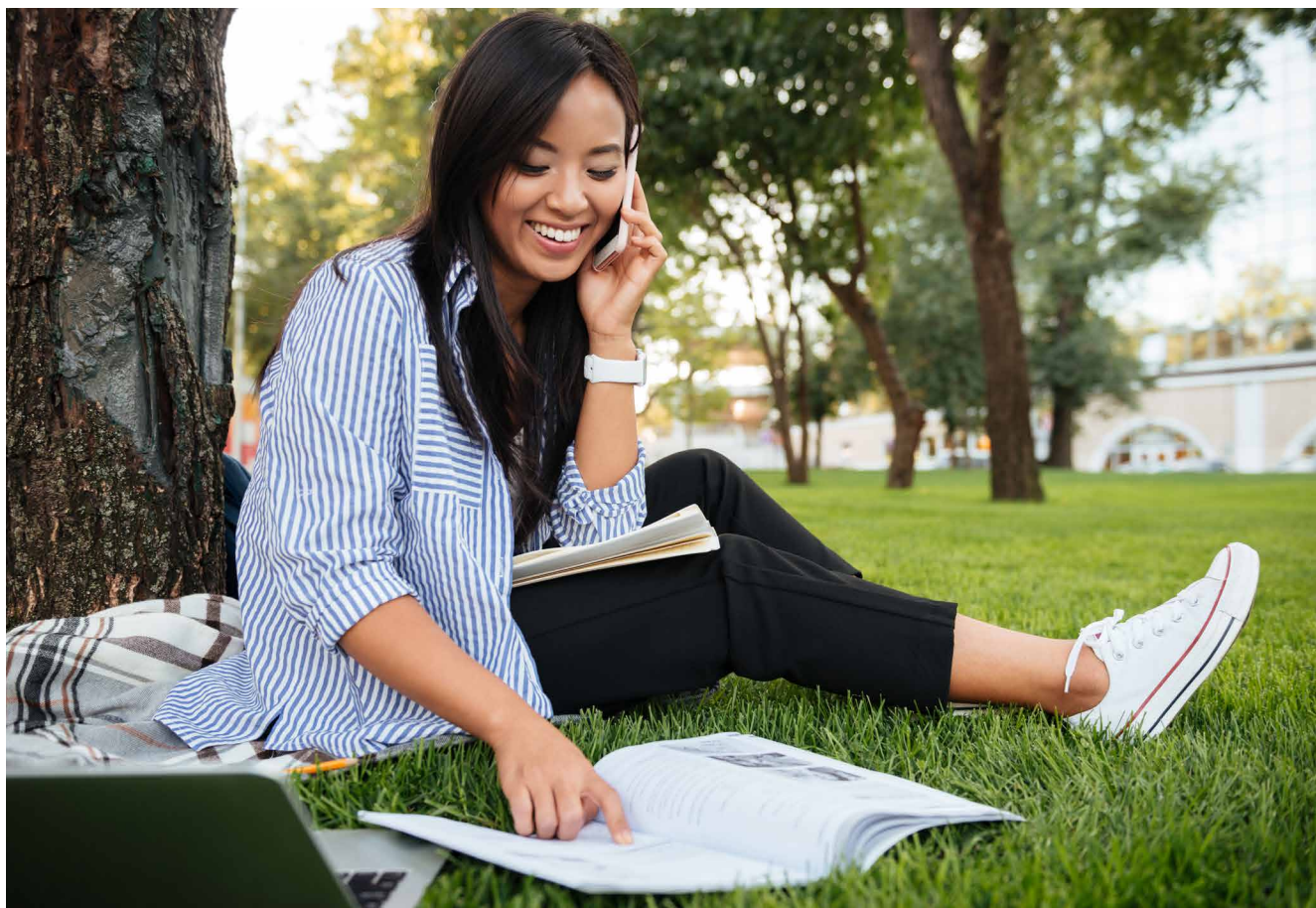
Of course, this is not meant to invoke sympathy among applicants; this process is certainly more stressful and consequential for you than for faculty members. But understanding the perspective of faculty may help you understand a little more about why the interview process can seem so peculiar and uncoordinated. This insight may also help you understand how best to succeed during each of the steps discussed below.

## The Preinterview

For instance, because it has become so difficult to narrow the pool of truly outstanding candidates to only 3–5 for a formal interview/campus visit, many faculty have begun to conduct “preinterviews” with candidates at the top of their list. Note that not all faculty conduct preinterviews, so if you don't hear that you were invited to one, don't worry!

A preinterview may be brief, and might occur on short notice. Some may be based on a structured interview designed to assess an applicant's knowledge or interest in the faculty member's area of research. Others may be quite informal, perhaps designed to offer a simple assessment of “fit” between the mentor's style and the social skills of the candidate. These informal meetings may last only 15–30 minutes, or might include opportunities for more extended meetings with faculty members, and perhaps even graduate students from their lab.

There are several ways you may want to prepare for these interviews. First, it



may be useful for you to keep handy a list of the schools, faculty mentors, and areas of research you expressed interest in when you sent in your applications. You may even want to print this list out on actual paper so you can access it very quickly. A faculty mentor who forgets what this experience is like on your end may call your cell phone and introduce themselves by name, then feel dismayed that you forgot who they are or which university they are calling from.

Second, it will be useful for you to develop bullet points (not a verbatim script!) to discuss your general research interests. You will undoubtedly be asked to discuss these on almost every interview. Remember, your interests will likely evolve as you progress through the preinterview and formal interview process. This is a good thing! Meeting with faculty and graduate students and hearing about so many projects across a variety of labs is a unique educational opportunity that is remarkably different from what most students learn in

undergraduate psychology classes.

As you learn more about research, and you hear more about projects that make you excited, you should revisit your research interests and rehearse again how you would discuss them with potential mentors. For instance, you might have expressed a general interest in studying romantic relationships in your personal statement, but now have refined those interests to be more focused on health outcomes, or the use of mobile devices to measure relationship quality. Expressing these refined interests will help you seem more sophisticated in your understanding of the literature and better able to adapt to an intellectual environment where new ideas and critiques are flowing continuously. No one will be concerned that your interests sound a little more refined than in your personal statement, and your commitment to honesty will help make each conversation with potential colleagues that much more valuable for your eventual decision-making.

Third, be ready to ask a few questions of your own. There will be more time for this if you get a formal interview (and more discussion of this below), but a few questions convey a general interest in the program and an awareness of what you are “signing up for,” which is a marker of professional maturity.

There are several things you cannot prepare to address and that may influence your candidacy. It is really important to remember that these factors are completely and totally out of your control and therefore, you should not blame yourself if you do not progress to the next stage of the selection process. For instance, some faculty mentors like to take someone who has had prior experience that aligns almost perfectly with the types of research questions, instruments, or approaches they rely upon in their lab; others prefer a “blank slate,” who will enter their lab fresh so the mentor can teach you their approaches “their way.” Some faculty may be looking for someone



with experience or interests in a new area of their research—perhaps a topic they have never published on, nor have listed as a research area on their website. Others may just be looking for a good student and have no preconceived preferences about the interests of incoming students, beyond a broad match to their lab.

Maddeningly for applicants, there is no way to know what the faculty mentor may be looking for. Moreover, a faculty mentor may be looking for different things in different years. All of this is to say that your success on a preinterview may depend on a range of factors that have little to do with your performance. It may be best to approach this as a “sorting process” wherein great students find their best graduate homes, rather than an evaluation process weeding out brilliant from less brilliant students.

## The Formal Interview

Whether you had a preinterview or not, you may be invited for a formal interview. In some cases, you may be notified that you already have been accepted and this invitation is more for “recruitment.” But in many instances, the interview is indeed designed to help faculty make admissions decisions. Every program conducts interviews in somewhat different ways, but several common features deserve mention.

**Social Gatherings.** There will be a lot of time during your visit (in person or virtual) dedicated to general socializing. At some programs, you can expect to be picked up at the airport by a member of the graduate program. You may eat many meals together, you may be offered lodging at a graduate student’s apartment, there may be a reception to meet the entire graduate program or department community, and/or you may even visit the faculty mentor’s home for a meal.

Remember this: Everyone you interact with is part of the decision-making process. The students, their partners, the departmental administrative staff handling your schedule or reimbursement receipts, as well as the faculty (of course)—they are all reporting back on their impressions of you to the faculty mentor who will decide your admissions fate. This isn’t meant to freak you out. But it is worth knowing that many people have attended an admissions reception populated only by graduate students, and

**Remember, faculty are not evaluating you as much as they are evaluating fit, so your ability to express what you want, react to the information you hear, ask questions you are generally curious about, or even diverge into general small talk that is unrelated to research are all going to help a lot.**

made choices that they may make at a strictly social event of peers, not realizing that these choices would ultimately be reported back to the faculty to assist in admissions decisions. The same goes for any social media posts about your experiences during interviews. It’s all reported back to the faculty.

**Program Director Overview.** At many interviews, a graduate program director and/or department chair may offer a speech to provide details regarding the program. Assuming you are generally attentive and polite, no one is evaluating your behavior during this speech. However, this is a fantastic opportunity to get important data you may need to decide whether this is the right program for you. Depending on the number of programs from which you received an invitation, or number of years you might have applied, you may feel like you are willing to accept any offer you get.

That would be an awful mistake. A program with an uncomfortable climate, a mentor with whom you do not feel comfortable to grow professionally, or a path that makes you feel “stuck” working on topics outside of your interest will not only lead to an awful five years in graduate school, but also a professional trajectory that could affect your career for years. You have worked so hard, done so well, and have so much potential to make it to this step. You owe it to yourself to go somewhere that will make you feel like you are being supported, educated, and prepared in the best way possible.

So during that speech, listen for signals that the program cares about mentoring, encouraging students toward their own paths, and has students who are happy. Listen for signs that the program is evaluating its own success and seeks input from students on how to be better. Listen for clues that suggest that the program is safe for people with different perspectives, experiences, and points of view. You may find all of these at a “prestigious” program or at a program that is lower on national rankings. In my opinion, it is these qualities that will benefit you more than the external reputation of that program.

**Faculty Interviews.** Of course, you will meet with several faculty as well. Usually these will last just 30–60 minutes, although conversations can continue during receptions discussed above. There are several ways you can prepare to do well in these interviews. First, look up your mentor’s recent work, of course, but keep in mind that what you see published likely reflects work that was completed at least a year or two ago. Instead, look on federal databases (e.g., NIH Reporter) to see if your prospective mentor currently has a grant. If so, read the abstract and you will know what they are working on today.

Second, get as much information as you can from current and former students about your prospective mentor. It is OK to email them before the interview date (respecting their time constraints), or talk with them before your faculty meeting and ask about the mentor’s current work, mentoring style, and emerging research



interests. This will give you a context in which to discuss your own interests and ideas. Be sure you remain authentic to your own interests, but finding “connections” or an understanding of a mentor’s current work can help you feel like a better fit to the lab.

Third, be prepared to ask questions. Many of them! Faculty will be happy to discuss their work, their style, the program, etc., and the more you ask them, the more interested and knowledgeable you seem. There are many lists of commonly asked questions available online (including my own website) to help guide you. But it is best if you can make these questions your own by explaining why you are asking them and what you are looking for. Doing so helps turn your interview into a “conversation” rather than what may seem like a pre-taped recording of pat responses that faculty have provided year after year. Remember, faculty are not evaluating you as much as they are evaluating fit, so your ability to express what you want, react to the information you hear, ask questions you are generally curious about, or even diverge into general small talk that is unrelated to research are all going to help a lot.

Nevertheless, it may seem quite intimidating and weird to ask questions, particularly on your first interview. I recommend an easy solution to solve this issue: read two department or graduate program handbooks. You can usually find a graduate program’s handbook on the web, and it likely has sections reflecting the program mission, faculty, resources, and expectations. Reading even one of these handbooks, let alone two may seem like an incredibly boring task, and you would not be wrong. But doing so will help you start to notice how programs that generally look the same online actually are different. They have different expectations for program requirements (e.g., What do their comprehensive exams look like? Are there different options for completing the dissertation? How are practicum assignments made?), and different personalities. On your first interview you may likely assume that whatever you hear is standard, so you may not have questions to ask. But after becoming acquainted with several programs (i.e., by reviewing a handbook or two) you will start to notice

important differences between programs that allow you to ask informed questions and get answers that will help you make your decisions.

Most programs plan to convene the faculty within a week or two after interviews have been completed, but may not be able to extend offers until funding or department permission has been secured. This gives you some time to send a “thank-you email,” which can be addressed to one person or several at once to convey your appreciation for the remarkable amount of time and effort it takes to organize interview days. These notes also give you a chance to express your interest in the program in clear terms, which may, in fact, influence faculty mentors’ decisions. It is probably best not to be desperate in such communication, but rather to recognize that you are a very talented student with a fantastic career ahead of you. Where you get to begin that career is the question at hand, and this is truly your decision as much as anyone else’s.

I wish you good luck in the interview process. Remember that just getting to this stage is a huge accomplishment and an amazing learning opportunity. This

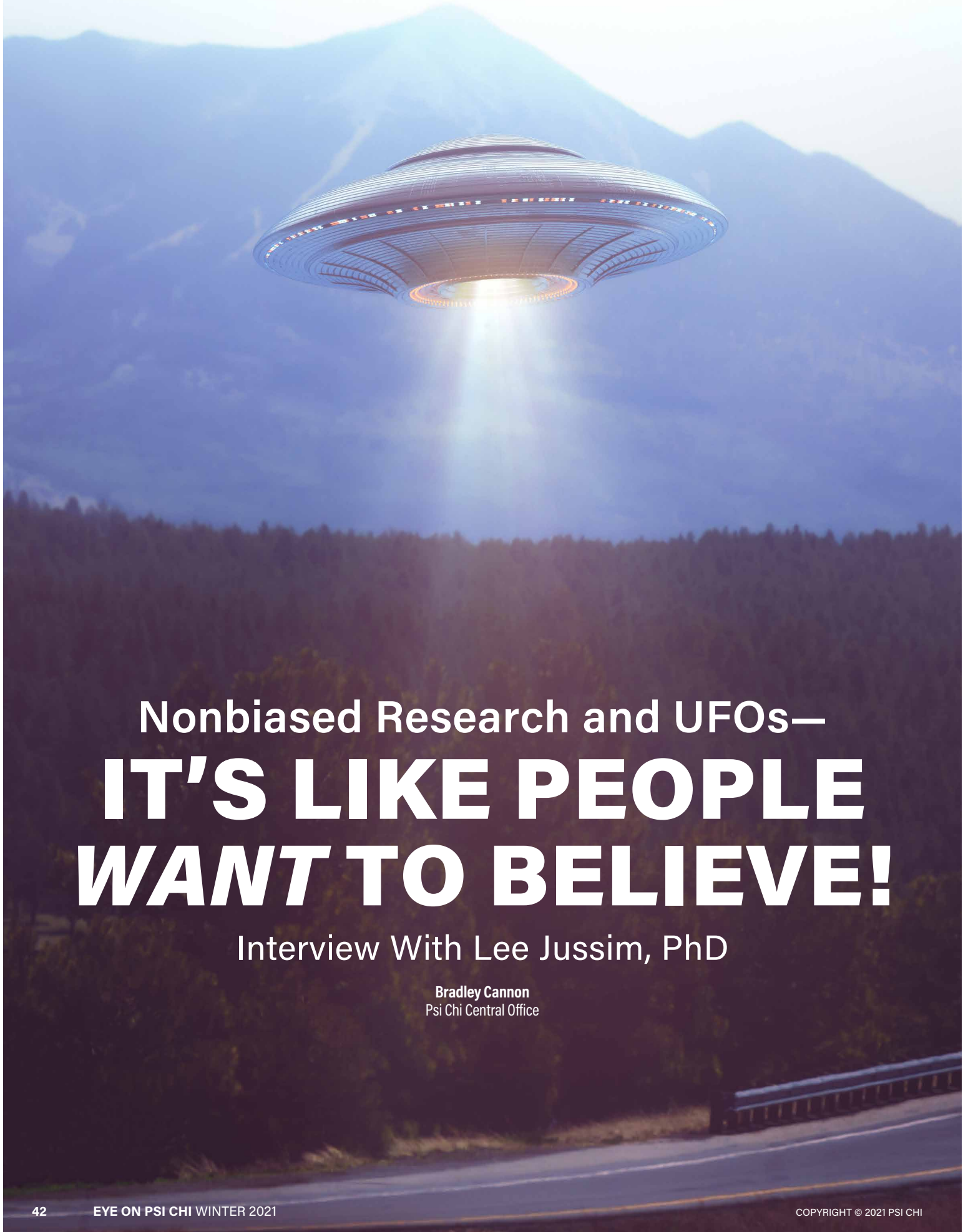
advice, coupled with our own terrific instincts, and experience you amass as you visit different places, will hopefully land you an offer. But more importantly, it will hopefully allow you to find a site that will give you great training that fits your goals and allows you to be happy.



**Mitch Prinstein, PhD, ABPP**, is the Chief Science Officer of the American Psychological Association and the John Van Seters Distinguished Professor of Psychology and Neuroscience at the University of North Carolina at Chapel Hill. He has published over 180 peer-reviewed papers and 9 books,

including an undergraduate textbook in clinical psychology; graduate volumes on assessment and treatment in clinical child and adolescent psychology; a set of encyclopedias on adolescent development; an acclaimed trade book, *Popular: Finding Happiness and Success in a World That Cares Too Much About the Wrong Kinds of Relationships*; and a book of professional development advice, *The Portable Mentor: Expert Guide to a Career in Psychology*. He is a past editor for the *Journal of Clinical Child and Adolescent Psychology*, a past-president of the Society for the Science of Clinical Psychology and the Society of Clinical Child and Adolescent Psychology, and has served on the Board of Directors of the American Psychological Association. Mitch and his work has been featured in over 200 pieces in *The New York Times*, *The Wall Street Journal*, *National Public Radio*, the *Los Angeles Times*, CNN, *U.S. News & World Report*, *Time* magazine, *New York* magazine, *Newsweek*, *Reuters*, *Family Circle*, *Real Simple*, *All Things Considered*, and in two *TEDx* Talks.





# Nonbiased Research and UFOs— **IT'S LIKE PEOPLE WANT TO BELIEVE!**

Interview With Lee Jussim, PhD

Bradley Cannon  
Psi Chi Central Office

## NONBIASED RESEARCH IS OUT THERE. Or is that just what we tell ourselves so that we can sleep better at night?

**D**r. Lee Jussim of Rutgers University has made a career for himself in uncovering flaws in research practices and poking holes in widely believed psychological concepts. He is the author of six books, 100+ articles, and the *Rabble Rouser* Psychology Today blog. During his career, he has supported the idea that biases and self-fulfilling prophecies are generally weak and fleeting and also that people's judgements of others are, in general, reasonably accurate. In this way, he strives to embrace scientific data, even when that data yields unexpected and sometimes unpopular results.

Despite his controversial criticisms of many social science research practices, Dr. Jussim is passionate about communicating strategies for improving people's research skills. For this interview, he shares candid strategies about conducting effective science and pinpoints potential pitfalls in the literature that you might come across—from small sample sizes to outright fraud.

**Thank you for speaking with me today. Could you start by sharing some basic statistics details that you look for in studies in order to begin to trust them, such as appropriate sample sizes and reliability coefficients?**

Sample size is a big one, and that is mainly because small samples have huge uncertainty about anything that they find. Sometimes small sample stuff is exploratory. I think that is a reasonable way to think about it. But historically, the field has acted as if anything published is now a fact and cannot be changed. And that is wrong! Once something is published, that

raises the possibility that we are probably going to need 10 or 20 years of people skeptically evaluating the truth of this one study's inherent claim before we really know whether it is true or not. Part of the solution is replication, but there are issues that go way beyond replication, such as whether findings have been interpreted appropriately.

What I really look for to have confidence is **detail and transparency**. I want the data available in case I or someone else wants to play with it. Without that, I can't really know what to make of a study. And even in the write-up itself, I want to know exactly, in detail, how all of the variables were computed—that is a very simple thing.

For example, let's say you have a two-item self-esteem scale with, "How good do you feel about yourself?" and "How confident do you feel?" You have a 7-point scale where 1 is low and 7 is high. Then, you report the means. Well, what are you reporting? Are you reporting the average of the two? Do you sum the two? Three quarters of reports don't say, so I can't know what to make of the numbers. Be super clear as to what you have actually done. Usually, that means including preliminary tables, tables of means, distributions, and standard deviations. It might involve a visualization of the data, just so I can see it. The absence of that is not necessarily a flag that something is wrong, but I just won't know what to make of it.

**What are some red flags in papers that immediately cause you to be skeptical of them, such as cherry-picking which articles an author includes in their lit review?**

Let's say there is some controversy in the literature. If a paper is crafted as if there isn't any controversy, then that

looks like a bad, bad case of confirmation bias. I can only think of two possible explanations, and both are terrible. Either (a) the authors didn't do it on purpose because they are not aware of the relevant literature, which means they don't know what they are doing and are scientifically incompetent. Or (b) they did it on purpose, which is not how science is supposed to operate.

The big red flag occurs when the main result is barely below .05, like .03 or .04. Good evidence has accumulated over the last ten years or so that those numbers are least likely to replicate and most likely to have been p-hacked. In my lab, we don't usually take findings seriously unless the *p* is below .01.

**I have occasionally seen corrections in articles. But it is rare, and so I wonder how do you know when content is getting outdated, is inaccurate, or has been proven false? Do journals actually put disclaimer statements on their articles where new readers will see it?**

The rhythm in social psychology, which is what I know best, is that there is an initial rush of enthusiasm for certain topics. This goes way back. The earliest case that I know about is from the idea that unconscious motives influence perception, and there were a flurry of studies. Then came popularity for cognitive dissonance in social psychology. It just keeps going on like this, and what happens is that these ideas are very rarely actually refuted after this initial rush of, "Oh my God, we have discovered something amazing!" The skeptics come in next and say, "Not really. Maybe you have nothing here. And even if you have something, it is much smaller than what you thought and claimed. There are many conflicting findings. Sometimes it occurs, sometimes it doesn't." And then everybody loses their trust and moves on.

That is the rhythm in much of psychology. Every once in a while, a famous study fails to replicate, but sometimes that doesn't even shift people's opinion. There is good evidence that famous articles that have been subject to repeat failed



replications continued to get cited at much higher rates than did the failed replications, even after the failed replications came out. In that way, these famous and commonly cited studies are like UFOs—it's like people want to believe.

**I can understand why journals choose papers with significant results. After all, these are the ones that are cited more and receive more prestige. Are there any incentive for journals to start publishing articles, even if they are “nonsignificant?”**

The incentive structure within social sciences academia in general is, in my opinion, not really a validity-seeking system. There aren't really rewards for finding things that are actually true. What there are rewards for is convincing people that you are creative and interesting, because that is what generates citations and a reputation.

Really, academia is a sort of a reputation management system, because something isn't accepted because it is true, but because you know two or three reviewers and an editor like it. Now, maybe their liking of it has something to

Making up data is just so blunt. It requires a certain level of **SOCIOPATHY** that I don't think happens very often. I would give people more **BENEFIT OF THE DOUBT.**

do with its truthfulness, but that is completely unclear. You could hypothetically imagine a different system where someone submits a study to a journal and they only publish it if someone else replicates it. I am not necessarily recommending that, but you can imagine how that would be a truth-seeking system. And yet, that is not what we do.

We instead have a social evaluation system, and this is true throughout the entire system. For example, how do you get into graduate school? You will need a good GPA and maybe some research experience, but one of the big things is letters of recommendation from your faculty advisors. How do you get an academic job? Again, presumably publications are needed, but your acceptance is also heavily influenced by letters of recommendation, especially those from famous people at prestigious institutions. That is how you get tenure also. Every step of the way is influence by these sort of social evaluation reputational things.

That is why journals and social scientists love flashy findings. And why wouldn't they? These are how you break through the noise. Everyone has limited attention spans, and there is only so much time and effort you can spend on anything. If you do a technically sound study about some small sliver of life, then that is Ok. But instead, you are probably going to then return to something like social justice, right? That is probably going to make a splash rather than some technically sound smaller thing. That is how the system works, and it is kind of off-kilter.

**So let's talk about fraud.**

My gut is that fraud is not really that much of a problem, but maybe I am naive.

A Dutch study came out recently claiming that something like 8% of Dutch faculty say they have made up data. That's a lot! And without naming names, at least one person very prominent in the sort of reform movement in psych said to me that he believes fraud is much more common than we give it credit for. He has tried to replicate zillions of studies and many don't replicate, so he feels the only way this would happen is people making stuff up. I believe he was earnest, but that doesn't mean he is right.

Making up data is just so blunt. It requires a certain level of sociopathy that

I don't think happens very often. I would give people more benefit of the doubt. There is however, incompetence and many biases in the system such as confirmation biases, political biases, theoretical biases, and status. But these are different than fraud, such as changing an answer from three to six. I just can't imagine that many people purposely do that.

**Are there any ways for a reader to identify made-up numbers? How do these fraudulent authors usually get caught?**

It helps to be basically numerate, and by that, I mean having eighth-grade math mastery at your fingertips. You don't need algebra. Surely, you don't need trig or calculus. Here is a really simple way to tell something is wrong. The means have to be reported to the correct digits, given the sample size. As a very simple example, if there are ten subjects, ten people per cell, and the main dependent variable is on a 1–7 scale, then the means have to make sense. They can't be in hundredths, because there is no value of any combination of 1, 2, 3, 4, 5, 6, 7 that, when divided by 10, is going to end up in hundredths. It is not numerically possible, so that is an easy example. It is just as true if you have 13 per cell. Certain numbers are possible, and others are not possible. To correct honest errors, people should probably use these systems for their own work.

**Let's say you published an article citing another study that was totally debunked, maybe before you published or maybe after. What should you do if anything and what actually happens?**

This question is easy to answer: Nothing happens.

**Should you put a correction on your own paper? Should you write a blog post?**

Nobody does that. I have never done that. I don't know if I have ever cited a debunked paper, but maybe I have.

“Debunked” is really unusual, right?

This is not counting registered reports, which I think are kind of near gold-standard level. But compared to the other literature, I might actually give **MORE CREDENCE** to conference presentations than to journal articles.

Let's say a paper has been subject to failures to replicate. That doesn't exactly mean that it has been debunked. To me, the thing is that you are not wrong for citing it; you are wrong for citing it and not acknowledging the failed replications. That is the real issue.

Let's say it has been debunked. Actually, I saw this on Twitter recently with this Cornell food researcher, Brian Wansink. There was rampant error—people believe there was actually fraud—and he eventually resigned from his position. His stuff has been widely discredited. Somebody later took to Twitter to say that an entire book or paper—I don't remember which—built on the ideas of that research is ridiculous because this entire line of research has been discredited. So that is a real-world story about someone citing discredited research and, as far as I can tell, nothing happened other than somebody got mad about it on Twitter.

I sometimes see articles that mostly cite only journal articles. And then I sometimes see articles that cite conference posters, unpublished or articles under review, podcast episodes, book chapters, and so forth.

Should those materials be taken as seriously as the journal article citations? Do you think they have as much of a place in the research?

The short answer is that I do.

This is not because I think conference presentations, book chapters, and unpublished stuff are stunningly high in credibility and validity, but instead because I think the published journal articles are relatively low in credibility or validity. So that really shrinks the difference.

Of course, you do need to be careful. For example, let's say you are citing a book chapter that is sort of a review and reached certain conclusions based on the literature. When you cite it, you want to be really clear that you are not citing it as having found something, because it didn't.

I would be surprised if evidence was ever discovered for more validity of claims in journal articles than in conference presentations, unpublished papers, or book chapters. The conference presentations need only achieve 50/50 accuracy. If there is a 50% chance of the conference presentation being right, then it is as good as the published literature, and I think that is probably fair, actually. In fact, if anything, there aren't publication biases for things like conference presentations. They are often not as well-written and might be written by undergrads, but that's a different issue than whether the findings would replicate. This is not counting registered reports, which I think are kind of near gold-standard level. But compared to the other literature, I might actually give more credence to conference presentations than to journal articles.

Wow, I have never, ever heard anything like that. It's a huge wakeup call for someone to say that the biases of peer review publications might actually overwhelm the benefits! Could you share about these biases? How did you come up with 50/50 accuracy?

Again, registered reports are very sound. But yes, I think the biases in peer review really are very pervasive. As I [recently wrote about](#) in the *Rabble Rouser* blog, a review article set out to determine the effectiveness of antidepressants, and 50% showed they were effective and 50% showed they weren't effective. And yet, through a series of biases, 95% of the published literature on the subject touted the effectiveness of antidepressants.

Nearly all of the articles with significant antidepressant effects were published, but most of the ones that were nonsignificant or in the wrong direction were not published. And it just gets worse from there. Authors also cherry-picked information in order to highlight some findings and spin the results. For example, let's say they had a mixed pattern of results; the spin would be to place all of the emphasis on the positive results. In instances of **selective reporting**, they didn't **spin** at all, but instead only reported the one variable that worked and not the others. Finally, **citation biases** occurred also when people cited only the effective studies seeming to show antidepressant effectiveness.

This example doesn't involve politics. There is no involvement of the left, right, Democrat, Republican, social justice, or injustice. It is not about stereotypes, prejudice, inequality, trans rights, or any of these hot button issues at all. It is instead about antidepressants. And yet, by the end of that process, 95% of the literature touted the effectiveness of the antidepressant medications even though the underlying literature was only half effective and half ineffective. That is what leads me to be very skeptical about the state of the literature.



**Lee Jussim, PhD**, is Distinguished Professor and Chair of psychology at Rutgers University (NJ). He has published over 100 articles and chapters and six books. His book, *Social Perception and Social Reality*, contested and debunked the psychological canon that people

were mostly big bad bags of bias, and showed that, instead, across many of the types of situations, people's judgments were often reasonable, rational, and accurate. This book received the American Publishers Award for best book in psychology in 2012. He is a founding member of Heterodox Academy and the Academic Freedom Alliance. His Psychology Today blog, *Rabble Rouser*, recently surpassed a million page views.

# Submission Guidelines

With more than 1,180 chapters, Psi Chi members can make a significant impact in their communities. Reviewing Chapter Activities in *Eye on Psi Chi* is a great way to find inspirational ideas for your chapter and keep in touch with your chapter after you graduate.

Activities are listed in the following categories:

- COMMUNITY SERVICE
- CONVENTION/CONFERENCE
- FUND-RAISING
- INDUCTION CEREMONY
- MEETING/SPEAKER EVENT
- RECRUITMENT
- SOCIAL EVENT

Share your chapter's accomplishments with others in the next issue of *Eye on Psi Chi*! Chapter officers and advisors are encouraged to visit [https://www.psichi.org/page/eye\\_activity](https://www.psichi.org/page/eye_activity)

## Submission deadlines\*

Fall: June 30  
Winter: September 30  
Spring: December 15  
Summer: February 28

\*Reports received (postmarked) after the deadline will appear in the next issue of *Eye on Psi Chi*.

## ABBREVIATIONS

ACHS	Association of College Honor Societies
APA	American Psychological Association
APS	Association for Psychological Science
EPA	Eastern Psychological Association
MPA	Midwestern Psychological Association
NEPA	New England Psychological Association
RMPA	Rocky Mountain Psychological Association
SEPA	Southeastern Psychological Association
SWPA	Southwestern Psychological Association
WPA	Western Psychological Association

## CHAPTER ACTIVITIES

### EAST

#### Fordham-Lincoln Center (NY)

**SOCIAL EVENT:** The chapter had another active season in the summer of 2021. For the first time in 38 years, due to COVID regulations on campus, the chapter held its joyous gathering and induction ceremony off campus on the elegant rooftop of 230 Fifth Avenue in Manhattan on August 6 and August 27, at the invitation of Andy Troy.

**INDUCTION CEREMONY:** On September 24, the chapter hosted its first on-campus induction since 2019, with Deans Laura Auricchio and Elaine Congress. Dean Auricchio's storied great-uncle Luigi Auricchio was the **Rector of the University of Naples from 1939-43.**

**MEETING/SPEAKER EVENT:** On September 10, the chapter cooperated with the APA and the Psychology Coalition at the United Nations (PCUN) to host a global webinar on "Resources for Students in International Psychology." This event featured 11 experts: Daniel A. Balva, MA (U Georgia), Elaine P. Congress, DSW

(Fordham), Harold Takooshian, PhD (PCUN), Lawrence H. Gerstein, PhD (Ball State U), Teresa Ober, PhD (Notre Dame, IN), Gabriel Twose, PhD (APA), Martha S. Zlokovich, PhD (Psi Chi), Ani Kalayjian, EdD (Teacher's College), Shenae C. Osborn, LMSW (Fordham), Luca Tateo, PhD (Norway), and Pina Marsico, PhD (Italy).

### MIDWEST

#### DePaul University (IL)

**INDUCTION CEREMONY:** The Psychology Department hosts an Annual Psych Night, an event dedicated to recognizing the excellence and achievements of psychology students. This is also when the chapter hosts its induction ceremony. This year the chapter welcomed 48 new members, on Zoom, all of whom were recognized for their academic accomplishments, dedication to the study of psychology, and deep interest in advancing the field of psychology. Additionally, new officers were introduced and inducted as chapter leaders for the next academic year.

**RECRUITMENT:** The chapter attended the university's fall involvement fair,

along with other student organizations. They handed out candy and flyers that advertised Psi Chi's first event of the year. The chapter created a poster for the event, including the mission and aims of Psi Chi, the eligibility requirements to join, and the chapter's past accomplishments. The officers spoke to several undergraduate and graduate students about Psi Chi and their interests in psychology. Students interested in joining and attending future meetings and events provided their name and email to the officers.

**MEETING/SPEAKER EVENT:** The chapter hosted a research lab matchmaking event on September 29, 2021, where representatives from various DePaul psychology research labs (faculty and graduate students) described their ongoing projects and explained how students could join their labs. This event was held in a hybrid format, broadcasting over Zoom, along with an in-person audience. The chapter was pleased to host more than 50 members who engaged with our presenters and were excited to learn about the research opportunities available this year.



**Top:** On September 24, an on-campus induction for the **Fordham-Lincoln Center (NY)** Chapter took place with Deans Laura Auricchio and Elaine Congress.

**Middle:** On August 27, the **Fordham-Lincoln Center (NY)** Chapter hosted a festive off-campus gathering on the roof of 230 Fifth Avenue.

**Bottom:** **DePaul University's (IL)** David Taullahu (president) introduced the psychology research speakers at a research lab matchmaking event, which was held in a hybrid format.







## SOUTHEAST

### Campbell University (NC)

**COMMUNITY SERVICE:** The chapter spread encouragement through Cards of Light in 2021 by partnering with Second Wind Dreams to bring joy to long-term care residents. Through the Cards of Light program, members encouraged Campbell students to create inspirational and uplifting cards using craft materials provided by the chapter. During the pandemic, some long-term care residents were unable to meet with their families and recreation programs were discontinued. This led to increased feelings of depression and isolation. In writing these cards, students reminded residents that they were not alone and that there are people out there who care!

### West Virginia University

**MEETING/SPEAKER EVENT:** During the September meeting, the chapter hosted speaker Annie McFarland, MS, ATR-BC, who is a board-certified registered art therapist and art educator, as well as the head of the Art Therapy Program at West Virginia University. Art therapy has recently been added as a new bachelor of arts degree at the school, and combines art making with psychology and counseling skills. McFarland gave an excellent presentation on the new program including the benefits of art therapy and the different places where art therapy is practiced. After she spoke, McFarland led chapter members in a creative art making experience that promoted self-expression and provided ways to apply this kind of therapy to improve overall mental health and wellness.

**RECRUITMENT:** The chapter attended the university's student organization fair, one of the first in-person events

held on campus this year. A table was set up at the event, and chapter officers in attendance spoke with interested undergraduate students about the advantages of joining Psi Chi.

## SOUTHWEST

### Universidad del Valle de Guatemala

**RECRUITMENT:** The chapter shared several social media posts informing potential members of the chapter's recent activities and current members. The chapter also organized a special meeting through Zoom and visited psychology courses at the university to answer questions and provide personal assistance throughout the application process.

**MEETING/SPEAKER EVENT:** The chapter organized a webinar discussing different topics related to mental health during the Covid-19 pandemic to commemorate the International Suicide Prevention Day in September. This webinar included three special guests from the Latin American region: Dr. Carolina González, board member in Asociación Chilena de Estrés Traumático; Dr. Silvia Pugliese, vice president of Asociación Latinoamericana de Rorschach; and Dr. Diego Castrillón, president of Sindicato de Psicólogos y Psicólogas de Colombia. This activity reached students and professionals in the field.

**MEETING/SPEAKER EVENT:** The chapter organized an online film discussion to analyze the story of Ted Bundy from a forensic psychology perspective. The activity was transmitted online through the chapter's Facebook page. This discussion was led by Inés Castañeda, MA, faculty member at Universidad del Valle de Guatemala (UVG).





Conmemorando el Día Internacional de la Prevención del Suicidio,  
La Asociación Amavida, La Asociación Estudiantil Psi Chi y  
El Departamento de Psicología de Universidad del Valle de Guatemala  
presentan la conferencia:

## RESPUESTAS ANTE LOS IMPACTOS DE LA PANDEMIA EN LA SALUD MENTAL

**11 DE SEPTIEMBRE  
16:00 HORAS**

**Ingreso Gratuito:**  
<https://bit.ly/2WSMm9p>

Meeting ID: 934 6545 8312  
Passcode Zoom: 432979

*Top left:* DePaul University's (IL) Elizabeth Walsh (left; secretary) and Tess Hasan (right; treasurer) recruited new members at the university's student organization involvement fair.

*Top right:* The West Virginia University Chapter hosted Annie McFarland, MS, ATR-BC. Also on display was the "world's largest collection of Psi Chi T-shirts" from Dr. Dan McNeil (advisor).

*Middle:* The Campbell University (NC) Chapter spread encouragement through Cards of Light.

*Left:* An invitation for a suicide prevention event at the Universidad del Valle de Guatemala.





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## Show Us What You Got!



Post your photos on social media using **#PsiChi**

### HAVING TROUBLE DECIDING ON WHAT TO GET NEXT?

These Are a Few of Our Favorite Things:



**Graduation Regalia**



**Hoodies**



**Water Bottles**



**Certificate Holders**



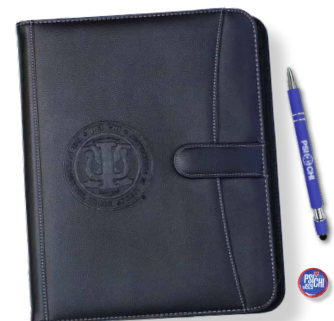
**Baseball Caps**



**Socks**



**Psychology T-Shirts**



**Accessories and More!**

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