MAKING NICE

How giving and gratitude can rebuild connections and break down barriers
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Presidential Column
What Is Systemic About Systemic Racism?

A Tribute to James S. Jackson

In addressing the United States’ entrenched racism, Shinobu Kitayama reflects on the social institutions that undergird it and the pioneering researcher who fought for the cause of documenting and understanding Black lives.

The Social Mind: Language and Other Human Tricks

How information is transmitted through speech varies tremendously among some 7,000 languages. Psychological scientists explore the myriad ways that language shapes our thinking, including its role in how we understand and reason about the social minds of those around us.

Remembering James S. Jackson (1944–2020)

The pioneering social psychologist, known for his research on race and ethnicity, racism, and health and aging among African Americans, is remembered for his extraordinary vision, innovative scholarship, infectious optimism, and generosity as a mentor.

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Teaching Current Directions in Psychological Science

Understanding Personality Stability and Change
By C. Nathan DeWall
Students can complete a brief personality inventory, followed by some reflection exercises.

Building New Cultures of Sustainability
By David G. Myers
The possibilities for student engagement can include small group or class discussion questions.

Sonja Brubacher on Best Practices for Investigative Interviewing
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Dr. Roboto
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“By the time I had to commit to applying to graduate school, the United States was 3 months into quarantine. With a global pandemic in full swing, tensions stirring around an upcoming election, and racial injustices taking center stage, I realized it was more important than ever to consider what was truly important in my life.”
—Jonathan Daniel, Student Notebook, Page 51

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Thinking back on a time you encountered false information or “fake news” may prime your brain to better recall truthful memories.

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The Mystery of Playing With Fear (Podcast)
New research shines a haunting light on the mind-body connection between fear and fun. An interview with Marc Malmendorf Andersen and Mathias Clasen, Aarhus University.

Research Topic: Hope
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WHAT IS SYSTEMIC ABOUT SYSTEMIC RACISM?

A Tribute to James S. Jackson

By Shinobu Kitayama
APS President

On May 25, 2020, in Minneapolis, a White police officer brutally murdered George Floyd. To eyes watching from every corner of the globe, this tragic incident revealed racism that pervades America. While racism surely is in the heads of people who espouse racist ideologies, these ideologies are also inscribed into our daily social interactions. They are woven into the policies and practices of our criminal justice institutions. They are entrenched in institutions of employment, education, finance, housing, and health. Through this ongoing social process, racist ideas and practices are shared, if often implicitly and subconsciously, among most of us in society (Banaji & Greenwald, 2013; Eberhardt, 2019; Jones, 1996; Jones et al., 2013; Markus & Moya, 2010). In this column, I want to reflect on racial economic disparity and social institutions that undergird racism in America—particularly racism against Black Americans.

Black Lives Matter
I cannot discuss this topic without paying a deeply felt tribute to James Jackson. I had the privilege of working with him as a colleague over the last two decades. Sadly, pancreatic cancer took his life earlier this fall. He passed on September 1.

After graduating from Michigan State University, James moved on to study social psychology at Wayne State University. He got his PhD in 1972 and started his career at the University of Michigan. The rest was history. He pioneered a new social science field focusing on Black Americans, illuminating social structural constraints on their health and well-being. He led the world’s premier research institute in social sciences, the Institute for Social Research. He advised President Obama. He established a solid foundation of survey and experimental research for the study of Black Americans. He mentored and promoted a generation of Black professors, research scientists, and practitioners of the science of diversity and inclusion.

Throughout his life, James fought to show a White world that Black Lives Matter. His proposal of the first nationally representative survey of Black Americans was a radical notion that many social scientists fiercely resisted. Until George Floyd was killed, the fact that an implicit White supremacy structures American society did not enter the consciousness of a majority of Americans. Nor did it seriously challenge the collective conscience. For more than four decades, however, James had insisted that Black lives must be studied with respect, documented with rigor, and incorporated into our understanding of human social behavior.

The key construct for James was “environmental affordances.” The environments of many Black Americans—the legacy of slavery, segregation, discrimination, and a pervasive anti-Blackness—are severely under-resourced and disadvantageous. Medical and social services are lacking. Housing is congested. Healthy foods can be hard to come by. Schools are underfunded. Financial services are predatory. Neighborhoods are overpoliced but under-protected. These environmental features make...
COVID-19 hit earlier this year, my America in general. Nevertheless, when in particular or the problem of race in was unmistakable and radiant. In the However, his passion for that research was evident even before his pioneering work. He drew the attention of the field to the remarkable resilience of Black people in the face of such affordances. This resilience, he insisted, must be studied and documented. The National Survey of Black Americans, started in 1977 under his leadership, embodied this belief and philosophy (see Taylor et al., 1997).

From the beginning of his career, James fought for the cause of documenting and understanding Black lives and the psychology underlying them. Notably, he defied the conventional wisdom that one must compare Blacks with other groups, particularly the White majority, to document the realities of Black lives. What counts, James said, is to document and study the resilience with which many Black people prosper despite all the powerful forces of racism. For this purpose, the “White control group” is not needed.

COVID-19 Pandemic
James was the social psychology program chair at the University of Michigan when I entered its graduate class in the early 1980s. He organized a seminar for incoming graduate students. I was fortunate to have numerous conversations with him. We didn’t talk much about his budding work on Black Americans. However, his passion for that research was unmistakable and radiant. In the ensuing decades, I never studied Blacks in particular or the problem of race in America in general. Nevertheless, when COVID-19 hit earlier this year, my previous interaction with James drew my attention to the distressing degree of racial disparity that was laid bare.

With no effective leadership from the White House (editors of the New England Journal of Medicine, 2020), America struggled to cope with the pandemic. Many people died. Further, it became increasingly clear that underprivileged minorities, particularly Blacks, Hispanics, and Native Americans, accounted for a disproportionate number of the deaths. Why? Commentators and medical experts drew our attention to the preexisting medical conditions of many people in these communities, including obesity, diabetes, and cardiovascular disease. To be sure, these conditions make people more susceptible to COVID-19. However, what is the cause of the preexisting conditions? The short answer lies in James’s environmental affordances for misery. But what is it in the environmental affordances that killed so many people in the minority communities?

One important clue is in the writings of David Williams, a prominent sociologist at Harvard. He was among the first to point out the potentially lethal effects of residential segregation in many American cities. This particular variable, he wrote, is one of the “spiders’ responsible for creating the web” of causation that leads to “a pervasive and persistent pattern of racial disparities across a broad range of health status” (Williams & Collins, 2001, p. 413).

The fact that many American cities are highly segregated has long been acknowledged (Massey & Denton, 1989). However, did racially segregated cities suffer more during the pandemic? We have recently explored this question by using daily counts of COVID-related deaths at the county level (Yu et al., 2020). We looked at the 100 largest American metropolitan areas, which are segregated to varying degrees. One can characterize the extent of segregation between two groups by calculating what proportion of people from each group must be relocated before the distribution of the two groups is no different from random. If this proportion goes up, the metropolitan area at issue is more segregated. For example, Chicago is quite high in segregation between Blacks and Whites; in fact, more than 70% of its residents would have to be relocated to eliminate segregation.

I must note another important consideration in drawing an intercity comparison like this. The metropolitan areas may vary in their capacity to perform diagnostic tests or in the criteria for judging whether any given death is COVID-related. Important as these factors are, however, they are unlikely to vary systematically within a short span of time—say, for a few weeks in any given metro area. So, following our earlier work (Berg et al., 2020; Salvador et al., 2020), we reasoned that we could minimize these confounds’ impact if we tested the daily increase in deaths over a short study period. Keeping the study period short was also important because growth is known to take an exponential function only during the initial period of an outbreak. For these reasons, we looked at the first 30 days of county-wide outbreaks.

We fitted an exponential function to the data and tested whether the growth might be steeper in more segregated metropolitan areas. We controlled for population size, population density, and the share of Blacks, Hispanics, and Asians in each area, among other variables. The results were very clear. Figure
1a plots the regression coefficient (indicating how steep the growth is) as a function of Black-White segregation. The growth curve became steeper as the degree of segregation between Whites and Blacks increased. A comparable pattern was evident when segregation was assessed between Whites and Hispanics (Figure 1b). No such pattern was evident as a function of White-Asian segregation (Figure 1c).

Invisible Racism

How might racial residential segregation contribute to the vast human toll of the pandemic? In all likelihood, one potent piece in the “web of causation,” as Williams put it, lies in wealth disparity. Over the last several decades, there has been little change in the racial gap in household wealth. Wealth is greater, by a factor of 7 or 8, for Whites than for both Blacks and Hispanics (Pew Research Center, 2016). Racial segregation in any given metro area results in concentrated poverty in minority racial enclaves and concentrated wealth in White enclaves. As noted above, poverty in minority enclaves precipitates a shortage of all sorts of resources, from medical and social services to healthy foods. Moreover, during the pandemic, residents of poor areas often have no choice but to expose themselves to infection risks at workplaces. Collectively, these realities also add to the systemic racism (and James's environmental affordances) in America and contribute to disproportionate deaths during the pandemic in these areas. The analytic focus on wealth disparity also helps explain why Asian-White residential segregation has little impact on health outcomes since there is little wealth disparity between Asians and Whites.

In a recent piece in the Atlantic, Jennifer Richeson, a Yale social psychologist and former APS Board member, argued that there is a mythology of racial progress in America (Richeson, 2020). With Michael Kraus and other colleagues, she showed that a representative sample of Americans vastly underestimated the wealth disparity between Whites and Blacks, believing that much progress had already been made to eliminate the problem of racism (Kraus et al., 2019). “The respondents in our study significantly overestimated the wealth of Black families relative to that of White families,” Richeson said. “In 1963, the median Black family had about 5 percent as much wealth as the median White family. Respondents said close to 50 percent. For 2016, the respondents estimated Black wealth to be 90 percent that of Whites. The correct answer for that year was about 10 percent” (Richeson, 2020). The mythology of racial progress fuels unsubstantiated optimism about racial equality. It may therefore help perpetuate systemic racism in America.

The data summarized in Figure 1 make it clear that racial segregation has lethal impacts, likely mediated by continuing racial wealth disparity. A deep irony is that many Americans seem to be unaware of the powerful effect of wealth disparity in separating Whites from individuals in underprivileged minority groups.

Race as a Process

The effort to link racial residential segregation to human suffering during the pandemic has brought my research journey full cycle back to James. In his approach to the problem of racism, he taught me that if we conceptualized race as a property of individuals, we would miss the target completely. Race is socially, historically,
George Floyd’s murder: “We should not think of the next year or two as the start of a decade or more of incremental progress. We should think of the next year or two as all the time we have, and a last chance to get it right.” All the more, I think it is crucial for us to follow James’s footsteps to renew our commitment to further the science of psychology grounded in an explicit understanding of racism at work, in both history and everyday life today.

References


and politically afforded (Markus & Moya, 2010). It is a construction that is continuously reconstituted. But if you get the impression that racism is less real because it’s constructed, you are wrong. This construction is anchored in many facets of our social reality, including but not limited to racial residential segregation.

No matter how natural it might seem at first glance, this social reality is a consequence of an infinite series of decisions, policies, and institutions that have been motivated by racist conceptions, images, and ideologies. That constructed reality, in turn, rationalizes and reinforces the racist ideas from which it is derived. Racist ideas and the racist reality are mutually constitutive, as I and my colleagues have argued elsewhere with regard to cultural ideas and practices in general (Kitayama et al., 1997; Markus & Kitayama, 2010).

In November 2020, America chose, for the first time, to elect a woman of Black and South Asian descent as vice president. This is a moment of joyous progress toward racial and gender equality. Kamala Harris will be a significant role model for immigrants and the children of immigrants. I, for one, cannot be happier. However, I must also agree with Richeson (2020) in this observation upon...
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• Prior recipients are not eligible.

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Members in the Media

Getting your thoughts down on paper could be just the thing to clarify your emotions and unlock a new perspective on your experiences. APS Fellow James Pennebaker’s research suggests that this kind of expressive writing may boast a range of benefits for physical and mental well-being, including improved memory and immune functioning.

FEELING LOTS OF...FEELINGS? JOURNALING CAN HELP


Jennifer Cheavens, The Ohio State University, The Globe and Mail, October 11, 2020: This Thanksgiving, More Than Any Other, Gratitude is Precious—but Warm Feelings Are Only the First Step to Living Well.

K. Andrew DeSoto, Association for Psychological Science, Oprah Magazine, October 29, 2020: After 2016, People Are Rethinking How They’ll Spend Election Night This Year.


Eli Finkel, Northwestern University, The Atlantic, October 20, 2020: What If Friendship, Not Marriage, Was at the Center of Life?

Alison Gopnik, University of California, Berkeley, Aeon, November 11, 2020: Vulnerable Yet Vital.


Angeline Lillard, University of Virginia, The Dallas Morning News, November 1, 2020: When So Many School Children Can’t Read, It’s Time to Do Something Different.

Arthur Markman, The University of Texas at Austin, Kate Sweeny, University of California, Riverside, The New York Times, November 2, 2020: You’re Waiting for Election Results. It’s Agony. Here’s What to Do.


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Research Briefs

Positive Affect Is Associated With Less Memory Decline: Evidence From a 9-Year Longitudinal Study
Emily F. Hittner, Jacquelyn E. Stephens, Nicholas A. Turiano, Denis Gerstorf, Margie E. Lachman, and Claudia M. Haase

Middle-age and older adults who experience positive affect—feeling enthusiastic, attentive, proud, or active—appear to show less memory decline. Hittner and colleagues examined data from a longitudinal U.S. study that tracked middle-aged participants’ self-reported positive affect, among other variables, and measured their memory using free recall. The researchers observed that, across 9 years, participants with higher positive affect showed less memory decline than those with lower positive affect. This association appears to reflect the impact of positive affect on memory rather than the impact of memory on affect. Memory decline is a normal aspect of aging but can also signal pathology, and the present results indicate that experiencing positive affect may play an important role in delaying memory decline. This effect on memory decline joins the many already identified health and well-being benefits of positive affect.

The Negative Effect of Smartphone Use on Academic Performance May Be Overestimated: Evidence From a 2-Year Panel Study
Andreas Bjerre-Nielsen et al.

Bjerre-Nielsen and colleagues monitored 470 students’ smartphone usage over 2 years and assessed their academic performance across multiple courses. They found that students who used their smartphones in class more had lower grades than those who used their smartphones less. However, this negative effect was not as large when the researchers used a model to control for stable characteristics of students and courses (e.g., student self-control, teacher quality), including those not observed by researchers. These findings indicate that previous research that controlled only for observed student characteristics might have overestimated the negative effects of smartphone use on academic performance.

The Worst-Motive Fallacy: A Negativity Bias in Motive Attribution
Joel Walmsley and Cathal O’Madagain

The worst-motive fallacy consists of a negativity bias when attributing motives to others’ actions. Participants read vignettes about different choices available to a character and selected which option they thought the character would choose. Participants also rated the "goodness" and "badness" of the motives in the vignette. They tended to think the character would choose the option that would satisfy the worst motive, contrary to the option they would choose. Thus, individuals appear to think that others are more likely than themselves to choose actions they consider morally bad.

Age Advantages in Emotional Experience Persist Even Under Threat From the COVID-19 Pandemic
Laura L. Carstensen, Yochai Z. Shavit, and Jessica T. Barnes

Despite being at heightened risk, older adults appear to show relatively better emotional well-being during the COVID-19 pandemic compared to younger adults. While infection rates were increasing exponentially in the United States, Carstensen and colleagues surveyed Americans between the ages of 18 and 76. They found that older...
adults reported higher emotional well-being regardless of the perceived risk of contagion and complications from the virus. These findings provide additional evidence for the benefits of emotional experience during prolonged stress.

Clinical Psychological Science
Losing Control: Sleep Deprivation Impairs the Suppression of Unwanted Thoughts
Marcus O. Harrington et al.

Successfully preventing unwanted memories from intruding on our days might require a good night’s sleep. In the evening, participants rated how different scenes made them feel (e.g., unhappy vs. happy) and learned to associate each scene with a face. The following morning, after either an overnight sleep or total sleep deprivation, participants saw the faces framed in either green or red. They were instructed to suppress the memory of the corresponding scene when the face frame was red, which coincided with neutral and negative scenes. Relative to sleep-deprived participants, those who had slept the previous night were more successful in repressing unwanted scenes.

Current Directions in Psychological Science
Behavioral and Physiological Evidence Challenges the Automatic Acquisition of Evaluations
Olivier Corneille and Gaëtan Mertens

Corneille and Mertens show how recent research challenges the idea that evaluations (e.g., fears and attitudes) are automatically acquired and based on involuntary and uncontrollable processes not influenced by verbal information. The authors explain that explicit (e.g., good/bad judgments), implicit (e.g., automatic associations), and physiological measures (e.g., skin conductance) have challenged the notion of automatic learning of evaluations. Moreover, procedures that prevent the conscious encoding of these stimuli do not indicate evaluative learning, which is usually sensitive to individuals’ processing goals. Thus, verbal instructions in social and clinical interventions might contribute to changing “deep-rooted” attitudes and fears.

Interpretation Bias in Paranoia: A Systematic Review and Meta-Analysis
Antonella Trotta, Jungwoo Kang, Daniel Stahl, and Jenny Yiend

People with the tendency to interpret ambiguous information negatively appear to show more paranoia. Trotta and colleagues conducted a meta-analysis of 20 studies that tested for the association between interpretation bias and paranoid thoughts in participants with and without a clinical diagnosis. Among both the clinical and nonclinical samples, participants who interpreted environmental information more negatively appeared to be more prone to paranoia and to have more severe symptoms of paranoia.

Perspectives on Psychological Science
Statistical Learning and Language Impairments: Toward More Precise Theoretical Accounts
Louisa Bogaerts, Noam Siegelman, and Ram Frost

Individual differences in statistical learning (SL) abilities appear to affect linguistic skills, including language impairments. Bogaerts and colleagues reviewed studies testing SL in participants with and without dyslexia and specific language impairment. The authors argue that current studies lack clarity regarding the definition of theoretical constructs (e.g., “SL,” “implicit learning”) and the overlap between experimental tasks and the constructs they intend to measure. Moreover, most studies do not appear to include appropriate control tasks and were not designed to contrast different theories. Bogaerts and colleagues propose that addressing these issues may advance research on SL deficits in language impairments.

Advances in Methods and Practices in Psychological Science
James D. Sauer and Aaron Drummond

Funder and Ozer (2019) argued for the importance of small effects that may accumulate to have practical importance. Sauer and Drummond suggest that open data and preregistration will make small effects easier to verify, but they caution researchers to take two considerations into account. The first consideration is restricted extrapolation; researchers must be careful not to overstate the importance of small effects by extrapolating to unmeasured consequences. The second is construct validity, as a small effect on an operationalized variable may be stronger or weaker than the effect on the construct of interest.
Roomba sales are soaring, suggesting that millions of people trust the robotic vacuums’ room-navigation algorithms and powerful suction power to keep their floors clean. But are we ready to embrace algorithms for activities with less-certain outcomes and arguably higher stakes—such as selecting investments, driving cars, performing surgery, or assessing job and university applications? Not yet, according to new research in *Psychological Science*. "To the extent that investing, medical decision-making, and other domains are inherently uncertain, people may be unwilling to use even the best possible algorithm in those domains," wrote Berkeley J. Dietvorst and Soham Bharti (University of Chicago). This is despite the fact that algorithmic forecasters outperform human forecasters in these domains, thanks to their use of tools that follow more consistent rules and make fewer errors than humans do.

"This unwillingness to adopt algorithms that outperform humans can have an enormous cost," the researchers continued. For example, "the majority of Americans report that they would not be comfortable riding in a self-driving car... but research suggests that early adoption of self-driving cars could save hundreds of thousands of lives."

In essence, we trust ourselves to take risks on decisions that are irreducibly uncertain, but we don’t trust computers to take such risks for us because their errors seem more pronounced on the very rare occasions they occur.

"We propose that people have diminishing sensitivity to forecasting error, which causes them to prefer decision-making methods that they believe have the highest likelihood of providing a near-perfect answer (i.e., one with little to no error)," Dietvorst and Bharti wrote.

In nine studies, the researchers showed that people perceive “relatively large subjective differences between different magnitudes of near-perfect forecasts (the best possible forecasts that produce little to no error) and relatively small subjective differences between forecasts with greater amounts of error.” As a result, they are less likely to choose the best decision-makers in domains that are more unpredictable (e.g., with random outcomes vs. with outcomes determined by an equation) and instead tend to prefer decision-makers based on their perceived likelihood of producing a near-perfect choice and with high variance in performance. This leads people to favor riskier and often worse-performing decision-makers, such as human judgment, in uncertain domains.

“These results suggest that convincing people to use algorithms in inherently uncertain domains is not a case of waiting until technology improves and algorithms perform better than they do today,” the researchers concluded. “The impact of this refusal is substantial, as society will not fully benefit from technological progress in consequential but uncertain domains until people are willing to use algorithms to make inherently uncertain predictions.”

But Do Machines Have Ethics?

Another recent article explores alarm over so-called driverless dilemmas, in which autonomous vehicles must make high-stakes ethical decisions on the road, such as whom to harm and whom to save (e.g., a pedestrian or a passenger). These concerns are an engineering and policy distraction, according to Julian De Freitas and others. "We do not teach humans how to drive by telling them whom to kill if faced with a forced choice. This is because planning for an unlikely, undetectable, and uncontrollable situation would be a distraction from the goal we *do* teach novice drivers: minimize harming anyone." The same goal should apply to self-driving cars, the researchers said.

See the full article, including references, at psychologicalscience.org/observer/trusting-algorithms.
INTERVENTIONS MAY HAVE LASTING BENEFITS

The term “intervention” is often used when concerned family members and friends confront a loved one about a troubling aspect of their life, such as an unhealthy dependence or relationship. In the social sciences, however, interventions are anything that practitioners or experimenters use in order to change people in some way.

A comprehensive review of past studies published in the journal Psychological Science in the Public Interest explores the factors that lead educational interventions’ effects to either persist over the long term or fade out—diminishing or even disappearing completely after the intervention ends. These results stress the need for scientists to conduct long-term evaluations of their interventions.

“The goal of this research is to better predict what will happen to people much later after an intervention that changes a person in the short term and, ultimately, to invest in interventions most likely to improve a child’s life,” said Drew Bailey, a researcher with the University of California, Irvine, and coauthor of the article. “We end by calling on researchers and funders to help improve the evidence base, which we can use to better inform research on persistence and fade-out.”

The researchers based their conclusions on a wide sample of research on interventions. Much of this work is in the form of meta-analyses, which together cover hundreds of studies. “Our review indicates that, across a large set of interventions targeting all sorts of psychological characteristics, persistence and fade-out frequently occur together,” Bailey said.

The authors did not attempt to identify one optimal package of existing interventions to invest in. However, their review clearly indicates that some interventions, such as compulsory schooling and high-quality early education programs (particularly for socioeconomically disadvantaged children), have improved children’s life outcomes.

“Quote of Note"

“We already have a lot of knowledge of what we need to do and models of how it can be done, but we are missing the action.”

—APS Fellow Margarita Alegría (Massachusetts General Hospital), calling on the scientific community to apply innovations in research and practice to reduce disparities in mental health. Alegría was the plenary speaker at a workshop on virtual disparities hosted by the National Institutes of Health on November 9 and 10, 2020. Read more online at psychologicalscience.org.

Reference

HAUNTED HOUSE RESEARCHERS INVESTIGATE PLAYING WITH FEAR

Chainsaw-wielding maniacs and brain-munching zombies are common tropes in horror films and haunted houses, which, in normal years, are popular Halloween-season destinations for thrill seekers. But what makes such fearsome experiences so compelling, and why do we actively seek them out in frightful recreational settings?

New research accepted for publication in the journal *Psychological Science* reveals that horror entertains us most effectively when it triggers a distinct physical response—measured by changes in heart rate—but is not so scary that we become overwhelmed. That fine line between fun and an unpleasant experience can vary from person to person.

“By investigating how humans derive pleasure from fear, we find that there seems to be a ‘sweet spot’ where enjoyment is maximized,” said Marc Malmdorf Andersen, a researcher at the Interacting Minds Center at Aarhus University and lead author of the paper. “Our study provides some of the first empirical evidence on the relationship between fear, enjoyment, and physical arousal in recreational forms of fear.”

Until now, however, a direct relationship between arousal and enjoyment from these types of activities has not been established. “No prior studies have analyzed this relationship on subjective, behavioral, as well as physiological levels,” said Andersen.

To explore this connection, Andersen and his colleagues studied how a group of 110 participants responded to a commercial haunted house attraction in Vejle, Denmark. After the experience, participants evaluated their level of fright and enjoyment for each encounter. By comparing these self-reported experiences with the data from heart rate monitors and surveillance cameras, the researchers were able to compare the fear-related and enjoyment-related elements of the attraction on subjective, behavioral, and physiological levels.

See the full article, and listen to an Under the Cortex podcast interview with Marc Malmdorf Andersen on the allure of recreational fear, at psychologicalscience.org/observer/playing-with-fear.

SAFE SEX OR RISKY ROMANCE?
YOUNG ADULTS MAKE THE RATIONAL CHOICE

A study published in the journal *Psychological Science* found that young adults—contrary to how they are sometimes portrayed in the media—tend to make highly rational decisions when it comes to selecting potential romantic partners.

This is not to say that young adults make risk-free choices, but they appear to consider both the risks and benefits of their sexual behavior in a highly consistent and thoughtful manner.

“There is a tendency to view sexual decision making in young adults as a highly variable and somewhat random process, more influenced by hormones or impulsivity than rational processes,” said Laura Hatz (University of Missouri). “Our study suggests, however, that young adults are highly consistent in their choices, balancing potential partners’ level of attractiveness against the potential risk for sexually transmitted infection.”

The research involved presenting 257 participants with hypothetical “sexual gambles” in which a photo of a potential partner’s face was shown alongside an associated, though purely hypothetical, risk of contracting a sexually transmitted infection. Nearly all participants in the study made consistently rational choices, as defined by established models of psychological behavior.

See the full article, including references, at psychologicalscience.org/observer/risky-romance.
NAM ELECTS APS FELLOW DEANNA BARCH

A PS Fellow and past Board Member Deanna Barch has been elected to the U.S. National Academy of Medicine (NAM), considered one of the highest honors in the fields of health and medicine. Barch, who is chair and professor of psychological and brain sciences, as well as a professor of psychiatry and radiology, at Washington University in St. Louis, was selected for “helping identify neural and psychological mechanisms that give rise to the symptoms of psychosis and other forms of mental illness that contribute significantly to disability.”

Established as the Institute of Medicine in 1970 by the National Academy of Sciences, the National Academy of Medicine addresses critical issues in health, science, medicine, and related policy across sectors in the United States.

In her lab at Washington University in St. Louis, which she has led since the early 1990s, Barch heads a team of researchers who study how humans exert control over their thoughts and behavior, and how this control can break down. Barch served on the APS Board of Directors from 2016 to 2019 and has also had roles including chairing the APS Publications Committee from 2017 to 2019.

Barch and 99 other newly elected members bring NAM’s membership to more than 2,200. In recent years, NAM has also elected APS Fellows including Ted Abel (2019), Terrie Moffitt (2018), and Valerie F. Reyna (2015), among others.

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The path to your postdoc may be meandering, but taking the time to build relationships with would-be mentors and other collaborators could pave the way for the next stage in your career.

“That process of networking is sort of essential for getting jobs, but it’s also a core part of doing science from PhD onwards,” said Katherine Storrs, a postdoctoral researcher studying visual perception at Justus-Liebig-Universität in Giessen, Germany. “Getting to know the senior and junior people in your field who are doing research that you like and is relevant to you is what science is. It’s a fundamentally collaborative process and it has all sorts of benefits.”

Storrs, APS Fellow Joy Geng (University of California, Davis), and Amy Rapp (Columbia University/New York State Psychiatric Institute) joined STEM career consultant Alaina G. Levine to share their experiences with the postdoctoral process during the APS Webinar “Path to My Postdoc.” The virtual event covered the postdoc application process, securing funding for fellowships, and the value of publications.

“Things are really strange and challenging at the moment,” acknowledged Storrs. “When I think back to the specific strategy I used [to get my postdoc positions], things like going to loads of conferences and lab visits and being able to move between countries for a few months at a time, none of that seems possible right now.”

But while COVID-19 may make it difficult to take the same paths these researchers took, Storrs continued, virtual alternatives that offer more egalitarian access to networking opportunities around the world are becoming more common.

Inside the Application Process

Rapp, a postdoctoral research fellow at the Center for OCD and Related Disorders, began on the path to her postdoc in the summer before her clinical internship at the UCLA. In addition to meeting with faculty members who had open postdoc positions, Rapp sent cold emails to researchers she admired and monitored the APS Employment Network for opportunities.

“A very genuine plug for this,” Rapp said. “[The APS Employment Network] is a great resource—there are a lot of excellent postings.”

Eventually, Rapp went on to create a fellowship proposal with her postdoctoral mentor, who helped her create a plan of study that matched Rapp’s interests with the needs of the
existing lab. Rapp thought of this period as a 3-month interview—for both herself and her potential mentor.

“That process of getting to know your potential mentor, what that working relationship is going to be like, was very important for me, and I think it’s very important in other people’s processes as well,” Rapp said.

Storrs wasn’t able to secure a fellowship initially, but she turned that roadblock into an opportunity to hone her skills.

“It’s a blow, but you have to expect that these things don’t stand a very high chance of being accepted,” she said.

Instead, Storrs pivoted into an internship at Twitter, where she studied perceived video quality and built valuable project management skills as a data scientist. During this time, she kept an eye out for postdoctoral opportunities and was eventually able to secure a position at Justus-Liebig-Universität in a lab that had recently won a postdoctoral grant. This meant she didn’t have to provide her own fellowship funding, though she continued applying and was later successful in receiving funding.

All in all, the process of becoming a postdoc at Justus-Liebig-Universität took Storrs about 6 months from first contact to actually landing the job, but she recommends starting the process a year before you anticipate needing a new position.

“Even in the best case, these things take many months,” Storrs said.

Geng, a professor of psychology at the UC Davis Center for Mind and Brain, added that when she is evaluating potential postdocs for her Integrated Attention Lab, she looks for a mix of hard skills and passion, both of which bring something substantial to the lab.

“We also like to make sure that there’s a good personality fit,” Geng added. “We’re looking for someone who is collaborative, someone who is willing to work with many different kinds of people.”

**Funding Fundamentals**
Researchers are always happy to have postdocs who bring their own money into the lab, Storrs noted, but, in Europe, postdocs generally need to be attached to a lab before they can begin applying for funding.

That said, keeping an eye on your area’s funding cycles can help give your application an edge, Geng said. The National Institutes of Health in the United States, for example, has several annual cycles in which funding applications are due and money is dispersed to labs, which may influence when positions become available, she explained.

Still, Geng added, it’s best to get in contact with researchers when you have plenty of time to spare—knowing you’re interested in conducting postdoctoral studies in their lab may even be the final straw that pushes a researcher to submit a grant application now, rather than waiting for the next funding cycle to begin.

**Publish or Practice**
Having a number of publications as a record of past productivity can improve your chances in the grant application process, but it won’t necessarily ensure your success in applying for postdoc positions, said Geng. Even if you’ve been published, she explained, the strengths and weaknesses of each individual contributor aren’t always clear, and researchers are often looking for postdocs with a particular set of skills.

“Publications happen when they do; it’s not something that we can guarantee for ourselves or anyone else at a particular time.”—Joy Geng, University of California, Davis

See the full article at psychologicalscience.org/observer/Path-to-Postdoc.

View a recording of the “Path to My Postdoc” webinar and other APS webinars at psychologicalscience.org/webinars.
Ten years ago, a major initiative at the National Institute of Mental Health (NIMH), the United States’ leading federal agency for research on mental disorders, set out to address a fundamental weakness in how mental illnesses are diagnosed and treated. The widely accepted diagnostic structures—the Diagnostic and Statistical Manual of Mental Disorders (DSM) and the International Classification of Diseases (ICD)—couldn’t account for many of the complexities of mental disorders, despite providing benefits such as reliability and ease of diagnosis across many contexts.

For instance, the varied ways people can qualify for a symptom-based disorder diagnosis can lead to two people being diagnosed with the same disorder despite having few symptoms in common. Similarly, patients who meet criteria for one mental disorder often tend to meet criteria for other mental disorders. This can lead to them receiving multiple diagnoses.

“Oftentimes, providers can’t agree, and patients end up going through a very frustrating and sometimes prolonged period of diagnosis, misdiagnosis, and rediagnosis,” according to Sarah Morris, chief at NIMH’s Adult Psychopathology and Psychosocial Interventions Research Branch and associate head of NIMH’s RDoC (Research Domain Criteria Initiative) unit.

The NIMH effort to address these shortcomings was the RDoC research framework. Launched in 2009, the framework integrates many levels of information spanning the full range of human behavior to better understand the nature of mental health and illness. Its goal is to provide information on basic biological and cognitive processes that lead to mental health and illness—insights that may help inform the development of mental health screening tools, treatments, and diagnostic systems.

In October, APS’s Government Research, Funding, & Policy team hosted Morris and a panel of four other scientists for a webinar to commemorate RDoC’s 10th anniversary and showcase RDoC-informed research conducted by clinical psychological scientists. More than 900 people registered for the live presentation of Clinical Psychological Science Through the Lens of RDoC: New Advances and Future Directions; the recorded webinar is available with this article online.

Employing the Science
Morris began the webinar by reflecting on the rationales for RDoC. “We were faced with a problem that these diagnostic categories, which have allowed the evolution of the science of psychiatry and are essential to clinical practice, were driving the entire research and clinical systems,” she said. Besides often resulting in trial-and-error diagnoses and treatments for patients, DSM and ICD categories hamstrung the work of clinicians and researchers. They still do. “Grant applications, journal publications, clinical trials, regulatory approvals are all based on DSM diagnoses.”

In short, RDoC represented an effort to “move away from this unwritten rule that NIMH-funded research should only be guided by what’s in the DSM,” Morris said. “Researchers should be free to explore new ways of classifying disorders in the hopes of achieving more precision in diagnosis and treatment. We know more than ever about behavioral neuroscience,” she continued. “We know that psychopathology occurs along neurodevelopmental trajectories. We know that there are bidirectional interactions with environment, in both risk and protective ways. We know that psychopathology is dimensional, and we know that we’re best off if we measure and relate many aspects together—the psychological, the biological, self-report, behavior—instead of focusing on any one of those measures as the gold standard or the foundational.”

Asserting RDoC’s “long-term goal of moving away from one-size-fits-all diagnoses,” Morris sketched a broad effort “to invert the clinical research paradigm.” Instead of starting with a mental disorder as defined by symptom-based criteria, the RDoC approach to studying mental illness is to start “with what we know about normal, healthy, adaptive mechanisms and figure out where things go wrong to result in psychopathology.” To date, the RDoC funding portfolio includes

Watch Online!
View a recording of the RDoC webinar with this article at psychologicalscience.org/observer.
more than 95 grants that demonstrate the initiative’s promise.

RDoC in Action: Research Highlights

Three psychological scientists outlined their work within the RDoC framework.

Vijay A. Mittal (Northwestern University) focuses on the psychosis prodrome among adolescents and young adults who may be at risk of developing a disorder like schizophrenia. “The signs can vary,” he said, “but they look a lot like delusions and hallucinations, negative symptoms...cognitive decline, social withdrawal.” As an example of indicators, he cited British artist Louis Wain, whose drawings of cats became more psychedelic over the course of his illness, suggesting “something off, something odd ... that you can’t put your finger on.”

Through longitudinal studies of young people considered at risk of developing disorders, Mittal and his lab have identified early interventions and other measures that could focus limited resources, reduce false positives, improve courses, train families to help track symptoms, and potentially prevent onset. One key involves tracking abnormalities in the circuits that govern motor behavior (basal ganglia, cerebellar, and corticocortical). “The great hope of this work is that we’ll be able to stop psychotic disorders from happening,” he said, while also improving means of identifying and screening at-risk individuals and understanding the causes of psychotic disorders more broadly. He showed examples of how unusual motor behaviors, such as a child’s highly asymmetrical crawling pattern, or certain tics or rigidities, could suggest vulnerabilities to developing disorders later.

For her work within the RDoC framework, Autumn Kujawa (Vanderbilt University) researches initial responsiveness to reward and the development of depressive symptoms, focusing on the domain of positive valence systems.

“Conceptually, we know that low reward responsiveness is often characteristic of depressive symptoms and of adults with depression,” Kujawa said in the webinar. People with this aspect of depression “tend to report that they experience less pleasure, less interest in seeking out previously rewarding experiences.” She looks for vulnerability markers that could identify youth at high risk of developing depression, studying where and how these alterations in emotional processing may emerge across childhood and adolescence and how preventive interventions might target them.

For one study, Kujawa used data from the Stony Brook Temperament Study, a large, longitudinal study of more than 600 children recruited at age 3 or 6. Under the direction of her graduate advisor, Dan Klein, she said, “we assessed parental depression using a semistructured diagnostic interview with biological mothers and biological fathers when [the children] were first enrolled in the study and then again, at age 9, when they returned for a follow up assessment.” At age 9, the children also completed electroencephalogram (EEG) reward tasks and self-reported their depressive symptoms. In another follow-up when the children were 12, they again reported their depressive symptoms along with “their own perceptions of their individual differences in reward responsiveness using a scale adapted from the BIS/BAS scales,” Kujawa said.

Among other findings, this research revealed no correlation between reward positivity and self-reported depressive symptoms. And whereas the researchers found significant relationships between children’s depressive symptoms and maternal depression, “we did not find effects for depression in fathers.”

In exploring how to translate these findings to interventions, Kujawa’s lab studied 70 adolescents (14–18 years old) with moderate to severe depression. Of these, some 24 completed a course of 16 sessions of cognitive behavioral therapy. Not only did EEG assessments conducted before and after the therapy show no sign of an increase in the adolescents’ reward positivity, they showed some reduction. But in a third study, with 98 young adults, the researchers found some enhanced reward positivity after motivating participants to “think about a personally salient reward and why they want to earn that,” Kujawa explained. “What we did find is that relative increases in reward positivity are associated with reductions in symptoms of depression and, more specifically, symptoms of anhedonia.”

“We have to figure out a better way to directly target reward responsiveness,” Kujawa said. “My lab is working now to figure out what does this mean for prevention and whether we can then use some of these approaches to increase reward responsiveness earlier in children at risk for depression.”

In the third and final research talk, Annmarie MacNamara (Texas A&M University) summarized her work on the neuroscience of anxiety, which falls under the RDoC’s negative valence system domain.

Anxiety is prevalent and costly for people and their societies, said MacNamara, but scientists and practitioners have no good, objective tests to diagnose anxiety. “If we had a better understanding of the pathophysiology of anxiety, we might be able to develop new treatments that work better ... we also might be able to better match patients to the treatments that are best suited to them,” she said, invoking the promise and challenges of personalized medicine.

According to MacNamara, emotions hold adaptive value, but in cases of anxiety, this emotion can “overfunction” and impede behavior. She described a series of research studies

For more on government funding opportunities, see the Federal Research, Funding, and Policy page on the APS website at psychologicalscience.org/policy.
using EEG that showed subjects emotional and neutral stimuli, examining their brain responses. MacNamara’s work focuses on the “late positive potential” neural signal, or LPP, which is larger for emotional, rather than neutral, stimuli. Data obtained by MacNamara and her lab have shown that in clinically anxious samples, LPP activity is indeed greater for negative stimuli than it is for controls.

However, said MacNamara, some individuals show “emotional blunting,” which is typified by smaller responses to negative and positive stimuli than to neutral ones. MacNamara wondered whether individuals with generalized anxiety disorder who also had a diagnosis of depression might show blunting, rather than hyperactivity, in LPP. Resulting data confirmed this prediction.

“This suggests that the presence of a comorbidity like depression might change that pathology,” said MacNamara. “We might see something different going on in these individuals with more than one diagnosis.” Such patterns also emerge in youth.

Given the frequency with which anxiety is comorbid with other disorders, MacNamara has focused on better understanding the pathophysiology of comorbidity. She described another study in which she used EEG and event-related potentials to examine emotional reactions to emotional stimuli.

According to MacNamara, results suggested “a neurobiological pattern associated with comorbidity load that might be comprised of heightened alarm as signaled by greater salience network activation, along with reduced motivated, elaborative processing, as indicated by blunted or reduced LPPs.”

These findings, along with follow-up work, reveal a spectrum of anxiety, a “brain profile that might mark comorbidity load and indicate a worse prognosis across the anxiety disorders.”

In future work, MacNamara hopes to determine whether LPP blunting is related to depression specifically or if it is connected to a broader category of disorders.

Enabling Stronger Science

The RDoC-focused workshop was bookended by talks by Uma Vaidyanathan, a psychological scientist who is a research and innovation manager in NIMH’s director’s office.

“The first and most obvious theme you saw among studies was the focus on constructs rather than just categorical diagnoses,” said Vaidyanathan to the webinar’s viewers. “While our researchers use some sort of diagnosis starting points, they did not focus solely on these labels.”

Vaidyanathan also observed that all the research presented came from a dimensional standpoint sensitive to how phenomena manifest on a spectrum. She also noted that the RDoC lens enabled researchers to consider the developmental components of mental disorders, too.

Finally, Vaidyanathan complimented the speakers on their use of multiple methods in their work.

“Most mental health diagnoses and phenomena are studied using self-report or other reports of feelings and behaviors,” she said.

“And while this is a useful start, going beyond this to fully understand the connections between brain, body, environment, and development is important.”
It’s Time
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Renew your APS membership and continue to support the important work that APS does to benefit your career, your science, and society.
At various points during the past year, many of us have lost our jobs and financial security. We’ve lost social interactions and the little freedoms we once took for granted. We’ve lost what made our days “normal.” Most tragically, many of us have lost loved ones. The COVID-19 pandemic has taken a major toll on lives everywhere and, combined with the added combustion of reckonings over systemic racism and divisive politics, much of the world has been negatively impacted in one way or another. What can we do to feel better during these times? One answer appears to be “giving.”

BY LUDMILA NUNES, APS STAFF WRITER
The act of giving can help those in need even as it improves the giver’s own well-being.

“Giving social support to others can be beneficial for the person who is giving. In giving to others, you might help them, but you might also help yourself,” according to psychological scientist Tristen Inagaki (San Diego State University).

Inagaki studies social connection and health, along with the neurobiological pathways linking the two. In a 2017 article published in *Current Directions in Psychological Science*, she and coauthor Edward Orehek (San Diego State University) explored the benefits of giving in nonmaterial ways, which she says are especially notable when providing care is an internally driven choice and is perceived as having a positive impact on the receiver.

“If I perceive the support to be given freely and to be effective at helping the other person, you’re likely to see stronger effects of giving on [my] health outcomes,” said Inagaki. “Whereas if I feel forced to give and that the support was ineffective in helping someone else, perhaps you wouldn’t see the same health effects.”

The pandemic has introduced important changes to the dynamics of giving. “On the one hand, the pandemic is a global situation that has put many people in need of support, whether financial, physical, or psychological. And so, there’s no shortage of need or opportunities to give,” Inagaki said. “On the other hand, it’s recommended that we remain physically separate from most of our social network and others in general,” even as we’re in near-constant close proximity to our children, extended family, and other housemates.

Close physical proximity appears to boost the associations between giving support and experiencing well-being. Citing recent findings, Inagaki noted that “giving to someone in your physical space is associated with better subjective health and less loneliness over time, but within the same giver, giving to those outside of the physical space is not.”

**Gifts With Benefits**

Overall, Inagaki’s research indicates that engaging in prosocial behaviors such as taking care of others can boost health and well-being. Moreover, other research suggests that giving may increase prosocial behavior throughout our lives. This can have important social consequences, as prosocial behavior can promote health and education, as well as help fight social problems such as poverty and hunger.

“The experience of giving benefits may encourage prosocial behavior by increasing the salience and strength of one’s identity as a capable, caring contributor,” wrote Adam Grant (University of Pennsylvania) and Jane Dutton (University of Michigan) in a 2012 article in *Psychological Science*.

For that study, Grant and Dutton asked university fundraisers to write journal entries for a week about recent experiences in which they had either

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**Getting High on Giving**

One of the main benefits of giving appears to be the enhancement of well-being. Connecting two lines of Inagaki’s work, a possible pathway for this effect might be that giving and engaging in prosocial behaviors causes social connectedness to increase, which triggers the body opioid system leading to well-being.

“We’ve found that giving support to others increases feelings of social connection with that person compared to conditions in which you don’t give to the person,” said Inagaki. “There’s some older research in animals to suggest that giving behavior is opioid-mediated,” she added.

In a 2018 article published in *Current Directions in Psychological Science*, Inagaki reviewed animal studies about the neurochemical mechanisms that mediate social connection and a theory suggesting that opioids are involved in feelings of being socially bonded in humans.

“Opioids affect social feelings, behaviors, and perceptions in both positive and negative social experiences,” explained Inagaki.

Social connection can cause an experience similar to that of taking opiates, with a cascade of neurochemical activity that increases our social well-being. On the contrary, when we experience social disconnection, our distress may increase. For example, some pharmacological studies suggested that naltrexone, a medication that inhibits opioid action, appears to reduce the feelings of warmth, pleasantness, and social connection that can be induced by holding a warm object.
received benefits from other people or given benefits to other people. The researchers found that those who wrote about their giving experiences increased their objective prosocial behavior, measured by time spent in voluntary calls to help the university in the 2 weeks following the writing exercise.

Grant and Dutton obtained the same pattern of results in a laboratory study. Using an online platform, they asked participants to list three ways in which they had recently given or received help. The month after completing the study, when participants went to the lab to pick up their payments, they also received a form describing the effects of the 2011 earthquake and tsunami in Japan. Asked whether they would like to donate to an earthquake relief initiative for the victims, participants were more likely to donate if they had reflected on giving help than if they had reflected on receiving help.

These findings suggest that “reflecting on giving, rather than receiving, can also lead to greater helpfulness,” wrote Grant and Dutton.

Nor are the benefits of giving limited to prosocial behavior or well-being in general. For example, a counterintuitive solution to the feeling that one does not have enough time might be to give some of it away, wrote Cassie Mogilner (University of California, Los Angeles), Zoë Chance (Yale University), and APS Fellow Michael I. Norton (Harvard University) in another 2012 article in *Psychological Science.*

Inagaki has explored specific pandemic-related behaviors and found that people who perform small acts of kindness, such as thanking an essential worker or donating time or money to a business in need, tend to experience less loneliness 3 months after than those who do not.

Engaging in simple, intentional positive activities, such as practicing kindness and expressing gratitude, has also been shown to increase our happiness. In a 2013 article published in *Current Directions in Psychological Science,* APS Fellow Sonja Lyubomirsky (University of California, Riverside) and Kristin Layous (University of California, East Bay) described how positive activities increase well-being. That effect appears to depend on the features of positive activities (e.g., their frequency, intensity, and variety), the features of individuals (e.g., their motivation, effort, and personality), and the fit between the person and the activity. Certain activities might generally increase people’s well-being, but the “right person” engaging in the “right activity” might see bigger increases in positive emotions, thoughts, and behaviors, feel more satisfied, and, ultimately, experience greater well-being.

Mogilner and colleagues studied how to increase people’s subjective sense of time. In four experiments, they compared the effects of spending time on other people with the effects of “wasting” time, spending time on oneself, and gaining free time. They found that spending time on others (e.g., helping an at-risk student or writing to a sick child) increased individuals’ perceived spare time. The explanation for this effect appeared to be a boost in self-efficacy—that is, confidence in one’s ability to execute behaviors that will achieve goals. Thus, “giving time makes people more willing to commit to future engagements despite their busy schedules,” the researchers concluded.

Similarly, giving advice might have a larger impact on behavior than receiving advice. In a 2018 study in *Psychological Science,* Lauren Eskreis-Winkler (University of Pennsylvania), APS Fellow Ayelet Fishbach (University of...
GIVING AND GRATITUDE

The happiness-inducing effect of spending money on others (or simply recalling having done so) is so powerful that it appears to occur across countries, regardless of national wealth.

The Other Side of Giving: Gratitude

Can receiving support also strengthen social ties and well-being? Yes, when doing so leads people to experience and express gratitude, research finds.

But it is important to distinguish gratitude from related emotions such as happiness and feelings of indebtedness. In 2008, Michael McCullough, Marcia Kimeldorf, and Adam Cohen (University of Miami) explored the features that make gratitude different from other related emotions. They suggested that (a) people feel grateful when they have received costly, intentional, and voluntary benefits from a benefactor; (b) experiencing gratitude motivates beneficiaries to repay their benefactors and to extend generosity to third parties. In the same article, the researchers argued that gratitude may have played an adaptive role in human social evolution by promoting reciprocal altruism (i.e., the exchange of benefits among nonrelatives, with costs for the givers) and upstream reciprocity (i.e., a pay-it-forward-style distribution of benefits). Gratitude can thus be seen as a prosocial emotion that fosters altruism, which ultimately benefits the human species. In line with this idea, gratitude appears to occur in different cultures independent of language (McCullough et al., 2001).

But how does gratitude facilitate prosocial behavior? In a study published in 2006 in Psychological Science, Monica Y. Bartlett and APS Fellow David DeSteno (Northeastern University) found “that gratitude increases efforts to assist a benefactor even when such efforts are costly (i.e., hedonically negative), and that this increase differs from the effects of a general positive affective state.” Moreover, gratitude can make people more likely to assist strangers. These findings, again, clearly differentiate gratitude from other positive emotions and even from a simple awareness of reciprocity norms (i.e., helping someone only because they helped us).

Bartlett and DeSteno concluded that they might “have identified one way in which gratitude fosters relationships: by encouraging individuals to accept short-term losses to reap longer-term rewards and, thereby, solve a ‘commitment problem’ central to social living.”

In a more recent study, published in 2019, DeSteno, Fred Duong (Northeastern University), Daniel Lim (Pennsylvania State University), and Shanyu Kates (Northeastern University) explored a specific benefit of gratitude: preventing stressful task, compared to individuals who had written about their route to school or work. These reduced sympathetic nervous system responses to stress might have beneficial effects for health outcomes such as decreasing blood pressure.

The happiness-inducing effect of spending money on others (or simply recalling having done so) is so powerful that it appears to occur across countries, regardless of national wealth.
Bartlett and DeSteno concluded that they might “have identified one way in which gratitude fosters relationships: by encouraging individuals to accept short-term losses to reap longer-term rewards and, thereby, solve a ‘commitment problem’ central to social living.”

cheating. The researchers induced gratitude in some participants by having a researcher posing as another participant fix a fake computer crash for them; other participants watched happiness-inducing cute videos or emotionally neutral documentary videos. All participants were then asked to report the results of a virtual coin flip that would indicate whether they would be assigned a short, fun task or a longer, difficult task, knowing that the next participant would be assigned the opposite task. Those who had been induced to feel gratitude were less likely to cheat than those who had been induced to feel happiness or no emotion.

In another experiment, recalling a time when they had been grateful, in comparison to recalling a time when they had been happy or their typical day, also prevented participants from cheating in an effort to gain extra money.

DeSteno and colleagues’ findings suggest that inducing gratitude might work as an honesty nudge and that instilling a culture of gratitude might help to reduce cheating behaviors. Another benefit of expressing gratitude appears to be increasing the communal strength of relationships, as Nathalie M. Lambert (Florida State University) and colleagues reported in an article published in 2010 in *Psychological Science*.

In a communal relationship, an individual feels responsible for meeting the needs of the partner and gives benefits in response to the partner’s needs without expecting to get things in return. In one of Lambert and colleagues’ (2010) studies, participants expressed gratitude to a friend, thought grateful thoughts about a friend, thought about daily activities, or had positive interactions with a friend. Participants who had expressed gratitude reported more communal strength in their relationship than any of the other participants. Thus, expressing gratitude may be an easy way to strengthen relationships.

Despite the importance of expressing gratitude, Amit Kumar (University of Texas at Austin) and APS Fellow Nicholas Epley (University of Chicago) reported in a 2018 article in *Psychological Science* that individuals tend to undervalue the positive impact of their expression of gratitude. They asked participants to write and send letters of gratitude and to predict the recipients’ reaction: how surprised they would be, how positive their mood would be, how awkward they would feel, and how competent and warm they would perceive the letters to be. The researchers then surveyed the letter recipients on their reactions.

Results indicated that the letter writers underestimated the recipients’ surprise and positive mood and overestimated their feelings of awkwardness. Moreover, willingness to express gratitude was driven by expectations that it would create a positive mood and low awkwardness in the recipient—which means that misconceptions about the impact of showing gratitude might deter individuals from showing it. And this can have negative effects: The participants reported that they felt happier after sending the letters and recognized that they expressed gratitude less often than they would like.

“Underestimating the value of prosocial actions, such as expressing gratitude, may keep people from engaging in behavior that would maximize their own—and others’—well-being,” wrote Kumar and Epley.

How to Give and Show Gratitude

The clear benefits of giving and expressing gratitude—not only for the receiver but for the giver—and the impact of these actions on happiness, well-being, and prosocial behavior can be particularly important in stressful times like the ones we are living in.

Inagaki offered some advice about how to give gratitude, show gratitude, and, in general, practice kindness.

First, just do it—even during the pandemic, and especially during the pandemic.

“Maybe it feels like there are a lot of barriers, but we’re finding that even something as simple as expressing gratitude toward an essential worker—saying thank you to medical professionals or to sanitation workers or teachers or really anyone who is out there keeping the world moving—that doing that more is associated with better well-being over time during the pandemic,” Inagaki emphasized.

Second, give repeatedly.

“A number of theories in the social relationships literature suggest that repeated, positive social interactions—perhaps including giving to others—would keep you socially connected,” Inagaki said. “So, after you first dive in and give to someone, do it again the next day.”
References


Research Topic: Giving

To learn more about these studies and others on the mechanisms underlying our generous motivations and behaviors, visit the Research Topic page on giving at psychologicalscience.org/topics/giving.

Featured articles:
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• The Gifts We Keep on Giving
• And more…
An estimated 7,000 languages are spoken around the world, each with a unique structure. How information is transmitted through speech can vary tremendously from language to language, which allows experimental psychologists like Lera Boroditsky (University of California, San Diego) to study the myriad ways that language shapes our thinking.

“Language is one of those smart human tricks,” according to Boroditsky. “We can make vibrations with our mouths that can travel through the air and impinge on our eardrums, and then the brain takes that pattern of vibrations and turns it into thoughts.”

Boroditsky’s research on a language called Kuuk Thaayorre—spoken by a remote Aboriginal community in Australia called the Pormpuraaw—provides an example of the way that language can foster cognitive differences between speakers of different languages. Kuuk Thaayorre uses a radically different paradigm to describe and organize space compared to languages like English. There are no words equivalent to “left” or “right”; instead, space is described through words for the cardinal directions, like “north,” “south,” “east,” and “west.”

“So you would say, ‘oh, there’s an ant on your southwest leg’ or ‘move your cup to the northeast,’” Boroditsky explained.

Not only are people who speak languages like Kuuk Thaayorre able to orient themselves in space much better than people who speak languages like English, but these differences in language also open up doors to whole new ways of thinking about relationships between the body, space, and time (Boroditsky & Gaby, 2010).

Different languages also divide up the color spectrum differently. For example, English has one word for “blue,” whereas Russian has distinctive terms for light blues (“goluboy”) and dark blues (“siniy”).

Neuroimaging studies have shown how these features of language begin to influence our experiences at the earliest stages of cognitive processing (Winawer et al., 2007).

“Within the first hundred milliseconds, the brain is already treating color patches as categorically the same or different, depending on whether they would be called by the same name or different names in your language,” Boroditsky said.

A body of research shows that metaphors are another aspect of language that can profoundly shape how we conceptualize experiences.

In a 2018 study, Boroditsky and colleagues found that framing the cancer experience as a “battle” versus a “journey” led to important differences in perceptions about a patient’s situation (Hendricks et al., 2018). Across five
experiments, 1,629 participants read otherwise identical vignettes about someone either “battling” cancer or on a “journey” with cancer. When cancer was framed as a battle, readers believed that the patient was more likely to feel guilty about not recovering.

This study is just one example of the ways that even small differences in language can change our emotions and appraisals of major life events, such as the experience of a major illness.

“That’s where language really comes to shine—not just shaping the way we think but actually constructing potentially whole realms of knowledge and thought,” Boroditsky concluded.

Language and the Social Mind

Language also plays a fundamental role in our ability to understand and reason about the social minds of the people around us.

Jennie Pyers (Wellesley College) examines how the emergence of language influences cognition—specifically, how we understand other people’s mental states, an area called “theory of mind.” An advanced component of theory of mind is understanding that someone else can hold erroneous beliefs. For example, a child might realize that a parent will look for a toy where it’s usually kept even if the toy is actually hidden in another location, like under the bed.

“Children struggle with this and don’t really fully understand this until after the age of 4,” Pyers explained.

“It seems that their language abilities are a key driving factor in their ability to understand false beliefs.”

Because language skills typically develop around the same time as theory of mind, it is difficult to study whether language facilitates social cognition. To tease apart the development of these skills, Pyers works with children with congenital hearing loss who are born to hearing parents. These children often have some degree of language delay, as their parents do not yet speak sign language and the child’s deafness limits access to the parents’ spoken language.

A Nicaraguan school for deaf children provided Pyers with a unique opportunity to observe how language emerges and influences other areas of development. In Nicaragua, formal schools for deaf children weren’t started until the 1970s. When a school did eventually open, children were finally in a large enough group of other deaf children that they started using their own rudimentary sign language, totally unique to the students at the school. New cohorts of students learned the language (now known as Nicaraguan Sign Language), and it was passed down from one class to the next, gaining complexity over time.

“So these children introduced new vocabulary and more syntactic complexity that, interestingly, the first creators of the language didn’t always learn themselves,” Pyers explained.

Initially, Pyers found that younger students, who had learned a more complex version of the language, performed much better on theory-of-mind tasks than students who spoke a simpler version of Nicaraguan Sign Language. (Pyers & Senghas, 2009.)

Many of the findings in this article were reported in “The Consequences of the Evolution of Language on the Mind,” an integrative science symposium at the 2019 International Convention of Psychological Science (ICPS) in Paris. Learn more about ICPS at psychologicalscience.org/icps.
both groups, later signing acquisition was associated with less-selective neural responses to information about people’s mental states.

What this tells us is that language is necessary for the specialization of the neural regions associated with theory of mind, Pyers explained. The human brain has evolved to depend on language to reason in sophisticated ways about other people.

Cognition Without Language
Language, whether spoken or signed, plays a foundational role in human cognition, but what can we learn about language from studying animals that lack language? How does cognition develop in the absence of language?

“How can we understand how nonhumans are thinking when they not only don’t have language, but they don’t have the capacity for language like that seen in humans?” mused Alexandra Rosati (University of Michigan), a psychological scientist specializing in comparative cognitive evolution.

Rosati argues that although nonhuman primates may lack language, their behavior provides an opportunity to investigate the roots of complex cognitive processes that have emerged in humans.

“Humans have a long, protracted developmental period with a long period of juvenile brain development that allows us to acquire all these cool cognitive skills that seem to define the human species,” Rosati explained.

Understanding how other primates acquire spatial cognition can help us understand how these skills develop in the absence of language.

As Boroditsky’s research with Kuuk Thaayorre demonstrated, language can influence how we encode spatial references: When people use terms like “right” and “left,” they encode space in an egocentric perspective, whereas people speaking languages like Kuuk Thaayorre might encode spatial information in a more allocentric context, in which a person’s spatial perception is centered on other people and objects.

Comparative developmental studies of nonhumans can help us understand which aspects of human spatial development are shared with other primates, and the extent to which spatial encoding in humans might be dependent on our aptitude for language.

Bonobos, our closest relatives, were able to alternate between self and other centric spatial frameworks in different contexts, suggesting “that language is not necessary to flexibly utilize both types of frameworks” (Rosati, 2015). Similar tests of spatial cognition with lemurs, a much more distant relative, revealed that only one out of four species of lemurs tested (ruffed lemurs) preferentially reasoned using an allocentric framework, whereas the other species were more likely to use an egocentric frame or showed no overall species-level preference.

What this tells us about the origins of human-like cognition is that even without language, primates can still demonstrate humanlike behavior patterns.

Linking Language to Democracy
Although spoken language is estimated to have evolved in humans about 60,000 years ago, written language dates back only about 5,000 years. José Morais and Régine Kolinsky (Université Libre de Bruxelles, Belgium) have spent decades studying how this peculiarly human predilection for literacy has shaped the evolution of language and the mind.

“Evolution is not the only form of change,” Morais said. “Literacy did not ‘evolve’ in the biological sense: It emerged.”

Evidence suggests that literacy isn’t just a useful tool for social cohesion, but that the processes of learning to read fundamentally change the way we process information and perceive the world.

For example, Morais and a team led by APS Fellow Stanislas Dehaene examined brain responses to spoken and written language using fMRI. Participants included groups of adults with varying experiences with literacy: illiterate adults, adults who learned to read later in life, and adults who learned to read from 1960 to 2015, the global literacy rate for people older than 15 increased from 42% to 86%. See an interactive version of this map with this article on psychologicalscience.org/observer. Source: Ourworldindata.org.
during childhood. Results of the study, coauthored by Morais, showed that learning to read as an adult—similar to learning in childhood—led to significant changes in the cortical organization of the brain (Dehaene et al., 2010). Literacy enhanced language-network responses to written and spoken words.

Furthermore, a 2020 paper, coauthored by the same team, found that learning to read at any age was linked to changes in brain connectivity (López-Barroso et al., 2020).

In essence, by becoming literate, we are simultaneously changing our brains and the cognitive frameworks that shape how we interpret the world around us, a concept Morais and Kolinsky calls our “literate glasses.”

“No doubt we are trapped. We are literate, so we can’t think and communicate without using literate concepts,” he argued. “When we put a child in the situation of learning to read, the child’s mind learns and the child’s brain changes at exactly the same time—not before, not later.”

By expressing language through literacy, a new capacity and a new form of mental organization are created. And, Morais said, this capacity for literacy was a necessary condition for the development of philosophy, logic, and science.

Morais argues that it’s essential to consider the equity implications of gaps in global literacy. As of 2015, an estimated 14% of the world’s population over age 15 was illiterate, although Morais believes that data on literacy are often poor quality and this number may well be an underestimation. People living in the world’s poorest countries, particularly women, have the least access to education and, hence, to literacy.

Morais cited global inequities between literacy rates in low-income versus high-income countries as one of the major inequalities among human beings. He described a cycle of “vicious dependency,” whereby so-called democracies require universal literacy from their citizens, which is impossible to achieve in states without a real and functional democracy.

“We must give everybody the cognitive means necessary to a collective critical involvement in important political debates and decisions,” he concluded. “Critical literacy, in my view, is the key.”

Alexandra Michel is a freelance writer in Baltimore.

References


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REMEMBERING JAMES S. JACKSON
(1944–2020)

APS James McKeen Cattell Fellow James S. Jackson, a pioneering social psychologist known for his research on race and ethnicity, racism, and health and aging among African Americans, died on September 1, 2020, following a nearly 50-year career at the University of Michigan. The following tributes are personal recollections by some of the colleagues who knew him best.

Introduction by Cleopatra Howard Caldwell
University of Michigan

James S. Jackson’s career and legacy reflect his unwavering commitment and extensive contributions to the field of psychology and the social sciences through his unmatched research creativity and unparalleled mentoring of multiple generations of ethnically diverse scholars in the field.

James established the Program for Research on Black Americans (PRBA) at the Institute for Social Research, where his groundbreaking scholarship on the life experiences of ethnically diverse Black populations across the life course resulted in some of the most extensive social, political, and economic studies on the meaning of racial and ethnic influences on health and mental health. His research highlights social and biological factors in health, race and racism, and sources of psychiatric misdiagnosis specifically among African Americans. A hallmark of James’s research is the influence of racial discrimination on outcomes among African Americans and ethnically diverse Black populations. This approach highlights the significance of examining within-group differences as relevant to understanding the health and well-being of Black populations,

APS Fellows James S. Jackson and Toni C. Antonucci (University of Michigan), who were married for more than 40 years, visiting Montreal in the early 1970s. Photos courtesy of Mary and Jerry Levitt, who met Jackson when all were graduate students at the University of Toledo.
which transformed scholarship on the mental health of African Americans in this country.

As a doctoral student in social psychology at Michigan during the early 1980s, I had the privilege of working with James, who actively engaged African American graduate students from diverse academic fields (e.g., psychology, sociology, social work, political science, public health, and economics), ethnically diverse young faculty, and a diverse and talented research staff. Most of the faculty and students involved with PRBA have gone on to produce cutting-edge research and become distinguished scholars in their own right. This level of success is a byproduct of the quality of research mentorship James provided. James encouraged others to achieve despite facing challenges. He was the ultimate optimist and the biggest cheerleader for all of his mentees. He did not allow failure to be an option. He was always there with an encouraging word and an alternative way to interpret a challenging proposal or manuscript reviews with humor and expert guidance. He had faith in his mentees’ ability to achieve long before we did, and he expected only the best. His generosity in allowing me to oversee the adolescent component of the National Survey of American life study and to participate in professional meetings with and for him launched my own academic career. The learning environment and opportunities for professional growth and discovery that James provided at PRBA are exemplified among his mentees around the world. Without James’s extraordinary vision, strong leadership, and innovative scholarship, there would be no network of outstanding scholars, especially African American scholars, contributing to expanding the knowledge base of Life in Black America in the field of psychology and beyond.

I am fortunate to have been a student, mentee, colleague, and friend of James throughout my career. James S. Jackson’s remarkable influence on so many will be missed.

Phillip J. Bowman

University of Michigan

James S. Jackson was a brilliant scholar, but also a bold trailblazer, charismatic leader, optimistic visionary, generative mentor, and compassionate friend. As an internationally renowned social psychologist, James was a trailblazer from his humble beginnings in Inkster, Michigan, a segregated Detroit-area community for Black workers adjacent to Henry Ford’s Dearborn factories. For almost 50 years, it has been a career-defining honor for me to work closely with James as a graduate student, colleague, research collaborator, and friend.

As a University of Michigan graduate student, I first met James in 1971 when he arrived as a new assistant professor shortly after completing his PhD. A product of 1960s activism, James blazed a trail of leadership inspired by both Martin Luther King and Malcolm X, with a strong commitment to racial desegregation, integration, and Black power. As a personification of these core values, James leaves a brilliant legacy with PRBA, cutting-edge scholarship on the affordances model of mental and physical health disparities, transformative leadership contributions to several national and international organizations, and multiple generations of “mentees” who continue to exemplify his commitment to address racial-ethnic disparities and improve the lives of African Americans and others. At a personal level, James and I shared a strong commitment to the well-being of the next generation. I miss his infectious optimism as a compassionate friend who was more like extended family and a brother who was always warm, generous, and caring.
James S. Jackson's legacy is unparalleled with respect to the enormous impact that he had in illuminating Black life in America through the landmark national studies that he directed as founder and director of PRBA. The National Survey of Black Americans and the National Survey of American Life datasets have together generated roughly 800 articles and 100 dissertations.

James was directly instrumental in changing institutional structures associated with social science research and training. Since its founding, PRBA has trained several hundred PhD students and postdoctoral scholars from diverse academic disciplines and practice fields who now hold positions in universities across the nation. PRBA mentoring and training activities reflected James’s personality, energy, and curiosity and his guiding beliefs that the study of Black American life, in all its diversity, is of the utmost importance and should be conducted with scientific rigor and precision.

Finally, as a first-generation college student, James's personal life history resonated with many of us. He was acutely aware of the personal challenges we faced in negotiating academic settings that were unfamiliar and oftentimes unwelcoming of our presence. James listened, understood, and role-modeled the skills and confidence to overcome these challenges.

For many of us who had the honor of knowing and learning from James, his legacy to us and our obligation to his memory is to “pay it forward” and continue to contribute to scientific inquiry and service in our respective fields of endeavor.

Anderson Franklin
Boston College

James Jackson was a visionary who converted a vision into reality. James was a colleague, friend, and “family member” for over 50 years.

It was in the early 1970s at one of our private meals that James shared his grand vision to build a program with a team of interdisciplinary scholars in collaborative research to study the much broader and diverse lived experiences of African Americans rarely genuinely studied, much less represented in the literature. His establishment of PRBA, as an early-career professional, turned into the progenitor of many related national and global funded initiatives and launched the careers of generations of Black psychologists and other scholars for over 40 years. He was optimistic and positive in outlook, and he believed more in what can, rather than what cannot, be done.

James was generous with his time, which he so freely gave to students. He was a master mentor. He made so many believe in their talent and their potential to do more than they believed possible. These personal and professional attributes are the foundation upon which James built his own scholarship and a career that included becoming the first African American director of the Institute for Social Research at the University of Michigan. James was a frequently sought out expert and resource on African American life, as well as promoter of social justice and
equity, with appointments on distinguished boards and committees. His “firsts” are many throughout his career. His professional accomplishments are emblematic of a set of unique personal and professional attributes.

Patricia Gurin  
*University of Michigan*

James Jackson already had a vision for the first national study of Black Americans when he joined the faculty at the University of Michigan in 1972. He wanted a large sample of Black Americans to study how mental health was conceived and experienced differently among different groups of the Black population, as well as conceived and experienced as a Black cultural phenomenon—not something compared to Whites. Thus, the first national study of Black Americans was launched, followed by the subsequent ongoing studies that over many years have provided a treasure trove of data and narratives about Black Americans in the United States. He kept PRBA funded and productive for 45 years.

From the beginning, James mentored graduate students, postdocs, and junior faculty members, and he provided a model for other senior social scientists to do that as well. His legacy is thus not only the rich depictions of Black Americans through his scholarship based in the series of studies he conceived and funded, but also the huge number of Black and other social scientists of color he mentored who now lead programs, departments, universities, government agencies, and international institutions across the country and abroad.

His colleagues and friends feel sad beyond words to have lost James when he was still young and vibrant—still writing proposals well after his cancer diagnosis, still supporting young Black social scientists. He stands for the best in social science and humankind.

Wayne R. McCullough  
*Michigan State University*

I first met James S. Jackson as he was starting his third year at the University of Michigan. He, a young assistant professor, and I, a new graduate student, became acquainted but navigated separate paths until 1977, when I had the privilege of working with him on the National Survey of Black Americans (NSBA). James was energetic, a bold leader with expansive vision and a sense of humor. I often referred to him as Dr. James S. Kirk Jackson.

NSBA is a prime example of one of James’s successful and groundbreaking explorations into the unknown. NSBA employed nontraditional approaches and survey methods to obtain a deeper understanding of the political, economic, spiritual, health, and generational issues confronting the Black population. As a leader, James set the direction, built a vision, fearlessly sought funding, and coalesced people, especially graduate students and postdocs, with the right skills to get the work done. NSBA’s seminal work set the stage for numerous streams of research and follow-on studies, which to this day remain significant and influential to advocacy groups and policymakers.

This early work led, perhaps, to one of James’s greatest lifetime achievements: the creation of a network of scholars devoted to research, interventions, and policy issues affecting communities of color. A great leader and mentor, James not only guided and inspired students but also found ways to obtain financial support for them. His efforts have not only dramatically advanced research and scholarship but have also led to a legion of networked scholars throughout the United States and abroad.

A “Trekkie” at heart, James attempted and achieved so much because he often went where no man had gone before with the firm belief that he could achieve his lofty goals. He lives on in the lives he so immeasurably touched.
Harold Neighbors

National Institute on Minority Health and Health Disparities

In 1975 I moved to Ann Arbor to pursue a PhD in social psychology at the University of Michigan. I had the good fortune of being assigned to an energetic and eternally optimistic assistant professor, James S. Jackson. I had no idea that this lucky pairing would mark the beginning of a research career that would take me into almost every area of minority health one could think of. As my advisor, and eventually my mentor, James introduced me to many people and to many topics that I would go on to study for the next 45 years. It is difficult to express the depth of feeling for someone who opened so many doors. I was honored to have a “front row seat” as I watched James execute many bold and brave moves that turned his dreams into a reality of accomplishments that few Black graduate students thought possible. James possessed a boundless energy that appeared to have no room for the word “fatigue.”

I will be forever indebted to James for the strong support he gave to me over several decades. He was instrumental in assuring that there was never a time in my graduate student career that I did not have some source of financial support. As director of PRBA, he provided me with a sense of belonging I did not know was possible. As principal investigator (PI) on the National Survey of Black Americans, James provided a unique opportunity to gain quality, “hands-on” survey research experience. James was the source of the constructive criticism necessary for me to formulate my own ideas on Black mental health. James was, and still is, a mentor and a friend. This is how I remember James Jackson.

Eleanor Seaton
Arizona State University

The first time that James Jackson and I met is indicative of who he was as a scholar, mentor, and person. I was an undergraduate psychology major at the University of Illinois at Urbana-Champaign, and I enrolled in a course with James Anderson. James recommended that I speak with his friend (i.e., James Jackson) about earning a PhD in psychology. Since this incident predated cell phones and the Internet, James Jackson and I played telephone tag but never communicated. I read the book Family Life in Black America, by Robert Taylor, James Jackson, and Linda Chatters while in graduate school. It dawned on me that James Jackson was the person I had attempted to connect with as an undergraduate student. I was shocked to learn that despite James’s many accomplishments, he found time to connect with an undergraduate student who wasn’t sold on attending graduate school. When I arrived at the University of Michigan for my postdoctoral fellowship in PRBA, I told James this story. He responded with a big smile and stated “That sounds like something I would do. I’m glad you’re here now!”

I am forever grateful for James Jackson’s mentoring because his influence can be observed in the specific theories and methodological techniques that I utilize and the research questions that I pursue. Yet, two aspects of his mentoring stand out. The first includes acknowledgment of the variation within
the Black community. The second includes an unapologetic embrace of studying Black youth without a White comparison group.

Robert Sellers
University of Michigan

If James’s scholarship at PRBA had been the full extent of his contributions to the field, he would have been substantial and worthy of admiration. However, in my mind, his greatest contributions were in the thousands of social scientists of color that he mentored, sponsored, and supported throughout his career. It did not matter what one’s interests were, or what institution one was at; James and PRBA were always willing to support any scholar interested in learning more or doing more.

I witnessed that firsthand when I came to Michigan in the Personality doctoral program from Howard University in 1985. I was told by mentors at Howard to make sure that I connected with James Jackson, even though my primary research interests (stress and coping among student-athletes) were totally unrelated to the work that James and PRBA were doing at the time. Despite his insane schedule (think of the number “Non-Stop” from the play Hamilton) and the fact that I was not even a student in his program, James found time to mentor me all the way through my graduate program. Throughout my career, he not only served as a mentor, but also as a sponsor—opening doors and providing opportunities that I never would have had without him. There is a small part of me that would like to think that I was special, an exception. In reality, I know that I was really just one of many favorites, part of an army of scholars of color, that James helped prepare to build a canon of scholarship on the life experiences of Black peoples throughout the diaspora. Forward sightedness was always his greatest gift. He envisioned an academy that few others could, and then through his sheer genius, personality, and will, he made it happen.

M. Belinda Tucker
University of California, Los Angeles

To my great good fortune, I entered Michigan’s social psych program at the same moment that James Jackson became the department’s first full-time African American professor. At 27 years of age, James was barely older than our newly diverse cohort of grad students. He was exuberant, ever-optimistic, confident, hyperenergetic, magnetic and bold—filling us with grand revolutionary ideas. Nearly heretical at the time, James asserted that the African American experience was worthy of study in its own right, and he devoted his life to developing new methodological and conceptual vehicles for understanding populations of color and the systemic inequities they face.

We ate this up! After all, most of us had attended college during the turbulent 1960s, when all things seemed possible and calling out injustice and prejudice was essential. I became James’s first dissertation student.

Jerry Gurin and I were privileged to be co-PIs on James’s inaugural proposal to National Institute of Mental Health for the first nationally representative mental health survey of Black Americans—his initial foray in a lifelong series of groundbreaking interdisciplinary studies that challenged established views and became training vehicles for a new workforce/brain trust that would literally change the face of racial inquiry and our institutions. Upon completing the proposal at midnight (by typewriter!), James, Jerry, and I rewarded ourselves by sharing an Apple Mountain dessert at Ann Arbor’s legendary Cottage Inn.

The vital core of this remarkable journey is James’s legendary devotion to students and younger colleagues, thereby establishing a model of mentorship that we, his academic offspring, have wholly embraced and imparted to our own progeny. James’s transcendent and transformative impact on our professions and the legion of scholars he shepherded through this life is eternal. I owe my entire career and my impossibly rich life to James.
With support from the APS Fund for Teaching and Public Understanding of Psychological Science, three teams of researchers are providing new resources for educators and their students. Using $5,000 grants from the Small Grants for Teaching Projects program, the teams aim to make learning statistics more accessible to students with disabilities, to inform the public about the science of implicit bias, and to provide more affordable—and ethical—opportunities for animal studies in undergraduate labs.

The APS Teaching Fund was established through a $1 million endowment from the David & Carol Myers Foundation. For more information on the fund, visit psychologicalscience.org/smallgrants.

The Accessible Toolbox: A Website for Teaching Statistics in Psychology to Students with Disabilities
Nicole Gilbert Cote, Jared Schwartzer, and Natasha Anderson (Mount Holyoke College)

With a growing number of students registered as having a disability on college campuses, there is a pressing need to better support educators on methods of universal design and strategies for teaching students with disabilities. However, many institutions are limited in their ability to provide instructional support and training on how to best address various disabilities in the classroom, particularly in regard to teaching statistics in psychology.

To address this limitation, Gilbert Cote, Schwartzer, and Anderson developed the Accessible Toolbox, available at commons.mtholyoke.edu/theaccessibletoolbox, to deliver a multitude of resources for instructors to better address the pedagogical needs of students with disabilities and various other barriers to success with statistics. The Accessible Toolbox offers activities that have been tested by students and consultants with disabilities, strategies to help students combat math-related anxiety, tips for working with neurodiverse learners, and information on how to support students who are blind or visually impaired; it also features advice from students with learning differences.

In addition, the researchers have developed a 3D statistics toolkit for learners who are visually impaired. The kit consists of a Braille label maker, graphing paper, and playing cards, as well as materials designed to support manipulative graphing, including reusable wax sticks, foam sheets, and three hardboard distributions (positively skewed, negatively skewed, and normal). The Accessible Toolbox is able to offer a limited number of free kits to instructors who request one at the-accessible-toolbox-g@mtholyoke.edu.

“All students with learning disabilities deserve to take courses taught by instructors who understand neurodiversity and apply that knowledge to the classroom,” Gilbert Cote said.

Outsmarting Human Minds: Interactive Teaching Modules on the Science of Implicit Bias
Mahzarin Banaji and Olivia Kang (Harvard University)

Humans make hundreds of decisions every day, both big and small. Often, these decisions are made with deliberation and are intended to result in sound choices for ourselves and our societies, yet research in psychological science shows that the human mind is as fallible as it is extraordinary. Alongside rigorous and informative inputs come contributions from implicit processing that shape and skew human judgments in subtle and often undetected ways. There is broad public fascination about these blind spots: what common biases and heuristics we fall prey to, how they affect our choices and perspectives, and what we can do to intervene.

Although many resources exist to teach people about implicit processes, they often stop short of allowing learners to interact with the data in active, customizable, and personal ways. To accomplish this, Banaji and Kang are developing a new suite of online teaching tools. Available at outsmartinghumanminds.org, this interactive database of explorable data sets (including maps,
demonstrations, and quizzes) brings the science to life for the general public. For instance, the demonstration “Should You Trust Your Vision?” brings a 2006 experiment by Dan Levin and Banaji to life, allowing users to experience a powerful visual illusion—one with social consequences.

In addition to its interactive offerings, Outsmarting Human Minds (OHM) also produces video and audio modules covering topics like the Stroop effect (delays in processing incongruent information—e.g., delays in naming the color red when it is used to write the word “blue”) and the ways first impressions based on faces or accents fool us. The latest module features a map that visualizes the shift in implicit biases related to race, age, and sexual orientation in the United States between 2007 and 2016. In the future, OHM will also include customizable Implicit Association Tests and an interactive module on long-term implicit attitude change.

“OHM’s greatest impact has been to show that teaching about bias can be humble, engaging, and inclusive,” said Kang. “We show that everyone can be both the target and perpetrator of implicit bias, and that having implicit bias is not a villainous thing but a side effect of being human.”

Roach Lab: Using Cockroaches to Increase Learning Outcomes at a Discount
Darby Proctor and Marshall Jones (Florida Institute of Technology)

Animal research has long been an essential part of psychology. But although comparative animal studies offer an invaluable window into the human mind, undergraduate animal laboratories, traditionally operated using pigeons and rats, are in decline because of budgetary constraints and ethical concerns over using vertebrates for teaching purposes.

One solution is to use invertebrate animals—in particular, discoid cockroaches. This insect may evoke revulsion in some, but the species poses few ethical concerns, is inexpensive to maintain, and is well suited for demonstrations in courses on learning, memory, and behavior.

Proctor and Jones have developed a comprehensive resource for implementing the roach model in university classrooms at roachlab.org. This resource includes experimental protocols that were designed for (and sometimes by) undergraduates and cover both classical and operant conditioning. To further aid faculty in keeping costs down while using roaches as model organisms, the researchers also include designs for many of the experimental materials to be 3D printed.

The researchers are now collaborating with several universities, including Drake University, Bucknell University, Georgia State University, and Eastern Florida State College, to assess student opinions about using the roach model in the classroom. Although the project is still early in the data-collection process, Proctor said, students have described Roach Lab as a thought-provoking model that has helped them synthesize the ideas and information presented in their psychology courses by promoting a more active learning process.

The Many Benefits of Working With Cockroaches

- Roaches are less expensive to maintain than other lab animals: They’ll eat almost anything, from cornmeal to lettuce.
- Roaches are easy to breed.
- Invertebrate work is generally exempt from ethical oversight, and there is no evidence that roaches need psychological enrichment (although Proctor and Jones suggest providing enrichment such as toilet paper tubes and burrowing soil to be safe).
In November 2020, the Atlantic published a sensational article that identified a hidden network of wealthy parents who urged their children to pursue niche sports (fencing, crew, squash) to gain admission to Ivy League universities. The article represented a second chance for its author, Ruth Shalit Barrett, whose reporting career had been wrecked amid allegations of plagiarism in the 1990s. But shortly after the Atlantic published Shalit Barrett’s comeback article, readers expressed concern regarding its accuracy. Eventually, the Atlantic retracted the article, noting that “the author misled our fact-checkers, lied to our editors, and is accused of inducing at least one source to lie to our fact-checking department.”

Not necessarily, according to Jenny Wagner, Ulrich Orth, Wiebke Bleidorn, Christopher Hopwood, and Christian Kandler, who present an integrative framework for understanding personality stability and change. They argue that personality predicts important life outcomes, but it also shifts over time (Bleidorn et al., 2019; Soto, 2019). Instead of asking whether personality changes, personality researchers should spend their time explaining why some personality traits change and others remain stable.

Our genes and environment contribute to our personality (Bleidorn et al., 2014). Yet no single genetic mutation or environmental event reliably alters personality. Instead, Wagner and colleagues (2020) emphasize that “people are often agents of their own stability and change” (p. 439). For example, introverts typically pursue environments that sustain their social motivation without sapping their energy, rather than social situations that would demand more extraversion. Conversely, people who strive to increase their conscientiousness may pursue careers that require reliability, carefulness, and diligence (Hudson & Fraley, 2016).

Students enjoy completing personality tests, so you should have no problem generating discussion. The following activity will encourage students to
complete a brief personality inventory, followed by some reflection exercises. I recommend presenting the Ten–Item Personality Inventory (Gosling et al., 2003) on PowerPoint slides.

**Instructions:**
Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

**Ten-Item Personality Inventory**

I see myself as:
- Extraverted, enthusiastic.
- Critical, quarrelsome.
- Dependable, self-disciplined.
- Anxious, easily upset.
- Open to new experiences, complex.
- Reserved, quiet.
- Sympathetic, warm.
- Disorganized, careless.
- Calm, emotionally stable.
- Conventional, uncreative.

**Scoring instructions (“R” denotes reverse-scored items):**

- **Extraversion:** 1, 6R
- **Agreeableness:** 2R, 7
- **Conscientiousness:** 3, 8R
- **Emotional Stability:** 4R, 9
- **Openness to Experiences:** 5, 10R

Ask students to complete the Ten-Item Personality Inventory and then score their responses. Make sure that students understand how to reverse-score items. Next, ask students to answer some reflection questions with a discussion partner. If you are teaching in a face-to-face format, make sure that students are using appropriate social distancing. If you are teaching virtually, you can put the students in breakout rooms.

Have students respond to the following discussion prompts:

- Which of the five personality traits have shown the most stability over your lifetime? Describe situations that inform your judgment about which of your personality traits seem the most stable.
- Which of the five personality traits seem the least stable over your lifetime? How has your personality changed along these dimensions?

Wagner and colleagues argue that people are often agents of their personality stability and change. Looking at your answers to the first two prompts, what actions have you taken to increase your personality trait stability? What steps have you taken to change certain personality traits?

Personality matters mightily. People should recognize and respect personality’s power to predict important life outcomes—from finding a compatible romantic partner to finding a fulfilling career. Although personality is often considered unchangeable, it shifts across the life span and in response to life events. By understanding personality stability and change, students can better understand themselves, their fellows, and their global community.

**References**


BUILDING NEW CULTURES OF SUSTAINABILITY

By David G. Myers


In 1960, Spaceship Earth carried 3.0 billion people with 127 million motor vehicles. Today, with 7.8 billion people and 1.3 billion motor vehicles, greenhouse gases are accumulating, and Earth’s climate is under assault. As multiple scientific reports document (National Aeronautics and Space Administration, n.d.), • sea and air temperatures are rising, • plant and animal life is migrating northward or upward, • snow and ice packs are melting, • the seas are rising, and • extreme weather—fires, hurricanes, droughts, floods—is increasing.

With the feared climate future now approaching, we can appreciate a recent Internet meme: “Goodnight moon. Goodnight Zoom. Goodnight sense of impending doom.”

If the bad news is that climate change is a likely weapon of mass destruction, the good news, reports Melbourne University social psychologist Yoshihisa Kashima, is that Homo sapiens has survived and flourished thanks to culture. Humans have adapted to varied environmental niches throughout our species’ existence. From the Equator to the Arctic, through the 14th century Little Ice Age and other environmental changes, humans have constructed dwellings, social networks, and institutions that have sustained our species. Thanks to culture—the socially shared information, attitudes, traditions, and inventions transmitted across generations—we are able to build on accumulated knowledge.

What is more, culture can change. And that allows us to envision future “cultures of sustainability,” observes Kashima. “New cultures may form. If a culture of human–nature disconnect has emerged over the 20th century, cultures of sustainability may emerge over the 21st.”

Kashima believes the recipe for such cultural transformation has four ingredients:
1. Reconceiving the human–nature relationship. Instead of seeing themselves as distinct from nature, and nature as a resource to be used indiscriminately, people in cultures of sustainability will “include nature as an important part of themselves.” Humans will share and practice ideas of “human-nature connectedness.”

2. Reconceiving human–artifact relations. The present-day linear conception of mass produce → consume → discard will be recrafted into a circular conception of assemble → recycle → reconfigure.

3. Norms and regulations that sustain the global commons. We are living the tragedy of the commons, as individuals, organizations, and countries pursue their self-interest to everyone’s collective detriment. Future cultures of sustainability will, therefore, entail both shared climate-friendly norms and government policies that incentivize collective conservation and renewable energy.

4. Envisioning a green utopia. Although our “system justification” serves to sustain the status quo, there is also a power to utopian thinking—to imagining an ideal future. Goals matter. They direct attention, promote effort, motivate persistence, and stimulate creativity (Gollwitzer & Oettingen, 2012). Moreover, goals are often realized when people mentally contrast a desired future with likely obstacles and form “implementation intentions” (if-then plans) that specify how they will overcome those obstacles (Oettingen & Gollwitzer, 2019). Thus, says Kashima, a shared green utopia might “motivate pro-environmental behaviors” and accelerate a global cultural trend toward a sustainable future.

The possibilities for student engagement with this topic are plentiful and can include small group or class discussion questions, such as the following:
• Where does climate change rank on your list of national and world problems?
What principles of persuasion might strengthen ideas of human-nature connectivity and associated social norms and practices?

What psychological forces drive cultural change?

As a writing assignment, instructors might also invite students to articulate their vision of a utopia—a North Star ideal that could help us navigate our future. Such a society might protect both lives and livelihoods, respect human rights and support human aspirations, define life success and satisfaction in nonmaterial terms, pursue truth with openness to mystery, provide both connection and purpose, supplement “me thinking” with “we thinking,” and live gently upon our Earth.

Kashima reminds us that, despite threatening climate trends, humans have the power to “craft cultures of sustainability.” Moreover, our species’ past successes in adapting to varied environments, and our increasing climate awareness, give us hope. As Rory Cooney’s “The Canticle of the Turning” chorus concludes, “Wipe away all tears, for the Dawn draws near, and the world is about to turn!”

References


Humans’ social networks, institutions, and artifacts adapt to the natural environment, just as the environment adapts to us (Kashima, 2020).

For more on the psychological effects of climate change, see the collection of articles at psychologicalscience.org/climate-change.
Sonja Brubacher is a Canada-based researcher in child memory development who works for Griffith University’s Centre for Investigative Interviewing in Australia. In addition to conducting research, Brubacher works with law enforcement and child protection officials across the globe to develop and implement best practices for working with children and vulnerable adults.

**Landing the First Job**
I got my PhD in 2011. My research had been heavily focused on children’s memory development, but I had also started to work with training police and child protection workers, doing research that was end-user focused. In 2014, after spending a 2-year postdoc working with Deb Poole (an expert in children’s memory and interview protocol development), one of my collaborators, Martine Powell (the founding director of the Centre for Investigative Interviewing), encouraged me to take on a full-time researcher role with her. The center has an international footprint, in terms of industry engagement, and it made sense to have a representative in North America. I was initially skeptical about how well this would work but was willing to give it a shot. While I was fortunate to spend
about 1 month of face-to-face time with the team each year (pre-COVID), we engage almost daily online, which has worked out really well.

Adapting the Interview
My research focus hasn’t changed dramatically over the years, but it has taken slightly different paths and branches. For example, I started out as a memory researcher, but some of my later experiences turned my attention to questions like how interviewers can provide better social support for interviewees who have to share information on sensitive, embarrassing, or difficult topics.

At the time I got the APS Rising Star award, I had been co-supervising two PhD students who were doing research with Indigenous Australian children. There were things about Indigenous communication styles that made us expect that parts of the traditional interview process might be difficult or unusual for these children. Existing research on interviewing children is based primarily on WEIRD [Western, educated, industrialized, rich, democratic] populations. It hasn’t had a huge history of cultural adaption yet, although that is changing.

One of the classic examples is “practice narratives” in forensic interviews with children. Typically, we like to spend a little time upfront getting to know the child, getting the child to describe a personal experience that they enjoyed, to give them practice in responding to interview questions and to get them comfortable with the interviewer. It’s a task that really centralizes the child in the interview, and in certain cultures that is not really a typical way of communicating. It can be difficult to go into an interview situation that’s already intimidating, and the first thing you’re being asked to do is to spotlight yourself. We looked at doing some modifications for that phase of the interview and some broader supports in the community around reporting and disclosure.

From the Field to the Lab and Back Again
A lot of my research is end-user focused. Some of it is directly translational because it’s got such a history behind it based on what practitioners are already doing. I do a lot of interfacing with practitioners directly. They give me real-world examples of where the research just can’t be put into practice because the samples of kids, or the contexts they’re working with, are different—they might not have a pleasant event they can talk about to get comfortable, for example.

Those kinds of conversations usually take me back to the lab to test out modifications to the interview process. Next, we go to field interviews to get access to interview transcripts with kids who are alleging various types of abuse or maltreatment. We look at whether or not the same practices are happening in real-world interviews and how kids respond. We don’t know in the field interviews whether a practice is increasing erroneous responses because we don’t know exactly what happened the way we do in a lab, but we can see whether it’s helping them report more.

Balancing the Personal and Professional
For me, I think really the biggest challenge is balancing work and life priorities. I’m 9 years post-PhD and still in a contract position because I was geographically limited for a whole bunch of different personal reasons. It’s challenging because when I was in grad school, the big conversation was always like, “You go wherever. You go everywhere for your research. You go anywhere, and if you’re not willing to move, you don’t really care about your research.” That wasn’t true for me. I moved into this role because I really love my research. I was passionate about what I was doing and I didn’t want to give it up, but I also couldn’t easily move.

I think that those kinds of attitudes and beliefs weigh early-career researchers down, especially women. Balancing the demands of family—including your partner’s family or your parents or whoever it is in your life who needs different kinds of care—is a huge challenge for a lot of people in our profession who want to do the work that they love, but they’re not able to just give up all the other puzzle pieces of their lives to follow it.

On Teaching Remotely
A lot of my students are initially quite nervous about having a remote supervisor. However, every single student I’ve ever worked with has said at some point, “It’s not about location—I feel like you’re always there.” I do set limits on when I’m available; it’s just that with technology the way it is, we can have instant connections, too. Being remote in some ways allows more flexibility, and when working from home there is less chance that someone will be knocking on the office door.

Finding What Drives You
Stick to your values—whatever it is you need to be satisfied or to function well as a professional and a mentor and a researcher. Whether you need to stay in one place, or you can go anywhere in the world but you really want to study one particular topic, make sure, as much as possible, that you don’t settle for something else. If you stick to what really matters to you, but you keep an open mind about what path you might take to get there, you could end up in a position you never expected that fits those values.

Do you know an early-career researcher doing innovative work in industry or academia who might be a good fit for Careers Up Close? Contact the Observer at apsobserver@psychologicalscience.org.
The University of Louisville Grawemeyer Award in Psychology is given for original and creative ideas: ideas that possess clarity and power and that substantially impact the field of psychology. These ideas help us understand one another and the world around us, and provide insights into the human mind. The purpose of this annual award is to acknowledge and disseminate outstanding ideas in all areas of psychological science. The award is designed to recognize a specific idea, rather than a lifetime of accomplishment. Nominations are judged on the basis of originality, creativity, scientific merit, and breadth of impact on the discipline.

The Nomination Process
The University invites nominations from throughout the world by individuals, professional associations, university administrators, and publishers or editors of journals and books in Psychology. Self-nominations are not permitted. Upon receipt of their nomination, nominees will be notified about the award conditions, the selection process and the supporting materials needed.

Nominations Must Include:
- A one-page to two-page letter of nomination, in English, identifying the specific idea being nominated and delineating the reasons why the idea merits the award, based on the criteria above.
- A current mailing address, telephone number, and e-mail address for the nominee.

Send Nominations (by postal mail or email) no later than February 28, 2021 to:
Director, Psychology Grawemeyer Award
Dept. of Psychological and Brain Sciences
University of Louisville
Louisville, KY 40292, U.S.A.
Telephone: 502-852-0430
E-Mail: grawemeyer.psychology@louisville.edu
Website: www.grawemeyer.org/psychology/

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2008 Albert Bandura
2009 Anne Treisman
2010 Ronald Melzack
2011 Walter Mischel
2012 Leslie Ungerleider & Mortimer Mishkin
2013 Irving Gottesman
2014 Antonio Damasio
2015 James McGaugh
2016 Steven Maier
2017 Marsha Linehan
2018 Robert Sternberg
2019 Kent Berridge & Terry Robinson
By the time I had to commit to applying to graduate school, the United States was 3 months into quarantine with no end in sight. The world was in a state of flux. With a global pandemic in full swing, tensions stirring around an upcoming election, and racial injustices taking center stage, I realized it was more important than ever to consider what was truly important in my life. I was and remain a (work-from-home) lab manager at Yale University conducting cognitive neuroscience research. I was worried about job security, my family’s health and safety, and how I was going to handle these stressors while applying to graduate school.

My fellow lab managers had already decided that they would apply in the next cycle, and I considered doing the same. I knew applying to graduate school would require time, effort, financial resources, and the support of my colleagues. Taking a step back, I had to ask myself if I had these resources and if I was in the right mental space to apply. I have since moved forward with the application process, but that doesn’t mean it is the right choice for everyone right now. I hope this article gives you a glimpse into some of the major changes and challenges I encountered during this application cycle so that you can come to your own best decision.

Test Optional

One of the major changes to applying to graduate school this year is that the GRE General Test can be taken at home. For me, taking the GRE at home had many benefits. For example, it allowed me to practice test taking where I would take the actual exam (i.e., at my desk in my bedroom). Having taken the exam both at home and at a testing center, I would say that not having to endure stressors like metal detectors and students reviewing the 30-60-90 triangle rule under their breath beside me was certainly a weight off my shoulders. I do suggest, however, that when your neighbor offers to watch your barking dog during your exam, you graciously accept.

When I began the process of sending my GRE scores to graduate schools, I had selected eight schools to apply to and was already aware, via #academictwitter, that some programs were no longer requiring the test. I was surprised, however, to discover that all eight of my schools had now followed suit. I had prepped for the GRE for 3 months before taking it in June. I was ecstatic about my scores and looked forward to using them to strengthen my application, but, after discussing the situation with my advisors, I decided against sending my scores. We felt that my application was competitive enough without them and that, unless I had a perfect score, they would hold little weight in a graduate school’s decision.

Taking Advantage of New Forms of Communication

In deciding where to apply, I knew it was essential to talk to potential principal investigators (PIs) and graduate students to learn more about their research, the graduate programs, and future directions. Video calling made contacting and meeting with potential PIs significantly easier. Despite time changes and noisy backgrounds, being able to hop on a video call with students and faculty allowed me to learn so much more about the programs than I would have over email or on the phone. Over video, I could share my screen to explain upcoming presentations, discuss collaborations on upcoming grants and fellowships, and simply express myself in a manner that was more natural than the formalities of email. Using Zoom (or Skype) also gave me the opportunity to learn more about potential programs without having to be offered...
a post-application interview. As a Black and queer applicant, it was also important for me to learn about the steps universities were taking to address recently publicized racial injustices. Being able to talk to graduate students in the moment and ask these difficult questions gave me a better grasp of how these programs valued my background.

Starting Early
I mentioned before that the world was in flux; the routines we once held ourselves to have become distant memories. When applying to graduate school, I also had to consider the changes my advisors may have been experiencing. Did they have family to take care of, were funding cuts and layoffs affecting their work, and did they have time to advise me? When thinking of letter writers specifically, I chose not only people I knew well who could write strong letters of recommendation, but also people who I knew were reliable and had the time to assist me. I had to have explicit conversations with my letter writers about my goals in applying to graduate school. Again, I had to ask myself questions: Would they have the time to write strong letters of recommendation, were there ways I could help them submit their letters on time, could they edit drafts of my personal statements, and, if so, how long did they need to look them over? These questions are important no matter the global situation, and asking them can save a significant amount of stress for all involved.

Considering Funding
Applying for funding is a necessity when applying to graduate schools during a pandemic. Normally, a university is able to provide internal funding for incoming graduate students for a set number of years, but because of the pandemic and the subsequent financial crisis, many acceptances now come with the caveat of requiring some form of external funding. When applying to external funding sources, I was advised not to dwell on any interrupted internships or research projects but, instead, to frame my statements around the goals I was able to accomplish in spite of my circumstances.

Expecting Changes
Before I received my work-from-home orders and our research center closed its doors for 4 months, I had proposed an independent study that would encompass everything I had learned throughout my time as a lab manager. Now I could not run my study, and I felt like my year and a half of research was all for nothing. Distraught, I reached out to my PI and explained my concerns. My PI, having been a graduate student during the Great Recession, said to me that one of the hardest parts of research is expecting change. Expect change, find alternatives, and shift the narrative. My PI then put me in contact with colleagues who had just completed data collection for a similar study, and while I waited for research to start up again at our lab, I began to assist on data analysis for their study. Performing this work shined a light on valuable implications and confounds that I would have faced with my own study. Now that I can turn back to it, I have the experience and network necessary to complete my work efficiently.

Always expect change, whether it’s missing data, inconsistent results, or a global pandemic. Oh, and don’t forget, wear a mask! ☹️

"With a global pandemic in full swing, tensions stirring around an upcoming election, and racial injustices taking center stage, I realized it was more important than ever to consider what was truly important in my life."
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INDIANA

Indiana University-Bloomington  The Department of Psychological & Brain Sciences  Visiting Assistant Professor

The Department of Psychological and Brain Sciences is seeking to fill four positions for visiting assistant professors to teach undergraduate courses in the areas of Introductory, Cognitive, Social, or Developmental Psychology, and/or Neuroscience. Position will begin August 2021. The ideal candidate will be an experienced instructor at the college level with an interest in adding value to the undergraduate program. This will be a 1 year appointment, renewable for one additional year. The teaching load is five courses a year. At the time of the appointment, applicants should have an advanced degree (a PhD in Psychology, Neuroscience, or related field is preferred), and documented teaching experience. Applicants should submit a letter of application that includes a statement of teaching philosophy and experience, evidence of teaching effectiveness, a diversity, equity, and inclusion statement, a curriculum vita, and have three letters of recommendation.

Interested candidates should review the application requirements and submit their application at https://indiana.peopleadmin.com/postings/9952. Questions regarding the position or application process can be directed to: Cherlyn Crees, Assistant to the Chair, ATTN: Instructor Search, Department of Psychological and Brain Sciences, 1101 E. 10th Street, Bloomington, IN 47405-7007 or chcrees@indiana.edu. Review of applications will begin January 4, 2021 and continue until the positions are filled. Information about the department and the university is available at http://www.psych.indiana.edu. The College of Arts and Sciences is committed to building and supporting a diverse, inclusive, and equitable community of students and scholars.

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GRANTS

University of Toronto 2021 Summer Research Opportunity Program
The Canada Summer Research Opportunity Programme (SROP) will support students who are Black, Indigenous, or other People of Color (BIPOC) applying to graduate school in psychology, management, or neuroscience. The 8-week remote mentorship program will run from June 7 to July 30, 2021.
Application Deadline: February 15, 2021
For more information, visit canadasrop.ca.

NIH Research Opportunities Related to COVID-19
In response to the rapidly evolving situation surrounding COVID-19, institutes within the U.S. National Institutes of Health (NIH) have issued notices of special interest (NOSIs) designed to allow researchers to apply their existing NIH research grants to COVID-19 research. These NOSIs offer competitive revision and administrative supplement opportunities that differ in scope and research area depending on the issuing institute; they allow researchers across all fields, including psychological science, to contribute their expertise and research projects to the growing body of COVID-19 research.

NIH will be accepting applications at various due dates from October 19, 2020 through January 26, 2022. 30 days before the due date, research institutions must submit a letter of intent.
Through this grant, NIH can provide awardees up to $2 million per year for up to 5 years.
Learn more at bit.ly/34ZUV45.

NSF Funding to Support Transition From New Research Discoveries to Innovation
The National Science Foundation (NSF) offers researchers the opportunity to transition their research from discoveries to the marketplace through the Partnerships for Innovation Program (PFI).

NIMH Research Opportunities Related to COVID-19
The National Institute of Mental Health (NIMH) has issued a funding opportunity announcement supporting new research institutions to study suicide prevention. In the face of rising suicide rates in the United States, NIMH has developed a goal to reduce the suicide rate by 20% by 2025. To achieve this goal, NIMH has prioritized studies that convene and employ a transdisciplinary team of researchers.

Research institutions should apply to support the rapid development, testing, and refinement of innovative approaches for:
• identifying, preventing, and treating suicide risk within well-defined target populations, with an emphasis on high-risk and underserved groups;
• organizing and delivering optimized suicide prevention services within real-world settings where at-risk individuals are served;
• continuously improving the quality, impact, and sustainability of optimized interventions and service delivery strategies within diverse care systems.

Deadline: January 13, 2021
Learn more about the PFI program at bit.ly/3ac7JDw.

MEETINGS & EVENTS

Join APS to attend live webinars and enjoy recordings of past events. Visit psychologicalscience.org/conventions/virtual to learn about the Student and Early Career Webinar Series; Government Research, Funding, and Policy Webinars; and other virtual events.

2021 APS Virtual Convention
May 26–27, 2021
psychologicalscience.org/convention

13th Annual Conference on the Science of Dissemination and Implementation in Health
December 15–17, 2020
academyhealth.org/events/2020-12/13th-annual-conference-science-dissemination-and-implementation-healthresearch

SOBC Capstone Virtual Research Conference
February 22–23, 2021
commonfund.nih.gov/sobc-capstonemeeting

Society for Affective Science 2021 Virtual Conference
April 15–30, 2021
society-for-affective-science.org
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Melissa Smith is a senior user experience (UX) researcher at Stadia, Google’s gaming platform, where she works to improve how players engage with interactive entertainment systems. Smith also volunteers with FIRST Robotics, a nonprofit helping to get K-12 kids interested in STEM through annual robotics competitions.

You became interested in robotics as a kid. What appealed to you about human-robot interactions?
As a kid and continuing on throughout my life, I’ve been fascinated with the concept of optimizing systems and making them more efficient. Human-robot and human-computer interaction appealed to me because it seemed like the ultimate form of optimization, since there are tasks that humans are innately better at doing and other tasks that computers and robots are better at doing.

How did your study of psychology lead you to zero in on human trust in automation?
The psychology of trust, especially human-human trust, is vast and complex. Being able to learn about how humans develop and display trust in something with variables that can be controlled (like a computer agent or a robot partner) was a fun way to contribute to the field of trust research.

Can you provide an example of how your work at Google has influenced the end-user experience? Or a sneak peek of an experience we can look forward to?
Working at a company like Google on projects like YouTube and Stadia is fun because the reach of your projects can be billions of people, which is exhilarating and humbling at the same time. A favorite project from YouTube is double-tap-to-seek, which allows you to skip forward or backward in a YouTube video on your phone by double tapping on the right or left side of the screen; this feature is now used more than the scrub bar (the progress bar at the bottom of a video) and is so intuitive. A favorite project from Stadia has been working to improve the transfer of an in-progress game from one device (like a TV console) to another device (like a phone or computer). This is one of the ways in which Stadia is helping to create the future of video gaming and interactive entertainment.

Recent research has spotlighted a gender gap in STEM and has revealed gender biases in gaming. What remedies do you believe could help counteract these biases?
Finding one’s community can really help at the individual level, whether it’s a work-related group or just people you connect with who can offer perspective and an outlet. For me, connecting with researchers across the industry at conferences, getting involved with Black UX Network events, and staying active through my volunteering with FIRST Robotics all provided me outlets and perspectives that help balance the day-to-day.

What’s your advice for students or other early-career psychologists interested in careers in UX or product development?
For students: Apply for and do as many internships (only paid ones!) as you can. Many major companies have internships available for students, whether undergrad or graduate. These provide a great way to learn what aspects of a job or company you like—and more importantly, what you don’t like. My internships with the Navy, a couple of Naval consultant companies, and Google all taught me different skills I continue to use and apply today.

For early-career folks: Make an effort to take note of new research trends through attending conferences, reading publications, or even perusing lighter reads like UX-relevant Medium articles. These efforts can pay off by keeping you agile and up to date on developing UX techniques and trends.
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