Human Behavior in the Time of COVID-19

"Behavior will determine the actual public health risk in the end. If we’re able to understand why behaviors are risky, and therefore follow appropriate guidelines, we will have a far better outcome than if we don’t."

—Valerie Reyna, Cornell University

Psychological scientists speak
See page 34.
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Mind, Body, and Illness: Amidst the Pandemic, Opportunities for Discovery

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Psychological scientists speak.

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“There are many reasons immigrants have a hard time—discrimination, low resources, lack of cultural capital. However, one aspect of many immigrant challenges is not feeling or not being perceived as feeling in the ‘right’ way; the way that is culturally attuned in the majority culture environment.”

—APS Fellow Batja Mesquita on her research, as supported by a grant from the European Research Council. Hear from other grant recipients too. Page 19

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Text Messages Can Help Predict Suicide Attempts

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People tend to project their own level of interest onto prospective partners, which helps to explain some differences between the sexes. Insights from Psychological Science. (Observation, February 2020)

How and Why We Misperceive Sexual Interest

Research from Clinical Psychological Science finds that attempting to conceal anxiety may hinder individuals’ nonverbal communication, increasing social rejection. (Observation, March 2020)

Social Anxiety May Hinder Mirroring of Body Language

APS and psychological scientists are flexing their entrepreneurial muscles, aided by a grant from the Ewing Marion Kauffman Foundation. (Observation, February 2020)

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Stay tuned to this growing collection of psychological science research and insights from the APS community. Updates on psychologicalscience.org/covid-19.
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MIND, BODY, ILLNESS: AMIDST PANDEMIC, OPPORTUNITIES FOR DISCOVERY

By Lisa Feldman Barrett
APS President

This is my final column to you as APS President. In the midst of this extraordinarily difficult and trying time, I hope that you and your loved ones remain healthy and safe.

In early March, as I raced home from abroad to shelter in place with my family, I asked myself a question: Are respiratory diseases, such as the common cold, physical illnesses or psychological illnesses? If you think this is a silly question, think again. When scientists place a cold virus directly into the noses of healthy adults, only about one-third develop respiratory infections. So a cold must have other causal factors. And some of them may be psychological.

The Common Cold Project is a series of prospective viral-challenge studies that were conducted from 1986 to 2011 (e.g., Cohen, 2005). Psychologist Sheldon Cohen and colleagues (Cohen, Miller, & Rabin, 2001; Cohen et al., 2013) placed viruses into the noses of healthy adults, including a coronavirus linked to the common cold, and observed who developed respiratory infections. Five studies revealed that a virus is not a sufficient cause. Chronic stress, affect and emotion, social isolation, social and economic disadvantage, childhood adversity, or other psychosocial factors may also confer risk. Social integration, social support, positive affect, and a high-quality relationship with parents in childhood may confer resilience.

It’s tempting to assume that a virus is the major cause of a cold, and any psychosocial factors are subsidiary and merely moderate the impact. After all, you cannot develop a cold without a virus. But a virus is not the cause. Respiratory infections, like most biological phenomena, more likely emerge from a complex web of weak, interdependent causal factors—the kind I described in my March 2020 Observer column (see also Lewontin, 2000)—and a virus is one of those causal factors.

Here’s what I mean. A virus does not “replicate itself” from its genes within a passive human body. Its capacity to cause infection requires certain necessary conditions in that body’s cells, immune system, and brain. The ensemble of “brain+body” provides a necessary environment for a virus. It contributes to the likelihood of its own infection, not only by the state of its immune and endocrine systems, but also by the mental phenomena it creates, which in turn are linked to immune and metabolic function. Therefore, the probability and severity of infection at any moment, as well as resilience (exposure to a virus with no symptoms), is a unique confluence of a virus in a body with a thinking, feeling, and perceiving brain. Both virus and “brain+body” are mutually dependent causes; therefore, neither should be ignored in science or in practice.

In this view, psychological factors may be necessary causes of respiratory illness. They are not sufficient to develop a common cold, but then, neither is a virus.

Cohen et al.’s studies are consistent with a larger body of important research by health psychologists which suggests again and again that mind and body are linked, not in a vague metaphorical way, but in a real, probabilistic, biological way. What we think and feel, how we experience the world, and who we experience it with may translate into vulnerabilities or resilience to illness (e.g., see Slavich, 2000). If psychological factors causally contribute to respiratory illness, then scientific research that directly studies these factors could prove vital to physicians, epidemiologists, and virologists on the front lines of the COVID-19 pandemic.
This research may, in fact, be as important as the more biologically focused science that fills the front section of major newspapers these days. Reifying an illusory boundary between mind and body, mental and physical, weakens our understanding of disease, and so it’s tragic (and frankly, infuriating) that decisionmakers in this unfolding drama, and the media who report on it, have a blind spot for research that dissolves this boundary, at least as of mid-April when this column went to print.

This blind spot could arise for various reasons. We don’t know, for example, whether findings from the Common Cold Project generalize to respiratory infection from the COVID-19 virus. Nor do we know whether the findings generalize to a pandemic unfolding in naturalistic settings around the globe. But the Cohen et al. findings provide a solid foundation for hypothesis-testing these and other empirical questions. Similarly, there is research suggesting that chronic stress may impact the effectiveness of vaccines to battle infection, particularly when the body’s immune system is producing antibodies to a novel strain of a virus (i.e., where a person does not have much in the way of preexisting antibodies when exposed; Quigley et al., 2007; Vedhara et al., 1999). And, indeed, psychological stress may blunt the antibody response to vaccines that are developed for newer influenza strains (also a respiratory illness; e.g., Cohen et al., 2001; Pedersen et al., 2009). If these hypotheses are ignored, particularly as the pandemic evolves, we may miss opportunities to make potentially life-saving discoveries.

Another reason for this blind spot may be that, frankly, we don’t know exactly how mental events, like the experience of stress, are transformed into physical conditions, like immune function. But an absence of knowing everything is not the same as knowing nothing. The Common Cold Project suggests that, at least for cold viruses, psychosocial factors leave a brain less able to regulate the proinflammatory cytokine response upon exposure to a virus. Other research has established a relationship between shorter telomere length and chronic stress (e.g., Epel et al., 2004), increases in proinflammatory cytokines, and poorer antibody response to vaccines (e.g., Goronzy et al., 2001; Saurwein-Teissl et al., 2002), and people with shorter telomeres (in white blood cells that help mount an immune response to pathogens) had an increased risk of respiratory infection (Cohen et al., 2013).

Yet another reason: The scientific findings might confuse people and cause inadvertent harm. Governments, medical providers, and scientists in many countries have been largely concerned with flattening the curve (i.e., managing the number of people with infection) so as not to overwhelm medical providers and increase the death rate. A public message that social support offers some protection from illness, for example, might lead people to ignore pleas to socially distance, etc. So alongside the science, we’d also need clear, concrete messaging: Maintain social connections while remaining physically distanced from others. Try to manage your stress and your emotions as you continue to wash your hands, disinfect surfaces, and perform all the other behaviors that reduce your virus exposure.

Regardless of these concerns, it is very possible that psychological caretaking—reducing stress, decreasing loneliness, and generally managing one’s emotional experiences—could help to flatten the curve after exposure to the virus. Many people, including many scientists, however, find it challenging to grapple with the idea that illness and disease might be caused by a virus plus the psychological conditions of its host, rather than by a virus alone. This brings me to perhaps the most important reason for the blind spot: Many people cling to a belief in biological determinism and simple unitary causes. This pair of beliefs—this ideology of illness (Lewontin, 1991)—lurks in large swaths of medical and scientific practice. In the present pandemic, biological determinism is to assume that COVID-19 has a fixed, deterministic capacity to cause illness, independent of the conditions of its host. A belief in simple, unitary causes is to assume that COVID-19 is responsible for respiratory infection in the normal medical sense and therefore is a sufficient cause, and all other factors (psychological, social, economic) must be modulatory.

This blind spot has serious consequences for the health and welfare of people who are struggling during this pandemic.

One immediate consequence is that people die from infection at a faster rate when they live in conditions that foster chronic stress and other psychological causes that make infection more likely. Other factors play a role here too, such as less access to health care, discriminatory treatment practices, and living conditions that make social distancing a luxury. But historians have shown time and again that improving biomedicine alone, without addressing the psychosocial conditions that foster the spread of respiratory illness, threatens the most vulnerable among us and allows viruses to persist (see McMillen 2016). From the mid-18th century to the beginning of the 19th century, for example, most people in Europe and North America died of infectious respiratory diseases such as tuberculosis, influenza, and pneumonia. Death rates from these illnesses slowly declined as nutrition, housing, and wages improved. The discovery of vaccines and other medicines had
an effect, of course, but conditions that reduced chronic stress, allowed parents more quality time to spend with their children, and increased well-being were the major causal factors (Burney, 2000; Lewontin, 1991). Even in the United States today, infant mortality falls with every dollar increase of the minimum wage (Komro et al., 2016).

Our current societal system of social stratification and economic disparity, and the psychological sequelae that it cultivates, belong to the web of factors that caused this pandemic. These consequences are now coming for the rest of us as people lose their jobs in droves. And severe, downstream effects may already be in motion; for example, children of stressed or depressed parents may be more likely to suffer health problems decades down the road (e.g., Hullam et al., 2019; Raposa et al., 2014), perhaps via alterations in immune function that begin in childhood (e.g., Ulmer-Yaniv et al., 2018).

Right now, our society spends substantially more time, creativity, and money on isolated biological or chemical approaches to health and illness than it does to understand how thoughts, feelings, and behaviors create conditions for health or illness to flourish. What would life be like, right now, if people understood that there may be sound biological reasons for reducing stress and negative affect, investing time and energy in social connectedness (particularly for children, the elderly, and people who are most at risk for illness), and generally being more mindful of how they can curate their day-to-day experiences?

We psychological scientists are uniquely positioned to answer these questions through our research and by educating the public. If we follow the lead of Cohen and other health psychologists, and continue to dissolve the porous boundary between the mental and the physical, we can remedy the blind spot and create opportunities for discovery that could ultimately save lives.

References
More APS Members in the Media online at
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Observer Forum

Reader feedback on the March Observer

Forward Into the Past
Presidential Column, by Lisa Feldman Barrett

The idea of taking variation as the prime focus of psychology would not seem much of a Kuhnian paradigm shift to clinicians, personality psychologists, or testing/scaling specialists who are concerned above all with individual differences, along with their origins and distributions. However, it is a good reminder to experimenters and typologists.

—Diane Sunar, Istanbul Bilgi University, Turkey

Brava! This hits home for those of us doing fMRI research, which is now requiring relatively large numbers of participants (30–100) for publication, and hundreds of participants are preferred. Then, the researchers are slowly learning to attend only to large effect sizes. In some cases, it is the radiologists and statisticians driving the research, not the psychologists, even though they are asking psychological questions. Thanks for this essay.

—Lucy Brown, Albert Einstein College of Medicine

The Talent Bias
Back Page, featuring Chia-Jung Tsay

You are absolutely correct when you suggest that the public venerates the “naturally gifted” musician over the “striver.” In my own research into the overlap of psychology and creativity (particularly musical creativity), I’ve found that people prefer believing that great talent/gifts are somehow externally-endowed—either by a genetic fluke, special wiring, or a divine intervention—instead of coming from hard work.

—Judith Schlesinger, theinsanityhoax.com

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Distanced Self-Talk Enhances Goal Pursuit to Eat Healthier
Celina R. Furman, Ethan Kross, and Ashley N. Gearhardt

How to make healthier diet choices? Distanced self-talk—using one’s name and non-first-person singular pronouns—may be an effective strategy to increase healthier eating, this research suggests. After watching a health video or a neutral video, dieters and nondieters made food choices while reflecting on them using immersed self-talk (e.g., “What do I want?”) or distanced self-talk (e.g., “What does [Name] want?”). Dieters made healthier food choices more often after watching a health video and using distanced self-talk, and nondieters made healthier choices whenever they used distanced self-talk, regardless of the video watched. These findings indicate that distanced self-talk, a relatively effortless strategy, can improve self-control and encourage healthier eating both for dieters and nondieters.

Clinical Psychological Science
https://doi.org/10.1177/2167702619896366

PSYCHOLOGICAL SCIENCE

Sex Differences in Mate Preferences Across 45 Countries: A Large-Scale Replication
Kathryn V. Walter, Daniel Conroy-Beam, David M. Buss, et al.

This research seems to support the popular perception that men are more likely to prefer attractive young mates, and women are more likely to prefer older mates with financial prospects. These sex differences were universal across the 45 countries surveyed. In countries where gender equality was higher, both sexes appeared to have mates closer to their own age. Contrary to older studies, this study found that gender equality did not predict other differences in mate preferences, such as financial prospects. Also, different countries’ rates of communicable and infectious diseases did not predict sex differences or preferences.

https://doi.org/10.1177/0956797620904154

Achieving More With Less: Intuitive Correction in Selection
Hagai Rabinovitch, Yoella Bereby-Meyer, and David V. Budescu

Acknowledging the influence of irrelevant attributes in the selection of job candidates (e.g., interviews that benefit English speakers when native language is not relevant for the position) may help underrepresented groups obtain a fairer chance based on their true abilities. In this research, subjects preferred the candidate who had higher levels of an attribute irrelevant for the job (e.g., a better score on a written test influenced by the candidate’s native language for a truck driver position). However, when the irrelevant attribute was not a characteristic of the candidate but merely situational (e.g., limited time for the test), subjects’ preference biases were attenuated.

https://doi.org/10.1177/0956797620903717

Probing Ovulatory-Cycle Shifts in Women’s Preferences for Men’s Behaviors
Julia Stern, Tanja M. Gerlach, and Lars Penke

Women’s preferences for certain male behaviors do not seem to change across the ovulatory cycle, this research suggests. Stern and colleagues...
found that women rated the sexual and long-term attractiveness of males displaying courtship or competitiveness behaviors the same regardless of where they were in their ovulatory cycle. Hormonal levels and relationship status did not affect the results. These findings are inconsistent with the theory that in the fertile (late follicular) phase, women shift their preferences toward indicators of men’s genetic quality, including dominant or competitive behaviors.

Yu and colleagues analyzed the characteristics and college trajectories of nearly one million students at 249 colleges and universities, comparing psychology with nonpsychology majors. Students who majored in psychology were not initially interested in the field, but those who had more exposure to psychology in high school were more likely to enter and stay in psychology. College students with poorer performance as science, technology, engineering, and math (STEM) majors often transferred into psychology, whereas those with higher performance transferred from psychology into STEM majors.

Papies and colleagues suggest that the desire for food and drink arises from rewarding simulations based on previous experiences. Specifically, people think of food and drink in terms of what it feels like to consume them, which leads to desire to consume them. Research using behavioral, physiological, and neuroimaging measures shows that cues related to food and drinks (e.g., eating contexts such as being in a cafe) trigger these eating and drinking simulations, such as thoughts about taste and enjoyment, which then affect desire (e.g., cravings). Increasing working memory load or mindfulness can disrupt these simulations, reducing desire.
Observations

MTURK WORKERS ARE MORE DEPRESSED—BUT BOTS AND DEMOGRAPHIC DIFFERENCES INFLATE THE DATA

Each of these factors contributes to the differing rates of major depression in National Health and Nutrition Examination Survey (NHANES) and Mechanical Turk (MTurk) participants. (Ophir et al, 2020).

Conducting psychological research through online platforms such as Amazon’s Mechanical Turk (MTurk) is more common than ever, but working with this convenient pool of participants can present a unique set of challenges. In line with previous findings, research in Clinical Psychological Science indicates that up to 11% of MTurk participants, compared with just 3% to 7% of the general population, may meet the diagnostic criteria for major depression. However, reports are significantly inflated by low-quality responses and sociodemographic differences.

“Knowledge about the reasons behind increased prevalence rates [of depression] is not only interesting on its own but also necessary for accurate interpretations of research results,” write psychological scientist Yaakov Ophir (The Hebrew University of Jerusalem) and colleagues. “To the extent that this finding reflects a genuine difference, increased prevalence makes MTurk an even more convenient and attractive recruitment platform for clinical researchers.”

The researchers dug deeper into how data quality, demographics, and other factors may contribute to the so-called “Turker Blues” through a set of two online studies.

In the first study of 2,719 MTurk participants reportedly living in the United States, Ophir and colleagues focused on how responses from inattentive and fake “bot” accounts may influence self-reported rates of depression.

Participants reported what, if any, symptoms of depression they had experienced in the past 2 weeks—including hopelessness, trouble concentrating, changes in sleeping or eating patterns, and suicidal ideation—on a scale of 0 (not at all) to 3 (nearly every day). By this measure, individuals who report experiencing five or more symptoms of depression throughout more than half of days in the past 2 weeks may be described as having major depressive disorder.

To weed out automated or otherwise fake accounts, the researchers made note of any supposed MTurk workers with suspicious IP addresses; such addresses suggested that the account may have been hosted on a private server. They also noted those with non-US-based IP addresses, given that bot accounts have largely been found to originate outside the United States.

In addition, Ophir and colleagues targeted low-quality responses using a program that rated participants for attentiveness on the basis of a series of eight indicators, including reading speed and consistency of responses. This allowed the researchers to sort participants into three categories: attentive workers, who passed all attention checks; questionable workers, who failed one attention check; and inattentive workers, who failed two or more attention checks.

Using these strategies, the researchers identified 236 workers with non-US or otherwise suspicious IP addresses, 35% of whom failed the attention checks, compared with 7%...
of participants using nonsuspicious IPs. They also identified an additional 181 inattentive and 427 questionably attentive workers, leaving a total of 1,848 participants who were both attentive and using a nonsuspicious IP.

Taken together, 18.5% of all participants reported symptoms that met the criteria for major depression. This number was heavily skewed, however, by the reports of workers with suspicious IP addresses or who were inattentive, Ophir and colleagues write. In fact, although 26% to 38% of workers with suspicious IP addresses or those who were inattentive or questionably attentive workers met the cutoff point for major depression, just 13% of attentive workers reported five or more symptoms.

In line with previous research, this suggests that the prevalence of major depression among MTurk workers is substantially higher than that of the general population, Ophir and colleagues write, but more stringent participant filtering may be required to prevent low-quality responses from further inflating these results.

Clinical measures can be particularly vulnerable to fake and inattentive responses, the researchers note, because these respondents tend to select answers toward the middle of a scale, which in the case of certain diagnostic measures can result in participants meeting the cutoff point for depression. Even though in this study we specifically focused on depression, our findings on the effects of failing to screen for inattentive and suspicious respondents are relevant for any crowdsourcing-based clinical research, ”Ophir and colleagues write. “Pathologies such as social anxiety may prove to have been artificially inflated as well.”

The researchers sought to replicate these findings, and to further investigate the influence of sociodemographics on the prevalence of major depression in MTurk workers, through a follow-up study of 2,444 US-based MTurk workers.

After filtering out workers who had suspicious IP addresses or who were inattentive, 11% of the remaining 1,461 attentive participants were found to meet the criteria for major depression. In contrast, just 3.6% of 5,134 individuals who participated in face-to-face interviews for the US Centers for Disease Control and Prevention’s 2015–2016 National Health and Nutrition Examination Survey (NHANES) were found to meet the cutoff for major depression.

Additionally, MTurk workers were found to be significantly younger, to be more physically inactive, and to report poorer sleep quality than the nationally representative sample in the NHANES study. These factors have all been tied to increased risk of depression, Ophir and colleagues write. On the other hand, the MTurk sample was also more highly educated, reported higher income, and was more likely to be employed than participants in the NHANES study, factors which have been found to decrease depression risk.

“Approximately half of this difference can be attributed to differences in the composition of MTurk samples and the general population (i.e., sociodemographics, health, and physical activity lifestyle),” write Ophir and colleagues—and there are a number of potentially provocative explanations for the remaining difference.

On the one hand, individuals who already suffer from depression may be more likely to participate in paid online surveys from the comfort of their home. It’s also possible that using MTurk may contribute to this increase in depressive feelings, the researchers write. This could be due either to the potentially deleterious effects of excessive screen time or to the socially isolating nature of these tasks, which may impair participants’ sense of leading a meaningful life.

The third and perhaps more concerning alternative, Ophir and colleagues write, is that people may simply be more comfortable honestly reporting symptoms of depression in an online setting, in which case the actual rate of depression in the general population may be significantly higher than face-to-face interviews suggest. Further work is needed to narrow down the potential cause, or causes, of the unexplained difference in these samples’ depression rates, the researchers conclude.

Reference

In "Observations," the names of APS Fellows and current APS Members are denoted by boldface type.
WORRYING ABOUT WORRY: SOME TYPES OF NEUROTICISM MAY PROMOTE GREATER HEALTH VIGILANCE

It’s safe to say COVID-19 has given each of us an abundance of things to worry about. In addition to the stress brought on by social distancing, homeschooling, and shifting professional circumstances, the coronavirus pandemic also forces us to confront the nature of worry itself: When a threat is real, where exactly is the line between allowing anxiety to rule our lives and worrying just enough to keep ourselves and those we love safe?

In previous research, people high in neuroticism, a personality trait associated with anxiety, worry, and fear, have been found to be less physically healthy and more likely to be diagnosed with mental health disorders. New research in Current Directions in Psychological Science suggests that individuals can score high in neuroticism for very different reasons, however. Individuals who score highly due to general feelings of anxiety and tension do indeed appear to have worse health outcomes, write Alexander Weiss and APS James McKeen Cattell Fellow Ian J. Deary (University of Edinburgh), but those who report more concrete feelings of vulnerability may have better physical health than average due to increased bodily vigilance.

“Neuroticism may be related to health-promoting behaviors in some contexts, health-harming behaviors in other contexts, and health-neutral behaviors in still other contexts,” Weiss and Deary explain.

The researchers note that while some studies have found evidence of a link between high neuroticism and impulsive health-harming behaviors such as smoking, for example, others suggest that high neuroticism paired with high conscientiousness, a personality trait associated with self-control and long-term planning, may be protective against such health risks.

To further examine how “anxious-tense neuroticism” and “worried-vulnerable neuroticism” influence health outcomes, Weiss, Deary, and colleagues analyzed data collected from 321,465 participants available through the UK Biobank, a large medical research project that collected data from individuals aged 40–69 years from 2006 to 2015.

In the 2017 study in Psychological Science, Weiss and Deary found that participants who had self-reported high levels of anxious-tense neuroticism (e.g., answering yes to “Would you call yourself a nervous person?”) were 6% more likely than average to have died of any cause, including cancer, cardiovascular disease, respiratory disease, and accidents, during the study period of 2006 to 2015. Individuals who had scored themselves high in worried-vulnerable neuroticism (e.g., “Are you a worrier?” or “Are your feelings easily hurt?”), on the other hand, were 8% less likely than average to die during the same period.

Weiss and Deary also investigated the role of genetics in neuroticism by comparing the genomes of 270,059 UK Biobank participants. This revealed that general neuroticism, anxious-tense neuroticism, and worried-vulnerable neuroticism were all associated with specific gene variants in different regions of the genome. Additionally, while the researchers found that all of these high neuroticism variants were associated with increased risk of mental health disorders, genes associated with worried-vulnerable neuroticism were linked to better physical health outcomes.

“The special neuroticism factor, whose items relate to being worried and feeling vulnerable . . . may be related to better health because it promotes health vigilance,” Weiss and Deary suggest. These individuals may be more likely to report symptoms, and thus more likely to be diagnosed and treated at earlier stages of a disease.

These findings reflect the multifaceted nature of neuroticism, Weiss and Deary note in the 2020 study.

“Although there are few ways that people can have very low or very high levels of neuroticism (they would have to have very high or very low levels of all facets), as one moves away from these extremes, there are many ways that people can get the same score,” the authors explain.

It’s also possible for two people with the same or very different neuroticism scores to be equally at risk of a particular health outcome due to the way health risks interact, they continue.

“As a medical or psychological professional, or as a friend, loved one, or acquaintance, we often tell others not to worry so much. Health-wise, we have found phenotypic and genetic evidence for an upside to worry,” Weiss and Deary conclude.

See the full article with reference list at psychologicalscience.org.
People with social anxiety disorder (SAD) may employ a number of self-protective strategies, including controlling their body language, to manage the heightened discomfort and distress brought about by day-to-day social interactions. But while these behaviors may help in the short term, research in Clinical Psychological Science suggests that attempting to conceal anxiety in this manner hinders non-verbal communication, increasing instances of social rejection, and ultimately affirming individuals’ negative expectations about social interactions.

“Individuals with SAD fear exposing their (perceived) flawed self to others because others might reject them,” write Maya Asher, Amitay Kauffmann, and Idan M. Aderka (University of Haifa, Israel). “Consequently, they use a number of self-protective or self-concealment strategies . . . but it is precisely the use of these strategies that ultimately leads to others’ negative evaluation.”

In addition to tightly controlling their body language in order to conceal physiological signs of stress, individuals with SAD may also avoid eye contact or shift their attention inward in response to anxiety-induced by social situations. These strategies can make it more difficult to process social cues, Asher and colleagues explain, hindering their behavioral synchrony with conversation partners. Nonverbal synchrony, the researchers note, not only includes mimicry or imitation—mirroring a partner’s nod, for example—but any form of responsive body language, such as shaking your head negatively to signal disagreement with someone nodding affirmatively or placing a hand on the shoulder of a person who slumps forward in despair.

Asher and colleagues further explored the relationship between SAD and non-verbal synchrony through a study of 156 participants in Israel, 38 of whom were determined to meet the formal criteria for SAD through a diagnostic interview conducted by a practicing psychologist specializing in the disorder.

During the study, mixed-sex pairs of participants—either both without clinical levels of SAD, or one with SAD and one without SAD—were recorded while they carried out a 30-minute conversation based on a set of three questions provided on index cards. These sets contained either increasingly personal closeness-generation conversation topics, or more general small-talk topics for discussion.

In addition to the interview, participants self-reported their symptoms of social anxiety, including how anxious they were in anticipation of the upcoming conversation. After these conversations, the videos were compared using motion-energy analysis (MEA) to measure the frame-by-frame movements of each participant.

Asher and colleagues then entered this data into two different models: one in which SAD was treated as a binary state—participants either had it or they didn’t based on the diagnostic interview—and one in which the researchers computed a continuous measure of SAD for each participant based on the severity of any symptoms they reported.

When SAD was treated as a binary condition, pairs in which neither participant met the diagnostic criteria for SAD were found to express greater nonverbal synchrony during closeness-generating conversations than during small talk. Pairs in which just one participant had SAD did not demonstrate this increased nonverbal synchrony during closeness-generating conversations.

When SAD was treated as occurring continuously, however, pairs with a greater difference in SAD scores were found to exhibit more nonverbal synchrony during small talk than during closeness-generating conversation.

The findings from the binary analysis suggest that individuals with SAD may feel more threatened by closeness-generation conversations, causing them to employ protective strategies that hinder nonverbal synchrony, Asher and colleagues suggest. The findings from the continuous analysis are a little more nuanced, however.

“One possible explanation for this pattern . . . is that in low-anxiety conditions (i.e., small talk), the more socially anxious individual may attempt to compensate for his or her perceived inferiority or social ineptitude by (consciously or unconsciously) increasing nonverbal synchrony,” the researchers write. “High levels of anxiety may be overwhelming and leave few resources for communication, which results in undersynchronization or underdisclosure.”

It could also be that conversation partners with lower levels of SAD go out of their way to enhance nonverbal synchrony during less stressful conditions, but become less likely to do so as their socially anxious partners become more obviously withdrawn.

Treating social anxiety as a continuous measure, rather than a dichotomous diagnostic category in which SAD is either present or absent, may help generate findings that reflect the full spectrum of symptom severity, increasing statistical power and decreasing measurement error, Asher and colleagues write. ☞

See the full article with reference list at psychologicalscience.org.
PHYSICALLY AGGRESSIVE PEOPLE SPOT ANGER IN AMBIGUITY

Physically aggressive individuals appear to be more adept at accurately detecting anger in ambiguous faces, suggests a new study in Psychological Science.

“Physical aggression may be characterized by aggressive realism, or a tendency to more readily process anger when it is present in ambiguous social stimuli,” explain authors Grace M. Brennan and Arielle R. Baskin-Sommers (Yale University).

Decades of research have suggested that physically aggressive individuals interpret social information in aberrant ways. For example, physical aggression is associated with a tendency to interpret ambiguous facial expressions as angry expressions. However, the processes that contribute to such associations remain unclear.

The researchers tested 90 men from a high-security correctional facility in Connecticut. Most of the participants had been charged with a violent crime, and more than half had been charged with violent infractions against another person while incarcerated. This sample is an ideal population for studying physical aggression, which is generally more pronounced in men than women. In addition, more than half of the inmates in the United States are serving sentences for violent crimes, the researchers write.

All participants completed questionnaires and scales to measure their physical, verbal, affective (i.e., anger), and attitudinal (i.e., hostility) aggression levels, as well as the range and differentiation of their emotions. Participants also completed an ambiguous emotion-identification task, in which they labeled male faces with one of two emotions as quickly as possible. The faces were created by a software that morphed two faces with different expressions, creating 30%–70% blends of emotions combining anger and fear, anger and happiness, and fear and happiness. Additionally, the faces appeared to move either toward or away from the participant.

Participants classified the faces moving toward them (looming) as angry more often than the faces moving away from them, which suggests that looming faces are perceived as more threatening. Participants who scored higher in physical aggression were more likely to classify faces as angry when anger was part of the blended face.

Brennan and Baskin-Sommers then subjected the individual data—reaction times and emotion choice in the emotion-identification task—to diffusion modeling, which allowed them to disentangle the decision-making processes that contribute to the choice of one emotion-label or the other. The diffusion model of decision-making assumes that (a) before the choice, an individual has an existing bias toward one option; (b) after the presentation of the options, the individual accumulates information; and (c) a decision is made when information in favor of one option reaches a response threshold. How long participants took to make their decision about an emotion allowed the researchers to calculate their bias, drift rate, and separation threshold.

The researchers found that levels of physical aggression did not appear to influence bias, indicating that physically aggressive individuals did not have a preexisting tendency to decide that a face was angry on the basis of less information, in comparison with decisions about other emotions. Physical aggressiveness also did not influence threshold separation, indicating that individuals who were more physically aggressive did not accumulate less information when identifying facial emotions. However, physically aggressive individuals showed a higher drift rate for anger, meaning that they accumulated anger-related information more efficiently, leading them to identify faces as angry more swiftly without a decrease in accuracy.

These results do not support the common idea that bias explains why aggressive individuals interpret social information in aberrant ways, Brennan and Baskin-Sommers write. Instead, they suggest that aggression relates to superior anger-identification abilities. Moreover, because drift rate indexes information accumulation from both perception and memory, these findings may mean that aggressive individuals use their accrued experiences of hostile interactions to form knowledge structures that allow them to identify anger more swiftly. They “draw on knowledge structures to make more accurate interpretations, allowing them to adopt a realistic lens for viewing their often hostile worlds,” write Brennan and Baskin-Sommers.

Understanding how and why aggressive individuals readily and accurately identify anger is important because this tendency is thought to contribute to what is often destructive personal behavior. Physical aggression is harmful yet ubiquitous, and it is associated with low-quality relationships, social rejection, and involvement in the criminal justice system, note Brennan and Baskin-Sommers.

Reference
Alison Gopnik, an APS Fellow who is recognized internationally for her study of children’s learning and development, has been selected as a 2020 Guggenheim Fellow. Announced on April 9 by the John Simon Guggenheim Memorial Foundation, the 175 individuals selected for the 2020 honors include writers, scholars, artists, and scientists drawn from 53 scholarly disciplines and artistic fields. Gopnik is the only recipient in the field of psychology.

A professor of psychology and affiliate professor of philosophy at the University of California at Berkeley, Gopnik writes and speaks widely about cognitive science and psychology, including the Mind and Matter science column for the Wall Street Journal and a 2011 TED Talk on how babies think. Her books include The Scientist in the Crib (1999), The Philosophical Baby: What Children’s Minds Tell Us About Love, Truth and the Meaning of Life (2009), and The Gardener and the Carpenter: What the New Science of Child Development Tells Us About the Relationship Between Parents and Children (2016). She alluded to her next project in a tweet. “Many thanks for all the Guggenheim congrats! I’m using it to write a new book 'Explore: A unified theory of childhood' aka a computational, cognitive and evolutionary explanation of why kids are so weird.”

In her “Bring the Family” address at the 2016 APS Annual Convention, Gopnik examined research showing how children learn from their caregivers through everyday observation, conversation, and play, rather than through intensive supervision and direction.

Her presentation, “Parents Without Parenting,” posited that young children demonstrate reasoning skills typically associated with scientists. “The young children are actually … better at solving problems than the older children are or than the adults are. It’s as if the particular kind of learning that these young children are doing is just designed to find things that are new, to find things that are unexpected, to find the things that aren’t the things that adults think.”

Since its establishment in 1925, the John Simon Guggenheim Memorial Foundation has granted more than $375 million in fellowships to more than 18,000 individuals selected for both their achievement and promise. Fellowships are intended to further recipients’ development by helping them “engage in research in any field of knowledge and creation in any of the arts, under the freest possible conditions and irrespective of race, color, or creed.” The Foundation receives approximately 3,000 applications each year.

Other APS Fellows to receive Guggenheim fellowships include Jennifer Richeson (2015), whose research focuses on cultural diversity and social group membership, Fei Xu (2018), who studies cognitive and language development in infants and children, and APS President Lisa Feldman Barrett (2019), renowned globally for her revolutionary research on emotion in the brain.
FOR WORK-FAMILY BALANCE, GIVE POLICY A PERSONAL TOUCH

Balancing the competing demands of work and family has become more precarious with COVID-19 forcing many employees to take on the added challenge of working remotely. Research in Current Directions in Psychological Science suggests that while formal workplace policies can help employees manage these roles successfully, informal social support remains essential if individuals are to take advantage of these programs without facing professional consequences.

“It is important to recognize that informal and formal supports are interconnected,” write authors Kimberly A. French (Georgia Institute of Technology) and Kristen M. Shockley (University of Georgia). “We posit that the presence of formal supports may condone or promote supportive [informal] behaviors.”

The path to work-family balance is a two-way street, the researchers note. Informal support, or lack thereof, from supervisors, who often have some discretion over how the employees who report to them navigate workplace policies, can significantly alter how this balance plays out at home. Similarly, support offered by spouses and other family members at home can also influence the workday.

Formal policies, on the other hand, can take a variety of forms, from remote-work options to child-care subsidies and, in some areas, labor laws that limit work hours and promise paid parental, sick, and family leave.

In a meta-analysis of 1,021 effect sizes from studies in 46 countries, French, Shockley, and colleagues found that the informal support offered by these relationships is consistently associated with reduced work-family conflict.

They clarified that this support is only useful when it’s needed—and the needs of individuals in seemingly similar situations can vary based on cultural differences, economic conditions, and individual preferences. In the workplace, for example, some employees who prefer to keep work and family separate may perceive a family-supportive manager as intrusive rather than helpful.

Use and availability of flextime and dependent-care options have been found to reduce the extent to which workplace demands contribute to family conflict at home—for example, when an employee is required to work late, which may interfere with family time—but not the extent to which family responsibilities, such as a child being sick, may interfere with the workday. This suggests that providing greater flexibility to workers does not necessarily lighten the load of family responsibilities. One potential explanation for this, French and Shockley suggest, is that increased flexibility may increase family demands.

“For example, the spouse with the more flexible job may be the one who takes responsibility for picking up children or doing more housework,” the authors offer.

More flexible work arrangements such as working remotely may also require greater self-regulation in the face of distractions, the researchers write, while employees who make full use of flexible work options may experience negative career repercussions due to the perception that they are wrongly prioritizing their personal lives over productivity.

“Informal and formal supports are interconnected,” French and Shockley conclude. “The weak associations between formal supports and work–family management may be due to formal supports being distal, impacting work–family management through a chain of support processes.”

References

Funding & Policy

PSYCHOLOGICAL SCIENCE AND THE EUROPEAN RESEARCH COUNCIL
Spotlight on APS Members and Their ERC Grants

One of the premier funding organizations in Europe, the European Research Council (ERC) encourages the highest quality research with the goal of strengthening the European research system. The ERC’s approach is described as “bottom-up” or “investigator-driven,” meaning that scientists themselves set research priorities, not the agency or political system. Researchers can propose work in any field as long as it seeks to identify new research directions and opportunities.

Psychological science is well represented at the ERC. Many APS Members hold ERC grants, and a considerable number of authors submitting to APS journals credit ERC support for their research programs. Psychological science is reflected in the ERC leadership, too: APS Fellow Eveline Crone (Leiden University) is a vice president of the organization, overseeing the funding of the behavioral and social sciences and humanities (for more, see “Frontiers of Psychological Science: An Interview With Eveline Crone” in the January Observer).

To highlight the influence of ERC funding on the psychological science research process, APS spoke with APS Members holding different types of ERC grants.

Shaul Shalvi
Amsterdam School of Economics, University of Amsterdam

Shaul Shalvi is an associate professor at the Amsterdam School of Economics at the University of Amsterdam. A psychological scientist, his research interests include behavioral ethics, judgment and decision making, behavioral economics, and cooperation. Shalvi relies on an ERC Starting Grant to study the behavioral roots of corruption.

“For many years, human cooperation has been praised as beneficial in organizational and personal settings. Indeed, cooperation allows people to develop trust, build meaningful relationships, achieve mutually beneficial outcomes, and strengthen bonding with one’s group members,” said Shalvi. “However, while the benefits of cooperation are clear, very little is known about its possible negative aspects. Such negative aspects include the potential emergence of unethical conduct among cooperating partners.”

This conduct, known as corrupt collaboration, occurs in business, sports, and other industries when one group bends ethical rules to set the stage for another group to further bend those rules in pursuit of personal profit.

“Our studies revealed corrupt collaborations most commonly occur when all involved parties gain from the corrupt behavior,” said Shalvi.

Shalvi also noted that his Starting Grant allowed him to hire a PhD student and two postdoctoral fellows to support his lab’s research.

Batja Mesquita
Center for Social and Cultural Psychology, University of Leuven

APS Fellow Batja Mesquita is a distinguished professor at the Center for Social and Cultural Psychology at the University of Leuven. Her research interests include culture and ethnicity, emotion, mood, affect, intergroup relations, and more. Mesquita relies on an ERC Advanced Grant to follow emotional acculturation and its impact on social networks longitudinally. Her

ERC FUNDING TYPES

Established by the European Commission—the Executive Branch of the European Union—and its Horizon 2020 funding plan, the ERC provides funding through five main types of grant. Their more traditional research project grants offer values of up to €2.5 million and include:

- Starting Grants, available to researchers with 2–7 years of experience since completing their PhD
- Consolidator Grants, for researchers with 7–12 years of experience
- Advanced Grants, for researchers who have shown significant research achievement and leadership over the last 10 years.

The ERC also awards Synergy Grants, which enable groups of scientists to work together, bringing different skills to a research project, and Proof of Concept Grants, which allow researchers to turn their research into commercial or socially valuable products.

For more information on ERC and its funding mechanisms, visit the European Research Council website (erc.europa.eu) or the ERC page of the APS website (psychologicalscience.org/tag/european-research-council-erc).
research project is titled “Emotional Acculturation: Emotions as Gateways to Minority Inclusion.”

“There are many reasons immigrants have a hard time—discrimination, low resources, lack of cultural capital. However, one aspect of many immigrant challenges is not feeling or not being perceived as feeling in the ‘right’ way; the way that is culturally attuned in the majority culture environment,” said Mesquita. “The guiding hypothesis of the current grant is that immigrant minorities who are emotionally attuned will have better immigration outcomes. This is so because normative emotions are rewarded by positive interpersonal outcomes, whereas emotions that violate cultural norms will be sanctioned.”

For example, Mesquita said, in a situation where Belgians would feel anger at realizing that their rights were violated, Turkish immigrants are more likely to feel shame at expressing worry. Yet Belgians may misinterpret this shame as a confession of wrongdoing. The shame then weakens the informal bargaining position of the immigrants, generally eliciting disapproval. At this micro level, emotions are key processes of social inclusion and belonging.

Mesquita said her ERC funding supports the investigation of key questions related to emotional acculturation.

“ERC funding allows us to follow emotional acculturation and its impact on social networks longitudinally,” she said. “In a large-scale study, we will follow newcomers in different cultural contexts ... and observe how emotional acculturation over time impacts minority-majority contact, friendships, and social economic integration, but also minority well-being and health.”

“We will also observe emotions in the lab, and examine the role of emotional acculturation in interactions between minority-majority and minority-minority dyads. This study too will be done across minority groups and national contexts,” she added.

Mesquita reported that ERC funding has allowed her to extend an existing collaboration with psychological scientists among different institutions.

Ayşe K. Üskül
School of Psychology, University of Kent

APS Fellow Ayşe K. Üskül is a professor of social psychology in the School of Psychology at the University of Kent. She studies interpersonal relationships, how cultural settings shape social cognition, and conceptions of self. An ERC Consolidator Grant supports Üskül’s work in researching the role of honor in social interaction and decision-making processes.

Üskül’s research is supported by a Consolidator Grant that supports her work in researching the role of honor in social interaction and decision-making processes.

“Through HONORLOGIC, we collectively aim to generate transformative evidence for theories of social interaction and decision making in psychology, economics, and evolutionary science,” said Üskül. “We will also contribute to increasing the diversity of the existing evidence pool in psychological research, test established theoretical assumptions in new cultural groups, and hopefully contribute to capacity building in under-researched cultural groups in our field. We will also make study materials in all languages publicly available to stimulate future research in this region.”

Üskül reported that ERC funding financially supports a large proportion of her research time, which she sees as essential to managing a large-scale project like HONORLOGIC.

“In a climate where demands on us academics are constantly increasing, at costs including reduced time for our dream research, ERC is one of the few funds in Europe that helps researchers acquire resources (most importantly time) to engage in high-risk, high-gain projects,” she said. 

— Kekoa Erber
APS Government Relations and Policy Assistant
PSYCHOLOGICAL SCIENTISTS RECEIVE PRESTIGIOUS NSF GRADUATE RESEARCH FELLOWSHIPS

Stipend and education allowance valued at $138,000 per grantee

The US National Science Foundation (NSF) has included 231 early-career psychological scientists among the recipients and honorees of its Graduate Research Fellowship Program (GRFP), a premier recognition program for undergraduate and graduate students. Announced every April, this highly competitive program provides crucial funding for researchers enrolled in, or about to enter, a research-based graduate program in science, technology, engineering, or mathematics, including psychological science. Among the 2,076 researchers offered fellowships, 91 are psychological scientists. Another 140 psychological scientists received honorable mentions. Since 1952, NSF has funded more than 50,000 Graduate Research Fellowships out of more than 500,000 applicants. Each fellowship includes a generous financial award that can substantially boost graduate student stipends, with funding for three years within a fellowship period of up to five years. The 2020 stipend is $34,000 annually, plus a $12,000 education allowance for each fellow’s department. Over the three-year period, the total GRFP grant value is $138,000 per grantee.

Each year, students in psychological science are well represented among the broader set of GRFP recipients. APS Member Tori Peña, a graduate student at Stony Brook University, is one 2020 GRFP recipient in psychological science. Her research examines how individuals use hints or cues to help their memory, particularly assessing the influences of social and non-social cues to improve recall.

“While ample research shows that cues have a complex relationship with human memory, people continue to believe that cues help more than hurt memory. My proposal provides a precise test of these beliefs,” said Peña. “The extent to which social and non-social cues help or hurt memory across the lifespan has wide implications for education and in aging to help improve cognitive performance.”

APS Member Brooke Burrows (University of Massachusetts at Amherst), also a graduate student in psychological science, seeks to investigate how public expressions of suffering influence attitudes toward conflict perpetuation and reconciliation. Her proposed research program will demonstrate how empirical research can contribute to evaluating conflict reconciliation strategies.

“I hope to start a line of research that critically explores how different modes of communication influence individual, group, and societal-level change within both collective action and conflict reconciliation processes,” Burrows said.

APS Member Margarett McBride, a graduate student at the University of North Carolina at Chapel Hill, focuses on measuring the content, frequency, and motivation of fathers’ conversations with their children around community violence issues, and what affect that might have on adolescents’ psychological well-being.

“By identifying mechanisms behind the impacts of community violence exposure on well-being in my research, policymakers, practitioners, and interventionists can have a more holistic view of ways to help families, and specifically fathers, cope with community violence,” she said.

The GRFP also offers honorable mentions that do not include NSF funding. Among those recognized in psychological science is APS Member Michaela Gusman, a graduate student at Arizona State University. Her proposed research focuses on examining how the development of sociocultural differences over time moderates neuroendocrine stress pathways in individuals exposed to adverse childhood experiences.

“Recognition from NSF validates my interests in integrating dimensional cultural concepts into the study of longitudinal stress outcomes to later inform culturally responsive, trauma-informed interventions,” Gusman said. “I ultimately plan to use this proposal as the foundation for an NIH F31 predoctoral NRSA grant to further my training in this line of research.”

Advocacy from APS, Congress

APS is a strong advocate for the GRFP and the important function it serves to support psychological scientists and researchers from across the STEM fields. Upon indications in 2019 that NSF would award only 1,600 GRFP fellowships for the 2020 cycle instead of the customary 2,000, APS led
a letter, cosigned by numerous other professional membership organizations and universities, encouraging NSF to support a full complement of 2,000 fellowships. The letter highlighted the program’s importance for the research community and showcased its broad support across the scientific community. Congress has also shown strong support for the GRFP in recent appropriations bills. APS is pleased that NSF was able to offer more 2,000 fellowships in 2020 and will continue to advocate for consistent or increasing numbers of GRFP fellowships to support talented early-career researchers.

Researchers pursuing their master’s or PhD with an interest in applying for an NSF Graduate Research Fellowship Program may wish to visit this page on the APS website: bit.ly/grfp-deadline. You’ll find deadlines, frequently asked questions, eligibility information, and psychological science-specific relevant information. The deadline to apply for the 2021 cycle is October 22, 2020.

— Kekoa Erber
APS Government Relations and Policy Assistant

APS Fellow Leads NIH Behavioral Science Program

APS congratulates APS Fellow Lisbeth Nielsen, recently appointed to head the Division of Behavioral and Social Research at the National Institute on Aging. Under Nielsen’s leadership, the division will continue its work in supporting behavioral science and research training on the processes of aging at the individual and societal level. Visit nia.nih.gov/news for more information.

COVID-19 Funding For NIH Grantees

Hold an NIH grant? NIH is offering competitive revision and administrative supplement funding to support behavioral scientists interested in studying COVID-19 and its effects. Visit obsr.od.nih.gov/research-support/funding-announcements/ for more information.
Eight psychological scientists have been recognized with the 2020 APS Janet Taylor Spence Awards for Transformative Early Career Contributions. Named for APS’s first elected president, the award honors the most creative and promising researchers who embody the future of psychological science. This year’s recipients were selected for their innovative research impacting areas from advocacy related to migrant children facing family separation to using machine learning and cognitive modeling to understand why errors occur in medical image-based decision making.

The Observer asked recipients to share their proudest achievements and ongoing research. Read longer interviews with each recipient at psychologica.scienc.e.org/observer. Learn more about the Spence Awards, and see past recipients, at psychologica.scienc.e.org/aps-spence-award.

Dylan Gee
Yale University
Clinical Affective Neuroscience & Development Lab (CANDLab)

My program of research focuses on anxiety and stress-related disorders in childhood and adolescence. My lab examines how early experiences such as caregiving and trauma shape the development of threat and safety learning, emotion regulation, and risk for anxiety disorders and PTSD. A central focus of this work is on sensitive periods and developmental changes in frontolimbic circuitry and emotional behavior, with the goal of translating this knowledge to optimizing treatments for children and adolescents.

I am really proud of the impact that my lab and I have had on policy and advocacy related to migrant children facing family separation and other atrocities at the US/Mexico border. At various critical points, my lab has come together to support justice for migrant children, including leading efforts to communicate science to the public and policymakers, disseminate resources for migrant families, and generate recommendations for best practices and treatment. I am particularly proud to have contributed a legal declaration detailing findings on early-life trauma that was cited in the judge’s ruling that the US government must provide mental health screening and care to all children and their caregivers who were separated.

I am particularly excited about two lines of research that my lab is beginning to tackle. First, we have been thinking deeply about how to parse the vast heterogeneity in early environments to more precisely delineate how key features of stress exposure influence the developing brain and behavior. Second, we are examining how individuals learn about safety in their environments (e.g., in the context of caregivers) and apply that learning to regulate fear.

Samuel Gershman
Harvard University
Computational Cognitive Neuroscience Lab

My interests are broad: My lab works on a wide variety of topics ranging from synaptic plasticity and Pavlovian conditioning in animals to language, perception, and reasoning. The main focus of my lab’s research has been on reinforcement learning and decision making. We’re interested in what representations and algorithms the brain uses to act adaptively in the world. Of particular interest has been the question of structure: How do we extract the latent structure underlying our observations, and how do we harness this structure to improve decision making?

As an undergrad, I remember learning about the hypothesis that dopamine encodes a reward prediction error. This struck me not only as an
I am really proud of the impact that my lab and I have had on policy and advocacy related to migrant children facing family separation and other atrocities at the US/Mexico border.

—Dylan Gee

extremely important idea, but also as a case study in how computational models could contribute to the advancement of neuroscience and psychology. As I delved deeper in graduate school, and then later as a postdoc and professor, I realized that the idea, despite its appealing simplicity, was incomplete. There were many gaps in the experimental literature, so one of the tasks that I set for myself was to enrich this idea, to equip it with the theoretical accoutrements necessary to explain the empirical data. I predicted that under certain circumstances, dopamine responses would be a nonmonotonic function of reward magnitude. This turned out to be correct, and it built a trust in our theoretical models that we built upon in future collaborations.

Hyowon Gweon
Stanford University
Social Learning Lab

I’m very interested in how high-level cognition, particularly “intuitive theories” (theory of mind, intuitive physics, etc.), contribute to reinforcement learning. We are now trying to tackle human video game learning as a problem of theory induction and theory-based planning.

I am interested in how we learn from others and help others learn. While humans are not the only species that engages in social learning, only humans incrementally build knowledge over generations and create cultural institutions (e.g., schools) to facilitate this process. What makes human social learning so distinctive, powerful, and effective? Our studies use a range of methods (developmental, computational, neuroimaging) to better understand the cognitive processes that support our abilities to learn from others (as learners) and help others learn (as teachers).

One example is our latest published work (Bridgers, Jara-Ettinger, & Gweon, 2020). It’s one of the first projects we launched as I set up my own lab at Stanford, with one of my first graduate students, Sophie Bridgers. We started with a seemingly simple question: How do we know what to teach? With Julian Jara-Ettinger (Yale), we turned the question into a project that combines computational and developmental methods. We presented a computational model of how we choose what to teach and empirically tested its quantitative predictions with young children. The take-home message is that humans, even as young children, readily consider what is rewarding or difficult for someone to learn and choose to teach what maximizes the learner’s expected utilities.

With postdoc Yang Wu, and graduate students Mika Asaba and Aaron Chuey, we are extending our work on social learning in a few directions, including what counts as data in learning from others, how children learn about the self from others, and children’s intuitive theories about knowledge transfer.

Kathryn Humphreys
Vanderbilt University
Stress and Early Adversity (SEA) Lab

My research focuses on early experiences, based on an understanding that early development is a period of increased brain plasticity and that caregiving environments are essential for supporting positive developmental trajectories. This research typically falls into three interrelated lines: 1) characterizing how early environments vary (e.g., differentiating neglect from abuse...
as well as assessing the consistency, cognitive, and emotional enrichment of environments), 2) linking variations in the early environment to child outcomes (e.g., psychopathology, cognitive and adaptive functioning), and 3) identifying predictors of children's environments (e.g., caregiver characteristics). The broader goal is to identify targets for interventions aimed at improving caregiving experiences, and, in turn, promoting positive long-term outcomes in children.

So much of what we assume about children's caregiving environments comes from either self-report measures or laboratory-based observations. While both have been extremely valuable in knowledge generation, there remains a large gap in what we know about children's experiences in their natural environments. I am working with computer engineers to develop wearable devices to assess the ways in which children, parents, and family networks physically interact throughout their days. If we can get this to work, we will be able to gain a better appreciation of how interactions change across development stages, how children vary in their interactions with their families, and what those interactions might mean for specific areas of functioning (e.g., language development, attachment security).

**Kathryn Humphreys**
Vanderbilt University

[There remains a large gap in what we know about children's experiences in their natural environments. —Kathryn Humphreys]

Luke Hyde
University of Michigan
Michigan Neurogenetics and Developmental Psychopathology (MiND) Lab

I am broadly interested in understanding brain and behavioral development in the context of risk and resilience. Specifically, my lab has focused on 1) the development of antisocial behavior, 2) the development of psychopathy and callous-unemotional traits, 3) the risk and protective roles of parents and neighborhoods, 4) the impact of poverty-related adversity on brain and behavioral development, and 5) how youth and families succeed when faced with adversity (i.e., resilience).

I'm proud of our work showing that parenting is an environmental/non-heritable risk factor in the development of callous-unemotional traits, because I think it counters iatrogenic beliefs that callous-unemotional traits are not treatable or that "psychopaths are born" and thus there is little we can do to promote positive development in these youth. I am also proud of the work we are doing now to take a more population-level approach to developmental neuroscience. In both cases, the factors that have led to success have to do with incredible mentees and team members in my lab, and incredible and generous collaborators.

I hope that my lab will focus more on resilience in the near future. We already know that poverty and its related adversities are harmful for youth. We need now to better understand why so many youth and families still thrive, even in the context of adversity. Beyond a near-term focus on resilience, I hope that my lab will eventually be doing personalized interventions, preventative interventions, or policy initiatives in the long-term that are informed by the work we’re doing now. Ultimately, I feel strongly that our work must be translated to be impactful at the societal level.

**Nour Kteily**
Northwestern University
kellogg.northwestern.edu/faculty/directory/kteily_nour.aspx
At the broadest level, I’m interested in the psychological forces that help to explain why human societies are so reliably organized into relatively stable social hierarchies, with some groups enjoying privileges at the top and others languishing without at the bottom. In my work, I try to better understand the mechanisms by which hierarchy is maintained (and sometimes challenged). As one of the mechanisms that has historically contributed to the domination and exploitation of disadvantaged groups, the topic of blatant dehumanization has interested me in recent years.

I’m particularly proud of a pair of papers that explored the psychological experience of feeling dehumanized by another group (which we call meta-dehumanization). Despite its importance, little research had considered the experience of being on the receiving end of dehumanization. In one paper, we examined the extent to which Muslim-Americans and Latinx-Americans felt dehumanized in the context of the rhetoric surrounding the 2016 election, which we felt was a perspective that needed illuminating.

One of the new and ongoing research projects I’m working on that’s especially exciting for me these days asks how groups formerly occupying disadvantaged positions in a social hierarchy act when the tables turn and their group rises to the top. Specifically, we consider how they treat their former oppressor and third-party disadvantaged groups, depending on a variety of contextual factors prior to shifts in the hierarchy. This research could help us better understand the processes by which hierarchies tend to reproduce over time.

—Nour Kteily

I’m interested in what makes thinking hard, and why we still do it anyway. More specifically, my lab studies the neural and computational mechanisms that intersect decision making (determining the right course of action) and cognitive control (pursuing the right action despite competing inclinations). We use a combination of computational modeling and measures of behavior and neural activity to understand what makes cognitive tasks effortful, including what makes decision making effortful; when and how people determine that mental effort is “worth” the investment; and what makes some people more willing to invest cognitive effort than others.

One of the reasons we want to understand the mechanisms that drive decisions to engage in cognitive effort is to understand how these mechanisms differ for individuals who have difficulty motivating themselves to perform cognitively demanding tasks. Such motivational impairments are pervasive across psychiatric and neurological disorders, including individuals with depression, schizophrenia, and Alzheimer’s, and can be severely debilitating. Our goal is to identify which of a variety of deficits determine these impairments (and/or their subtypes), by combining our modeling with behavioral and neural data we collect using tasks that target different aspects of how people process incentives in their environment.

In addition to understanding how these mechanisms differ across individuals, we are also eager to understand how they develop within an individual over time. In particular, we want to better understand how one’s childhood environment helps shape perceptions of the incentives to engage in different forms of effort. We have started to look at how these early experiences shape adult cognition, but in the coming years we hope to extend this research into earlier stages of development as well.
Jennifer Trueblood
Vanderbilt University

My research is aimed at understanding how people make decisions when faced with multiple alternatives, how changing information affects decision processes, and how people reason about complex events. To address these questions, I use computational cognitive modeling to formalize hypotheses and then test these with behavioral experiments.

My proudest accomplishments have been in applying the theories developed in the lab to real-world decision problems. For example, my colleagues and I have been using a combination of machine learning and cognitive modeling to understand why errors occur in medical image-based decision making. In partnership with the pathology department at the Vanderbilt University Medical Center, we've discovered that prior information (including irrelevant information) can impact the interpretation of cell images. This work has important implications for AI and automated systems that are being developed to support human medical image classification and decision making.

In another line of research, I've been using quantum cognition to provide a new perspective on legal decision making. Even though “quantum probability theory” might sound like a strange thing to apply to human behavior, it is a powerful framework for developing psychological theories because it naturally accommodates contextual and sequential effects.

Lately, I've been thinking broadly about how we build better theories of human decision making. Over the past decades, there have been numerous formal theories of decision making proposed. Right now, we don't have a good sense of how these theories are related. Are there common principles shared by multiple theories? Can ideas from different theories be combined to build better ones? In addition, can we look to advances in machine learning to construct joint cognitive and machine-learning models to further advance theories of human decision making and to build better predictive models of human behavior?

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See Page 29 for all 2020 APS Awards Recipients.

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QUOTE OF NOTE

"At this time, it is essential that employers create opportunities and practices to help employees experience less ambiguity (e.g., providing clear expectations), reduce stress (e.g., offering employee assistance programs that provide short-term counseling and other confidential services), and maintain social cohesion (e.g., virtual happy hours and other social functions)."

Call for Nominations: APS Rising Stars

Deadline: September 30, 2020

The APS Rising Star designation recognizes outstanding psychological scientists in the earliest stages of their post-PhD research careers.

Nominations will be evaluated based on the following criteria:

• Significant publications
• Significant recognitions
• Significant discoveries, methodological innovations, or theoretical or empirical contributions
• Work with potentially broad impact

Eligibility for the 2020 nomination period is limited to individuals who received a PhD between January 1, 2014 and December 31, 2017.

Nominations Process: Each nomination must be supported by two APS Members, one of whom must be an APS Fellow. For information on submitting nominations, please visit: www.psychologicalscience.org/rising-stars

Please consider the diverse and international nature of our field in nominating colleagues. Nominations of members of underrepresented groups in psychological science are encouraged.

CALL FOR FELLOWS NOMINATIONS EXTENDED

SPRING REVIEW DEADLINE EXTENDED TO JUNE 1, 2020

Fellow status is awarded to APS Members who have made sustained outstanding contributions to the science of psychology in the areas of research, teaching, service, and/or application. Fellow status is typically awarded for one’s scientific contributions; however, it may also be awarded for exceptional contributions to the field through the development of research opportunities and settings. Candidates will be considered after 10 years of postdoctoral contribution.

NOMINATION REQUIREMENTS

• A letter of nomination specifying why the candidate is judged to have made sustained outstanding contributions.
• The candidate’s current curriculum vitae.
• Additional letters of support from two outstanding contributors to the field of scientific psychology familiar with the nominee’s work, one of whom must be an APS Fellow.

FELLOWS COMMITTEE

Tyler Lorig, Washington and Lee University (Chair)  Elizabeth Gershoff, University of Texas at Austin
NiCole Buchanan, Michigan State University  Elizabeth Marsh, Duke University
Winfred Arthur, Jr., Texas A&M University  Candice Odgers, University of California, Irvine

For more information and to submit a nomination, please visit www.psychologicalscience.org/fellows

Electronic submissions are required.
Congratulations, 2020 APS Award Recipients!

View the full 2020 APS Awards Brochure at www.psychologicalscience.org/2020awards.

2020 APS William James Fellow Award

Neil Burgess  
University College London

Susan A. Gelman  
University of Michigan

Carol S. Dweck  
Stanford University

Andrew N. Meltzoff  
University of Washington

2020 APS James McKeen Cattell Fellow Award

Thomas E. Joiner  
Florida State University

Richard M. Lerner  
Tufts University

2020 APS Mentor Award

Toni C. Antonucci  
University of Michigan

Elizabeth Ligon Bjork & Robert A. Bjork  
University of California, Los Angeles

E. Tory Higgins  
Columbia University

2020 APS Janet Taylor Spence Award for Transformative Early-Career Contributions

Dylan G. Gee  
Yale University

Luke W. Hyde  
University of Michigan

Samuel Gershman  
Harvard University

Nour Kteily  
Northwestern University

Hyowon Gweon  
Stanford University

Amitai Shenhav  
Brown University

Kathryn L. Humphreys  
Vanderbilt University

Jennifer S. Trueblood  
Vanderbilt University
Neil Burgess
University College London

Over the last quarter century, Neil Burgess has made important and strikingly original contributions to our scientific understanding of spatial and episodic memory. His contributions have been key to successfully bridging the gap between brain science and observed behavior. Using single-cell recordings in rodents, as well as neuroimaging experiments with both healthy human participants and human neuropsychological patients, he has discovered mechanisms of spatial cognition that connect animal and human neuroscience.

A central focus of his work is the nature and function of spatial representations in the hippocampal formation. Burgess pioneered the use of virtual reality with functional neuroimaging, enabling the use of novel experimental manipulations and analyses to explore spatial memory, navigation, episodic memory, and imagery. These innovations enabled Burgess and colleagues to identify many of the neural representations and computations supporting spatial cognition in humans, often complementing and extending related findings in rodents. Burgess complemented his diverse and innovative empirical work by employing his background in math and physics to develop computational models that provide a quantitative understanding of spatial representations in the brain, these representations’ role in memory function and dysfunction, and their manifestation in brain activity. These influential models combine insights from the full range of experimental approaches, generating novel predictions that have helped drive an increasingly complete understanding of spatial cognition.

Burgess is a Fellow of the British Royal Society and a Wellcome Trust Principal Research Fellow.

Carol S. Dweck
Stanford University

At Carol Dweck’s New York City elementary school, her class was seated in order of IQ. The experience launched a lifetime of scientific discovery—a quest to understand the implicit assumptions embedded in our culture, practices, and selves that constrain human development and growth. In her work, Dweck distinguishes between the belief that intelligence is fixed more or less at birth and the view that intelligence can grow “like a muscle” with effort, good strategies, and help from others.

Together with her students and collaborators, Dweck has shown the negative consequences of fixed-mindset beliefs for children’s persistence, learning, resilience, and ultimately their achievement. She has also shown how fixed-mindset beliefs are conveyed through common phrases like “You’re so smart” and through organizational cultures focused on “genius.” In groundbreaking field experiments, Dweck has demonstrated the power of a growth mindset to enhance learning, especially for struggling students. Further, she has explored fundamental questions about the malleability of human qualities to understand other diverse problems, including intergroup conflict and school bullying. Carol Dweck’s scholarship has reshaped social, developmental, personality, and educational psychology. Moreover, the rapid uptake of her work in education and elsewhere has improved programs and policies to the benefit of millions. A beloved mentor and collaborator, Dweck has challenged people to let go of the fears that hold them back and to see challenges as opportunities for learning and growth.

Dweck is a member of the American Academy of Arts and Sciences and the National Academy of Sciences. She is a recipient of the APS James McKeen Cattell Fellow Award and the APS Mentor Award.
Susan A. Gelman

University of Michigan

Susan Gelman has achieved international renown for her work on essentialism, the theory that people categorize objects and ideas on the basis of underlying essential features that are not obvious on the surface. Crows and flamingos, for example, are both birds; however, they do not look at all alike. On the other hand, crows and bats resemble each other in many ways even though they do not share membership in the same essential category that crows and flamingos do.

In Gelman’s influential book *The Essential Child*, she asserts that a cognitive bias favoring essentialist thinking profoundly influences human behavior, including that of children. For example, Gelman has shown that children have an early, powerful tendency to search for hidden, non-obvious features of objects when they are learning words, generalizing knowledge to new category members, reasoning about the insides of things, and constructing causal explanations.

Across human languages, Gelman has identified generic noun phrases (e.g., “bats fly at night”) as building-blocks of essentialism. Children, she has shown, readily commit such phrases to memory. Gelman’s research and theories on essentialist thinking have spurred a revolution in developmental psychology, which previously had been dominated by the view that children primarily notice concrete, surface-level features of the objects around them.

A past Member of the APS Board of Directors, Gelman is known not only for her extraordinary research but also for her contributions to the field through service and mentoring. She is a member of the American Academy of Arts and Sciences and the National Academy of Sciences.

Andrew N. Meltzoff

University of Washington

Andrew Meltzoff’s landmark studies in infant development helped reconfigure our understanding of preverbal cognition.

Meltzoff demonstrated imitation in early infancy and proposed it as a powerful social learning mechanism by which infants begin to acquire the behaviors, skills, and norms of their culture. Through a set of classic studies, Meltzoff made key discoveries concerning the nature and functions of imitation in childhood. He used these findings to develop an influential theory of infant development, which described an intrinsic linkage between the perception and production of human action. Meltzoff’s “like-me” framework, which holds that human infants gain a foothold in the social world through perceived similarity between the bodily acts of self and others, led to further advances. He leveraged “like me” to connect infant social understanding to broad social phenomena such as the development of in-group biases and stereotyping in children.

Recently, Meltzoff has used neuroscience methods to investigate the neural representation of the developing body schema and the neurobiological bases of perception–action coupling in infancy. Meltzoff’s pivotal findings have transformed theories in developmental psychology. The “like-me” framework has become a powerful tool for addressing questions about children’s development and learning. Furthermore, Meltzoff’s innovative experiments have influenced scholars in diverse disciplines including evolutionary biology, robotics, philosophy of mind, and clinical science research on autism.

Meltzoff is a Fellow of the American Association for the Advancement of Science and a member of the American Academy of Arts and Sciences.
Thomas E. Joiner
Florida State University

Thomas Joiner is a leading authority on suicidal behavior and its prevention. Joiner’s influential interpersonal theory of suicide refutes the public’s tendency to equate suicide with weakness and cowardice. His model holds that suicide risk begins with a sense of feeling disconnected from and burdensome to others, along with a decreased fear of pain and death and the technical competence to kill oneself.

To test and refine the interpersonal theory of suicide, Joiner has worked closely with the US Armed Forces, the Department of Veterans Affairs, firefighters, and other first responders. Further studies in a variety of clinical settings have generated additional support for his theory. Importantly, most of the more than 100 studies published to date on the theory were conducted by teams other than Joiner’s. This body of work speaks to the immense influence of Joiner’s scholarship. It also suggests that his work is inspiring new generations of scientists to study suicide.

Joiner’s work has resonated not only among scholars but also among members of the public. Indeed, Joiner strives to include those bereaved by suicide and those who have survived suicide attempts in research and prevention efforts. Each year, he holds dozens of workshops where community members learn about current suicide research and are empowered by empirically rooted strategies for helping people in crisis.

Joiner’s research has dramatically improved the way suicide risk assessment and intervention is conducted in day-to-day clinical practice, and it has saved lives.

Joiner is a Fellow of the American Association for the Advancement of Science.

Richard M. Lerner
Tufts University

Richard Lerner is one of the world’s leading developmental psychologists. His basic scientific contributions are surpassed only by his commitment to applying science to the real lives of children, families, and communities.

Lerner’s scholarly work (including over 80 authored and edited books) has largely focused on youth, a topic where he has offered a new vision of positive developmental processes—and a distinct departure from notions of adolescents as inherently difficult or deficient. His paradigm-shifting relational developmental systems theory holds that children, through their plastic developmental processes, have the capacity for positive growth. Incorporating biology, sociology, public policy, and psychological science, Lerner has spearheaded groundbreaking longitudinal mixed-methods research on the characteristics of families, communities, and institutions that contribute to positive youth development. His years of research show adolescents’ capacity for personal strengths, good family relationships, and positive social contributions.

In addition to conducting research, Lerner has served on dozens of national and international boards and committees where he applies his knowledge of human development to the work of government agencies and nonprofit organizations tasked with addressing social issues. Lerner’s legacy—one that includes both innovative research and outstanding leadership in social policy—has shaped a new wave of youth programs that focus not just on specific skill building, but also on opportunities for youth participation and leadership in their communities.

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Toni C. Antonucci
University of Michigan

E. Tory Higgins
Columbia University

APS honors Members in the earliest stages of their careers as well as accomplished leaders with the field’s most prestigious awards and recognitions. This recognition is a critical part of supporting and encouraging scientific advances in our field. The dramatic advances in psychological science over the past three decades reflect the outstanding accomplishments of APS Members and Fellows. For a list of past recipients or to submit a nomination, visit www.psychologicalscience.org/awards.

Robert A. Bjork & Elizabeth Ligon Bjork
University of California, Los Angeles

Visit www.psychologicalscience.org/Mentor2020 to read profiles of the 2020 APS Mentor Award Recipients in the April Observer.
Human Behavior in the Time of COVID-19

"Behavior will determine the actual public health risk in the end. If we’re able to understand why behaviors are risky, and therefore follow appropriate guidelines, we will have a far better outcome than if we don’t."— Valerie Reyna, Cornell University

Psychological scientists speak.

As national and international news outlets report on the health impacts and biomedical traits of COVID-19, information about human behavior and psychological science research remains critical to understanding this pandemic. To address the dearth in this kind of coverage, APS has undertaken a number of informational outreach efforts to broadly share what psychological science tells us about epidemics and the aspects of human behavior that help and hinder our efforts to mitigate the spread of COVID-19. We’ve highlighted some of these insights and research findings in the pages that follow, and you’ll find much more at psychologicalscience.org/covid-19-information.
LEARNING FROM PSYCHOLOGICAL SCIENCE

In the wake of the closures of their universities and labs, psychological scientists around the world are experiencing new demands on their time as they adjust to teaching remotely, overseeing dispersed labs, and managing family caregiving. At the same time, many have found themselves on the front lines of exploring the psychological factors that can help the public understand the impact of COVID-19. The comments that follow are excerpted and adapted from a variety of sources, including a virtual roundtable featuring APS members with specific areas of expertise, a series of “backgrounders” assembled in response to the crisis (see opposite page), a podcast featuring an APS Fellow, and appearances by APS members in the news media. Find links to these resources and more at psychologicalscience.org/covid-19-information.

A collective crisis heightens sensitivity to social interactions.
This is a situation that can have both positive and negative effects as a function of it being a collective crisis. On the positive side, there is a sense that we’re in it together, and we see many amazing examples of people supporting one another. On the negative side, we see some people respond to this with a sense that they need to “protect their own,” and it is “us versus them.”

APS Fellow Bethany Teachman, University of Virginia, APS roundtable discussion

Many people are feeling both impulses at the same time. They’re obviously going to feel fear because of the uncertainty, the present threat, and the potential threats. And the social cues around people right now are going to raise their perception that we’re in danger. Then there’s the talk of the long-term impact to the economy too, and you have a real recipe for people to be anxious and frightened.

APS Fellow Valerie Reyna, Cornell University, APS roundtable discussion

In ambiguous situations, people look for social cues from others. You say, “Well, if other people are doing it, maybe they know something about whether this is an acceptable risk.”

APS Fellow Baruch Fischhoff, Carnegie Mellon University, quoted in The Atlantic

Children learn many of their own fears and anxieties from what they hear and what they see. In other words, seeing something scary on television, hearing something scary on the news, or seeing their parents look nervous or afraid are common learning mechanisms for young children. The recommendation for parents here is to be aware of the emotional information and the factual information about the coronavirus that is being transmitted to children, as they are apt to learn from whatever information happens to be around them.

Vanessa LoBue, Rutgers University, APS Backgrounder series

Moral responsibility can be a powerful motivator.
If your worldview is that you’re always asked to make sacrifices and you never get anything out of it, maybe you don’t want to comply with [social distancing]. But if you have a worldview that tells you it’s important to help others, then maybe you’re happy to make these sacrifices. You’re looking around to see what people are doing. If you take your cues from other people, you might be more inclined to take strong action yourself because you see other people doing it.

APS Fellow Gretchen Chapman, Carnegie Mellon University, quoted on Slate.com

You’re probably going to have a hard time not scratching your nose, no matter how much you want to. But moral responsibility can be a powerful motivator. The potential consequences start to feel real when you spend just a couple of minutes considering the people you know who are at heightened risk of complications due to COVID-19—people like your parents or grandparents,
that friend whose husband has a heart condition, or your colleague with diabetes. Even if we can make only a 5-percent difference, we really should try.

APS Member Adam Grant, the Wharton School of Business, writing for The Atlantic

One of the most important things crisis communications research tells us is that our leaders should be honest and transparent. Insincerity is very alienating, and it leads to distrust. Empathy from our leaders, honesty from our leaders, and being frank with the uncertainty, not promising more than can be delivered, is likely to help us through this crisis. In contrast, contradictory messages or insincerity are probably going to exacerbate the distress level. Moreover, we do know that once trust is lost, it’s very difficult to regain it.

APS Fellow Roxane Cohen Silver, University of California, Irvine, APS interview/podcast

Continued exposure and chronic anxiety can worsen outcomes.

This is unquestionably a period where people are experiencing an enormous amount of stress, given the large demands the situation is placing on our daily lives—the changes in our routines and structures that we typically rely on, and the uncertainty surrounding how long this is going to last and what the ultimate impact is going to be on our families, our communities, and our workplaces. Psychological science has taught us quite clearly that in situations of mass trauma or mass stress, like a natural disaster or a terrorist attack, there’s a very clear link between the degree of media exposure that people have and their...
symptoms of anxiety, depression, and substance abuse.

APS Member Katie McLaughlin, Harvard University, APS roundtable discussion

Decades of scientific research show that how we make meaning out of situations can leave us vulnerable to unhelpful, out-of-proportion anxiety. When our environment is inherently ambiguous—open to interpretation and unknown outcomes—our interpretations matter. They matter a lot. Ambiguity breeds anxiety; more so when the “facts” change hourly.

APS Fellow Lori Zoellner, University of Washington, writing (with others) for The Seattle Times

Humans often can develop a robust and pathological fear of things that might not happen, to create realities that don’t exist. In the old days, the virus update would be a mention on the 6 o’clock news, but today, it’s tweets and Facebook posts 24/7. Fears can be learned. If you’re communicating with people online who are afraid or are seeing people online who are afraid, that exposure is more likely to invoke fear in you.

APS Fellow Roxane Cohen Silver, University of California, Irvine, APS interview/podcast

Human beings are inherently social, not solitary, creatures. When people’s actual or achieved social contact falls below their desired level of social contact, they begin to feel lonely, and loneliness is stressful. The stress of loneliness degrades mental and physical health (e.g., cardiovascular fitness, immune fitness) through disruption of recuperative behaviors (e.g., sleep, leisure) and corruption of health behaviors (e.g., substance use, diet, exercise).

APS Member Chris Segrin, APS Backgrounder series

How we behave determines how we will cope.

The key psychological objective for most people is to keep stress at a minimum. Everyone is adapting to the new reality, which includes the fear of viral spread and contagion, self-quarantine, and supply shortages. More seriously, some are coping with illness and fear of death. To overcome the stresses of these situations and remain resilient throughout, it is important to use the tools we already have at our disposal, including:

- Staying optimistic
- Relying on the support of others
- Bonding with those close to us
- Keeping informed but not overindulging in media consumption
- Distracting oneself
Finding ways to laugh and have fun through things like movies and reading

Most especially, finding ways to minimize isolation with joint family activities and keep in touch with friends, colleagues by phone, video, email.

APS James McKeen Cattell Fellow
George Bonanno, Columbia University, APS Backgrounder series

Social relationships are an incredibly important buffer against the negative consequences of stress. We know that

having strong emotional support not only prevents anxiety and depression in periods of stress, but also buffers against the negative physiological consequences of stress on the immune system and physical health. One of my very favorite studies shows that the stress-buffering effects you get from receiving social support you also get when you give social support. And this is something that people can control right now—the

APS AND SAGE:
FAST-TRACKING AND EXPANDING ACCESS

To facilitate the dissemination of findings on psychologically relevant aspects of the COVID-19 crisis, APS and SAGE Publications have joined together to expedite the review and fast-track the publication of Psychological Science articles that deal with COVID-19. Learn more at psychologicalscience.org/publications/psychological_science/psci-covid-19.

In addition, APS has made its journal research pertaining to epidemics and related health issues publicly available at psychologicalscience.org/news/journal-research-epidemics-online.html. Examples include:

- Effects of Symptom Presentation Order on Perceived Disease Risk (Psychological Science, March 5, 2012)
- Fear of Ebola: The Influence of Collectivism on Xenophobic Threat Responses (Psychological Science, May 20, 2016)
- It’s Not All About Me: Motivating Hand Hygiene Among Health Care Professionals by Focusing on Patients (Psychological Science, November 10, 2011)
- Increasing Vaccination: Putting Psychological Science Into Action (Psychological Science in the Public Interest, April 3, 2018)
- How Do People Value Life? (Psychological Science, December 22, 2009)

Finally, SAGE has made publicly available the latest medical research related to COVID-19 as well as top behavioral and social research to help individuals, communities, and leaders make the best decisions on dealing with the outbreak and its consequences. Visit journals.sagepub.com/coronavirus.
degree of support they provide to others, including to members of our communities who are more vulnerable. **APS Member Katie McLaughlin, Harvard University, APS roundtable discussion**

It's reasonable to have some anxiety and sadness. At the same time, it's important not to get stuck there. There are a number of things that we can do to maintain as much of our normal lives as possible.

- **Relationships.** Social distancing does not have to equal social isolation. Those are two very different concepts and virtual interaction can make a big difference.

- **Thoughts and feelings.** It really doesn't help us to spend 10 hours a day scrolling through newsfeeds and posts on COVID-19. So in a number of anxiety treatments, we encourage people to pick a couple of times a day when they focus on their worries and get the information that they need to problem-solve, but then spend the rest of their time living their lives as normally as possible.

- **Behavioral self-care.** A lot of what helps at this time is healthy eating, sleep, exercise, and perspective-taking so that you don't get stuck in assuming the worst.

- **To live your values.** Be kind to yourself and be kind to others. This is a stressful time and anxiety is normal. We have to give ourselves permission to experience the feelings that we're having and then to try to do as much as we can to maintain normality in the face of that situation. **APS Fellow Bethany Teachman, University of Virginia, APS roundtable discussion**

**We not only have to understand our ability in our agency, but we also have to know the limitations of our minds. We really need to spend time trying to trust the experts. We have physicians and epidemiologists who are really good at explaining the effects of the virus on society. We also have psychologists who are really good at giving advice on how to cope with isolation, fear, and anxiety. In uncertain times like now, when it is impossible to have a full understanding of the situation, we need to rely on trusted sources of information.** **APS Member Andreas Olsson, Karolinska Institute, APS roundtable discussion**

We are not just passive recipients of what is happening. We can collectively work together to respond to this situation as a challenge, as opposed to appraising it as an impossible threat that we cannot manage. **APS Fellow Bethany Teachman, University of Virginia, APS roundtable discussion**

Giving support to other people is just as effective at helping to reduce stress responses and the negative consequences of stress for our physical and mental health as receiving support from others. We know very clearly that exposing yourself to a lot of media coverage about the pandemic is going to increase anxiety. The more we can create positive habits and boundaries around our exposure to media, the better. **APS Member Katie McLaughlin, Harvard University, APS roundtable discussion**

One of the most important fundamental findings that inform what we’re dealing with right now is that people react to the gist of the events rather than the details and the facts. It’s how people interpret reality that governs their emotions and their actions, not the actual reality itself. So we have to think about this torrent of information washing over everybody. How can we help people extract the bottom-line gist of that information so that they can take effective action? **APS Fellow Valerie Reyna, Cornell University, APS roundtable discussion**

We can cope with this. My research (and the research of others) has shown repeatedly that the majority of humans cope well and are resilient to just about any adversity. There is no single best way to cope for everyone. Research has shown many different factors predict resilience, but the effects of all of these factors are small because they don’t always work or they don’t work for everyone. **APS Fellow Bethany Teachman, University of Virginia, APS roundtable discussion**

Above all, psychological science tells us this:
Research also shows that we need to be flexible and adapt. This means paying attention to what is happening to us and being nimble so we can adjust to what the situation is calling for. Each person should try different ways of coping and adapting to see what works best for them.

This is not easy but we can do it. Human beings have shown abundant psychological resilience in the face of just about any adversity imaginable. APS James McKeen Cattell Fellow George Bonanno, Columbia University, APS Backgrounder series

PRIORITIZING LAB HYGIENE AMID A PANDEMIC

“With entire universities moving to remote instruction and virtually all other functions online, researchers are facing an unexpected and sudden end to on-site, in-person data collection. For psychological scientists, this moment brings both promise and peril.”

In an editorial in the May issue of Psychological Science, Dwight J. Kravitz and Stephen R. Mitroff (both at The George Washington University), along with Psychological Science editor and APS Fellow Patricia J. Bauer (Emory University), note that COVID-19 offers unique opportunities to advance psychological science, but they warn researchers not to forego rigor and transparency in the quest for expedience. The hiatus of in-person data-collection may also push researchers to run analyses of incomplete data sets or terminate data collection before reaching the predetermined sample size. The authors introduce the Airport Scanner applet (www.bigcogsci.com/post-hoc.html) to illustrate how practices that seem “logical” and “reasonable” can lead to inflated false-discovery rates and to provide suggestions for improving research practices. They also provide a series of links to other resources for reproducible and transparent research.

Kravitz and colleagues believe that psychological scientists can keep improving the quality of research even during the pandemic. “As long as we are appropriately reflective—and transparent—we can maintain positive momentum, even as we shelter in place,” they write.

Read the full editorial at psychologicalscience.org/publications/psychological_science.
I’m a first-year PhD student and I live on campus. My parents live in another country. When everything shut down, I was not able to fly abroad in a hurry, so I couldn’t go home. I stayed in housing and I live alone. No roommates. I feel incredibly alone. Zoom meetings and online chatting are not the same as talking to live human beings. It’s not even comparable. Sometimes I go 2–3 full days without seeing a person from head to toe. And I haven’t been productive at all. I have a hard time focusing on anything. I mostly just stare out of the window, go on walks, or do nothing at all.

I’m a first-year master’s student assisting with two research projects (well, I was until COVID hit). Thankfully, I’m still getting the tuition remission through my fellowship but it’s been disappointing to pause data collection (and of course presenting at the APS convention) for however long this will last.

I’m an undergraduate junior interested in social and health psychology. My research with Tulane University focuses on improving the quality of life for patients with cancer. As NOLA quickly became a hot spot for COVID-19, we were told to stop in-person research and classes in the second week of March. My lab has adjusted projects and grants to include COVID-19 contingency plans to address how our studies may change during the COVID-19 threat, especially given that cancer patients are a vulnerable group for adverse effects of infection with this virus. Generally, I have been really lucky because I was able to return home, continue with my Zoom classes, put together a COVID-19 psychosocial survey from home, and write a few grants for summer research. This pandemic has made me appreciate my lab more because I have access to archival data to work with while human subjects research is infeasible. Additionally, the PI of my lab has been very flexible and understanding of RAs’ individual circumstances.
I’ve had to shut my research down entirely (human subjects). I’m mid-career, so I’ll be ok (although I’ll have to put off the promotion application), but it will extend my students’ timelines and their ability to find postdocs. I’m worried about the lab in general and our productivity, but mostly I’m worried for my students’ careers.

I am a young PI funded by a prestigious early-career group grant. My lab consists of currently two postdocs, three PhD students, one master’s degree student, and two full-time research interns. In Germany, schools and nurseries have been closed since March 16th. I have 3 young kids—ages 2, 7, and 10. I was transformed from a fully committed PI working long hours into a housewife doing home schooling for a first grader, a fourth grader (believe me they have lots of work sheets to do) while taking care of a toddler, my elderly dad, cooking, cleaning and at the same time trying not to let my lab down completely while my husband works long hours. I’ll be ok but it will have a long-lasting effect on my productivity.

Since I work in the mental health field, I focus on providing telephone counseling. Staying at home gave me the opportunity to run research related to COVID-19 in Qatar.
HOW DO WE GET TO MARS? (AND HOW DO WE STAY PSYCHOLOGICALLY HEALTHY IN THE PROCESS?)
By Gary Strangman

Imagine yourself on the surface of Mars, one of the first humans to successfully make the trip to an entirely different planet. You look to the horizon and take the picture of Earth above. Although you’ve trained for nearly every eventuality, it suddenly hits you with more force: Earth is very far away, and so is nearly everything comforting. Your friends, family, and favorite places are there, along with the sound and smell and feel of rain and the ocean and wind blowing through the trees. Then you remember that even “phoning home” is not possible—at least not the way one normally thinks of it. As the distance between you and Earth increased over the 6-month transit to Mars, communication lags also increased: from a manageable few seconds to delays that simply prohibit real-time conversations. Even at the speed of light, signals between Earth and Mars take between 3 and 22 minutes one way. And that assumes communication is possible at all, since blackouts occur for multiple reasons. Your sense of remoteness and isolation has jumped tenfold.

Along with this extreme isolation, you also have to worry about the physical dangers. These include the lack of an atmosphere, high exposures to radiation, and reduced gravity that weakens muscles and bones and cardiovascular systems. Health risks are paramount, seeing as your Earth-based medical care is a minimum of 56 million kilometers and 6 months away. Even the habitat that keeps you alive has the potential to be dangerous—toxic exposures or fire in a completely closed system are much more problematic than in any normal home.

These hazards—radiation, isolation, distance from Earth, altered gravity, hostile and closed environments—lead to the many health risks associated with spaceflight. Perhaps one of the biggest concerns that NASA has for astronauts embarking on

At least 56 million kilometers separate Earth from Mars. The one-way trip alone takes 6 months. Learn more about TRISH at nasa.gov/hrp/tri. Credit: NASA/JPL

Gary Strangman
Translational Research Institute for Space Health (TRISH)

Gary Strangman is an innovation specialist at the Translational Research Institute for Space Health (TRISH) and associate professor in psychiatry at Harvard Medical School. Learn more about TRISH at nasa.gov/hrp/tri.
an exploration mission to Mars, however, is psychological and behavioral health. Astronauts who have flown on the International Space Station can quickly list those activities during their flight that were key to maintaining behavioral health during their flight. They could view and photograph Earth, pick up the phone and call family and friends, enjoy special video conferences with celebrities and schoolchildren. They had the “surprise” of a favorite meal or dessert (typically thanks to a resupply vehicle), various exercise options (although the amount needed to maintain physical health wears on some), and even weekly private psychological conferences with ground medical personnel.

With the exception of exercise, none of these psychological supports will be available on exploration missions to Mars. From your view on Mars, Earth is a tiny dot. Phone and videoconference calls will become asynchronous video or audio file-exchange activities. And resupply will be rare or nonexistent.

So, how can NASA keep astronauts psychologically healthy and operating at peak performance during Mars missions that are likely to last 30+ months?

Enter TRISH—and Psychological Scientists

The Translational Research Institute for Space Health (TRISH) is a Baylor College of Medicine-led consortium with the California Institute of Technology and the Massachusetts Institute of Technology. Charged by NASA (nasa.gov/hrp/tri) via a cooperative agreement, TRISH seeks and funds new health technologies to predict, protect, preserve, and restore astronaut health during deep-space exploration missions. TRISH’s mission requires a holistic and overarching approach to connect two critical groups: researchers who may not be aware that their research is exactly what NASA is looking for and experienced investigators who have a history with NASA research.

Partnered with NASA’s Human Research Program, TRISH focuses spe-

Maintaining and Optimizing Performance in Novel Contexts

Mission success is paramount in spaceflight. It requires every crew member to consistently perform at a very high level, cognitively and behaviorally, particularly in high-pressure situations. This can be an enormous challenge over the course of a 3-year Mars mission, considering the constellation of potential psychological and physiological stressors that astronauts might encounter in exploration spaceflight. Novel challenges require the adaptation of approaches and the use of novel and disruptive techniques to maintain and optimize behavioral performance.

For example, the basal ganglia and hippocampus are essential structures in learning and memory that are also particularly vulnerable to radiation exposure and chronic stress. In addition, spaceflight often provides disruptive circadian cues that can interfere with internal clocks and hence performance. Mars’s 24.6-hour rotation period, for instance, means a 40-minute daily time shift relative to your internal clock. At the other extreme, astronauts on the International Space Station experience 16 sunrises and sunsets every day.

Given these concerns, TRISH supports a number of brain-stimulation approaches to help maintain and optimize behavioral performance, particularly with regard to functions critical to spaceflight. These include executive functioning, memory, learning, decision making, risk taking, and complex sensorimotor tasks.

TRISH seeks and funds new health technologies to predict, protect, preserve, and restore astronaut health during deep-space exploration missions. Learn more at nasa.gov/hrp/tri.
Individual and Team Psychological Resilience

It might seem obvious that astronauts would require high psychological resilience to the kinds of challenges they might encounter in space exploration. However, in a small Mars crew of 4-6 individuals, the selection requirements are already immense. For instance, a crew typically needs a pilot, a physician, a medic, a geologist, and an engineer at a bare minimum, with expertise in life-support systems, space-suit systems, propulsion systems, electronics, computers, software, medical equipment, and many more domains. Further, to reduce the likelihood of serious medical issues far from home, astronauts also need to be exceptionally healthy.

Given these absolute requirements, additional selection criteria are often not feasible. But can psychological resilience be trained? If so, how and how quickly, considering that the intensive 18-month training period prior to a mission allows only about 40 hours of medical training? In addition, is it sufficient to have a collection of resilient individuals, or must team resilience be trained separately? These are all key questions for which TRISH is seeking breakthrough approaches. Specifically on the challenges of human deep-space exploration. We at TRISH want to find and fund disruptive, breakthrough approaches that reduce risks to human health and performance. These approaches include monitoring, detection and diagnosis, countermeasures (i.e., therapies), prediction and prophylactic countermeasures, as well as both experimental work and technology development.

How does all this relate to psychological science? To address NASA’s behavioral health risks, TRISH needs experts in behavioral health maintenance and management to invent and validate approaches for use in spaceflight. (See Table 1 for a few specific concerns regarding behavioral health during exploration spaceflight, and find a more detailed discussion of these concerns at NASA’s Human Research Roadmap in the resource list.) These and other behavioral health concerns, which can arise from the various hazards of spaceflight, will likely be exacerbated by the loss of critical behavioral health supports that astronauts currently rely on when flying aboard the International Space Station. Psychological scientists are well versed in both the detection and management of behavioral health conditions; many either use or develop technologies and unique approaches as part of their daily work. It is this expertise—new methods for maintaining psychological and behavioral health, as well as for mitigating psychological and behavioral health challenges that arise—that TRISH is seeking on NASA’s behalf.

The 6-month transits to and from Mars will likely represent the most confined portion of the trip, and hence the greatest risk, but the expected 18-month stay on the surface (because of orbital mechanics and the varying distance between the Earth and Mars) poses daunting behavioral health challenges as well.

On March 12, 2020, TRISH released an industry solicitation seeking just such capabilities (spacehealth.bcm.edu/prog/industry_program_2020). Open until June 26, the solicitation covers these and other example areas of interest:

- Unobtrusive monitoring (i.e., noncontact or minimal-contact sensors) that can be used to accurately assess and/or monitor an individual’s behavioral health status.
- Closed-loop approaches that combine ongoing monitoring with countermeasures that are deployed as needed to continually “nudge” individuals toward more optimal or healthy states.
- New stress and anxiety monitoring and countermeasures for the completely new and dangerous environment of deep space.
- Methods for optimizing asynchronous communications in the face of 3- to 22-minute one-way communications delays.
- Brain-computer interfaces for enhancing memory and/or cognitive performance.
- Investigations into how approaches to improve health span may be relevant to behavioral health and performance.

TRISH is open to other research targets as well, particularly approaches that can be used or adapted to address multiple behavioral health concerns. The current solicitation is focused on companies (see the solicitation for detailed eligibility requirements), but applicants often include academic collaborators. And because of the tremendous challenges provided by NASA’s behavioral health risks, TRISH is broadly interested and has various additional funding programs for academic and other types of applicants (see resource list at end).

In terms of resources to meet this challenge, NASA does not plan to have a psychologist or psychiatrist on a Mars crew. Thus, all supports for behavioral health need to be brought along in some other form. And because of the difficulty of lifting items off planet Earth, “packing for Mars” becomes a challenge. Table 2 provides a number of key considerations that apply to items taken aboard an exploration spacecraft. Most...
of the limitations relate to the difficulty of launching items into space (requiring minimal mass and volume), the remoteness of exploration flights (limited communications and resupply), and the unique environment (fluids, degradation). While Mars-mission design plans are still being developed, the exploration medical kit could be as small as two shoeboxes. That space must contain everything for medical care: from bandages to drugs, medical devices to disposables. Regardless of shoe size, that is not a lot of space, and hence components of the medical kit that can help with multiple medical conditions or be used in various settings are highly favored.

As we think ahead about the first missions to Mars, we Earth creatures are likely to be caught up in the tremendously exciting event, with much press coverage and ongoing attention on the crew and fanfare upon their return. In fact, the isolation may be considered a bit of a relief from the media blitz, which could lessen the psychological concerns in crews that fly first. As shown during the Apollo missions from 1968 to 1972, however, this novelty effect may wear off after the first few missions—to the point where public interest becomes minimal while the dangers and risks remain high. How do we ensure psychological and behavioral health on exploration missions not just during the first mission, but on later missions as well? That too is of interest to TRISH.

Maintaining behavioral health is a major challenge here on Earth. Even in ordinary times, without the mandatory social distancing necessitated by the COVID-19 pandemic, isolation and confinement have negative effects on behavioral health for multiple subgroups of the population. Maintaining behavioral health throughout a 30+ month Mars mission will be an exceptional challenge. Neither NASA nor TRISH can meet this challenge alone; we need help from both industry and academia to bring and test the best ideas and generate solutions. For those with disruptive ideas on how to help astronauts cope with these myriad challenges, we hope that you will work with us to provide solutions. We strongly encourage you to lend your expertise to NASA’s space program.

Resources and Related Reading

Information about applying to the current TRISH Industry solicitation (open until June 26, 2020): https://spacehealth.bcm.edu/prog/industry_program_2020/

Information on other TRISH funding and related programs: https://www.bcm.edu/centers/space-medicine/translational-research-institute/funding


Information on NASA’s concerns and evidence about behavioral health in spaceflight: https://humanresearchroadmap.nasa.gov/evidence/reports/BMed.pdf?rnd=0.97086689910584

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**Table 1: Psychological/behavioral health concerns in exploration spaceflight**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Potential Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic stress</td>
<td>Dangerous environment with chronic physiological and psychological stressors</td>
</tr>
<tr>
<td>Acute stress</td>
<td>Any emergency or psychologically difficult situation, occurring either on Earth or on Mars</td>
</tr>
<tr>
<td>Depression</td>
<td>Isolation, remoteness, boredom, lack of meaningful work</td>
</tr>
<tr>
<td>Interpersonal conflict</td>
<td>Close-quarters confinement, no escape, long (multiyear) missions</td>
</tr>
<tr>
<td>Performance deterioration</td>
<td>Loss of motivation, circadian desynchrony (Mars has a 24.6-hour day)</td>
</tr>
<tr>
<td>Fluid shifts</td>
<td>The lack of gravity shifts fluid toward the head, which could adversely affect behavioral health.</td>
</tr>
<tr>
<td>Radiation damage</td>
<td>Memory and learning centers in the brain are particularly sensitive to ionizing radiation.</td>
</tr>
</tbody>
</table>

**Table 2: Constraints relevant to systems used in spaceflight**

<table>
<thead>
<tr>
<th>Constraint</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass</td>
<td>Every 1 kg of mass requires 29 kg of rocket fuel.</td>
</tr>
<tr>
<td>Volume</td>
<td>Even a low-mass item can consume too much physical space to fit in a spacecraft.</td>
</tr>
<tr>
<td>Power</td>
<td>Power must be self-generated by the craft, so the fewer watts required, the better.</td>
</tr>
<tr>
<td>Ease-of-use/ repair</td>
<td>Astronauts cannot be experts in everything, so minimal training time is important; repairs should be unnecessary or trivial.</td>
</tr>
<tr>
<td>Communications</td>
<td>Real-time guidance from Earth is not an option, so self-care options are optimal.</td>
</tr>
<tr>
<td>Fluids</td>
<td>Fluids behave very differently without gravity; systems with fluids require microgravity testing.</td>
</tr>
<tr>
<td>Medications</td>
<td>There is no drugstore on Mars and perhaps no possibility for resupply.</td>
</tr>
<tr>
<td>Resupply</td>
<td>Systems requiring consumables—or spare parts—are a liability.</td>
</tr>
<tr>
<td>Component degradation</td>
<td>The rigors of spaceflight can rattle, cook, freeze, clog, or fry systems. Any off-gassing in a closed environment can be dangerous to crew.</td>
</tr>
<tr>
<td>Required resources</td>
<td>Even digital-only systems require resources. Computer storage space will be finite, and one must assume Internet access will be unavailable.</td>
</tr>
</tbody>
</table>
APS honors Members with the field’s most prestigious awards and recognitions. This is a critical part of supporting scientific advances in our field. Please consider the diverse and international nature of our field in nominating colleagues. Nominations of members of underrepresented groups in psychological science are encouraged.

2022 APS William James Fellow Award
Honoring APS Members for their lifetime of significant intellectual contributions to the basic science of psychology.

Nomination Deadline: October 15, 2020

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Honoring APS Members for their lifetime of significant intellectual achievements in applied psychological research and their impact on a critical problem in society at large.

Nomination Deadline: October 15, 2020

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Call For Nominations

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To submit a nomination or for more information, including past recipients and nomination materials, please visit www.psychologicalscience.org/awards
EVEN DUMBLEDORE MADE BAD DECISIONS: DECISION-MAKING COMPETENCE IS MORE THAN INTELLIGENCE

By Cindi May and Michael Scullin

Perhaps no literary character more famously represents the “wise old man” archetype than Professor Albus Dumbledore. In the Harry Potter series, Dumbledore is depicted as the most intelligent wizard in the world. In most cases, he also appears patient, emotionally stable, and benevolent. Yet, Dumbledore’s decisions were often dubious: He gave a pre-teen boy an invisibility cloak and then let him keep it after it was used repeatedly to break curfew. He almost always hired the wrong person to teach Defense Against the Dark Arts. And he failed to close Hogwarts when students were in mortal danger or even being abducted from campus. Dumbledore shows that smart people can make bad decisions, even in a land of magic.

In the Muggle world, bad decisions are everywhere, typically when there is a lapse in one of six decision-making competencies:

1) Resistance to framing effects
2) Consistency in risk perception
3) Recognition of social norms
4) Calibration of one’s confidence in one’s knowledge
5) Applying predefined strategies/rules to choose among options
6) Resisting sunk costs.

The latter two competencies offer excellent teaching opportunities. For example, when purchasing a laptop, students may not systematically compare the features of all available laptops and end up buying one that doesn’t meet their actual needs. Such students are failing to apply predefined decision rules. As another example, after performing poorly in an introduction-level course, some students still spend years limping toward a degree that is ill-suited to their preferences and skills (rather than switch majors). Such students are failing to resist sunk costs.

Do such bad decisions come from the same bad decision-makers? Wändi Bruine de Bruin and her colleagues Andrew Parker and Baruch Fischhoff indeed find that someone who makes a bad decision in one context is more likely to make a bad decision in another context:

• Diverse measures of decision-making competence correlate positively (Bruine de Bruin et al., 2007; Parker & Fischhoff, 2005).
• Better decision-making scores at age 19 predict higher scores at age 30, even when controlling for executive functioning (Parker et al., 2018).
• Decision-making scores predict real-world consequences including interpersonal problems (Weller et al., 2015) and negative life events (Bruine de Bruin et al., 2007).

APS Fellow Cindi May is a professor of psychology at the College of Charleston. Her research explores ways to enhance memory and cognitive functioning for older adults and individuals with intellectual disabilities. May can be contacted at mayc@cofc.edu.

Michael Scullin is an assistant professor of psychology and neuroscience at Baylor University. His research investigates the interplay of sleep, cognition, and aging, with the overarching goal of translating psychological science into real world benefits. In 2017, he was named an APS Rising Star. Scullin can be contacted at michael_scullin@baylor.edu.
Have your students test two decision-making competencies using this 5-minute activity: (tinyurl.com/DecisionMakingCompetence).

In Phase 1, students read a scenario in which they rate how likely they would be to abandon an irretrievable loss (sunk cost) for a newer, better option. In Phase 2, students examine expert ratings for five televisions and have to follow decision rules to choose correctly amongst the five options. After the activity, engage students in small-group discussions on why they believe they found it difficult to resist the sunk-cost option (Phase 1), what distracted or otherwise prevented them from applying decision rules correctly (Phase 2), and which characteristics they believe make a good decision maker.

According to Bruine de Bruin and colleagues, higher intelligence is typically associated with more competent decision making. But that’s not to say that intelligence and decision-making competence are the same thing (Stanovich, 2015). Even when controlling for intelligence (fluid or crystallized), decision-making scores at age 19 predict decision-making scores at age 30 (Parker et al., 2018) as well as negative life events (Bruine de Bruin et al., 2007). Moreover, intelligence measures only overlap strongly with some decision-making competencies. Intelligence is very strongly associated with the ability to apply decision rules ($r=.66$), but only weakly associated with the ability to resist sunk costs ($r=.18$; Bruine de Bruin, Parker, & Fischhoff, 2012). Thus, the brilliant Professor Dumbledore might have the wits to apply decision rules, but he could still fall susceptible to sunk-cost decision making.

The good news is there are strategies to help you resist continued investments in sunk costs. The answer may boil down to motivation, emotions, and experience. Motivation and emotional skills are required to fully engage the complexity of the problem, buffer against the negative affect tied to what’s been lost, and choose the best path forward. Some of these decision-making skills can be learned in the classroom (Jacobson et al., 2012), whereas others may be learned from accumulated life experience. What’s fascinating is that older adults have more difficulty applying decision rules, but they are much better at resisting sunk costs than young adults (Strough, Parker, & Bruine de Bruin, 2015).

A brief overview of the science of decision making doesn’t perfectly explain why Dumbledore didn’t better protect his students, couldn’t hire a teacher who wasn’t some kind of monster, and wouldn’t set rules without implicitly encouraging students to break them. We’re happy to share the longer, more complex story… over a butterbeer. ●

References


EDITED BY C. NATHAN DEWALL

Teaching *Current Directions in Psychological Science* offers advice and guidance about teaching a particular area of research or topic covered in this peer-reviewed APS bimonthly journal, which features reviews covering all of scientific psychology and its applications. Visit this column online for supplementary components, including classroom activities and demonstrations: psychologicalscience.org/publications/teaching-current-directions.
TEACHING SOCIAL PSYCHOLOGY UNDER THE CORONAVIRUS

What social psychological principles do behaviors during the coronavirus crisis illustrate—and how might teachers find teachable moments?

By David G. Myers

In response to the coronavirus crisis, psychology's teaching community has rallied to support one another. Facebook groups for teachers of AP Psychology and the Society for the Teaching of Psychology are sharing ideas for online teaching and for student engagement and assessment. The Social Psychology Network (socialpsychology.org), the British Psychological Society (thepsychologist.bps.org.uk), and APS (psychologicalscience.org) all offer links to teaching-relevant coronavirus information.

For psychology teachers everywhere—many with students displaced to their homes—the COVID-19 pandemic's dark clouds offer a potential silver lining: some teachable moments. In so many ways, we are experiencing social psychology writ large, with so much to study.

Here's my initial list of opportunities for online and in-class discussion of social dynamics in action.

Concept: The need to belong. We humans are social animals. We live and find safety in groups. We flourish and find happiness when connected in close, supportive relationships. Separation (or, worse, ostracism) triggers pain.

Discussion questions:
1. Are there ways in which the pandemic thwarts our need to belong?  
   Possible answers: Social distancing, cancelled communal gatherings (sports, parties, worship), the isolation of off-site learning and work, and diminished travel to be with loved ones or for shared experiences.
2. If so, might the isolation increase risk of physical or mental health problems?  
   Possible answers: Isolation may exacerbate loneliness and depression, both of which can make people vulnerable to ill health and, ironically, compromised immune functioning. (My colleague Jean Twenge offers more on this on theconversation.com.)
3. Are there ways we can nevertheless satisfy our need to belong?  
   Possible answers: Online meetings through video conferencing; connecting through social media (Facebook's mission: "to give people the power to build community and bring the world closer together"); FaceTime conversations; acts of caring to those in need or at-risk; "love-bombing" friends and family with messages and emails.

Concept: The social responsibility norm. Norms are social expectations for desirable behavior. The social responsibility norm is the expectation that we help those in need.

Discussion question: Have you observed or read examples of the social responsibility norm in operation during the current crisis?  
   Possible answers: People doing grocery runs for neighbors at risk; friends reminding peers that "even if you aren't at risk for serious illness, you need to protect yourself so older and at-risk folks you meet aren't imperiled and hospitals overwhelmed."

Concept: The availability heuristic's influence on our fears. Heuristics are thinking shortcuts. The availability heuristic is our automatic tendency to estimate the likelihood of an event by how readily it comes to mind (how available it is in memory). Vivid media images of disasters can therefore lead us to fear things that kill people in bunches (such as plane crashes, when auto travel is vastly more dangerous).

Discussion question: Although it's too early to know the coronavirus's lethality (because we don't yet know how many people have undiagnosed infections), have you witnessed examples of some panicked people fearing it too much? And of others, by failing to appreciate its exponential future spread, fearing it too little?

APS Fellow David G. Myers is a professor of psychology at Hope College. His scientific writing has appeared in three dozen academic periodicals, and he has authored or coauthored 17 books, including Psychology, Exploring Psychology, and Social Psychology. Myers can be contacted via his website at davidmyers.org.
Discussion question: Do you agree with statistician-writer Nate Silver’s speculation that these two tendencies (fearing too much and fearing too little) might balance each other?

Concept: Unrealistic optimism. We are naturally positive thinkers. In study after study, students have believed themselves far more likely than their classmates to be destined for a good job and salary, and less likely to develop a drinking problem, get fired, or have a heart attack by age 40. Likewise, smokers think themselves less vulnerable to cancer or better able to quit. Newlyweds believe themselves invulnerable to divorce.

Discussion question: If cognitively available COVID-19 horror stories inflate too much fear in some, does unrealistic optimism create too little in others? If so, what are (or were) examples of such? (People, despite initial warnings, flocking to bars and beaches?)

Concept: Selective exposure to information. Selective exposure is the human tendency to prefer and seek information and news feeds that affirm rather than challenge our preexisting views.

Discussion question: A recent survey (replicated by NPR/Marist) found that 58 percent of Republicans and 29 percent of Democrats believed “the threat of coronavirus has been exaggerated.” Might selective information exposure explain this difference? If so, how?

Discussion question: Are you selectively exposing yourself solely to news and social media sources that affirm rather than challenge your views?

Concept: Group polarization. In experiments, discussion among like-minded people tends to enhance their preexisting views.

Discussion question: In times of crisis, does the internet enable the segregation of like-minded people clustered in echo chambers, progressives with progressives, and conservatives with conservatives—each group sharing links to sites that affirm their own views?

Discussion question: Does this polarization describe you and your friends?

Discussion question: Are there other ways in which you engage views other than your own?

Concept: Individualism vs. collectivism. Cultures vary in the extent to which they prioritize “me” or “we”—personal (my) goals and identity or group (our) goals and identity.

Discussion question: Have you observed examples of individualism or collectivism in response to health or government guidelines for controlling the spread of the virus?

Possible answers: Individualism (“I’m fine and at little risk, so why shouldn’t I party with my friends?”) Collectivism (“We’re responsible for each other, which means not getting a virus we could pass on to someone who is older or immunocompromised.”)

Discussion question: Does China’s collectivism help explain its plummeting rate of new COVID-19 cases—from several thousand per day during February to less than 10 a day by March 17?

Possible answer: Students may note that China is more collectivist—more “we” focused—but also more autocratic (though collectivist but democratic South Korea also has controlled transmission).

Concept: The motivating power of social perceptions. Stock market drops and bank runs occur when people perceive that others will be selling their holdings or withdrawing their money, causing collapse. People who may not think conditions are terrible may create a downturn by fearing that others think so.

Discussion question: Has your community experienced a similar run on goods—by people who may not fear a lack of goods, but worry that others do, and will empty shelves?

Concept: Attributional bias. People may commit a fundamental attribution error, by attributing others’ behavior to their disposition but their own behavior more to the situation.

Discussion question: Have you observed any such examples, such as explaining that others are rushing to buy and hoard toilet paper out of selfishness, while “I am loading up to respect the mandate to stay home and make few trips.”

Concept: Terror management. Some 300 studies explore the effects of reminding people of their mortality. “Death anxiety” provokes varied defenses, which range from aggression toward rivals to shoring up self-esteem to prioritizing close relationships to embracing worldviews and faith that remind us of life’s meaning.

Discussion question: Have you observed any examples of people’s heightened death anxiety and their adaptive responses to such?

For psychological scientists, the world around us is a living laboratory in which we observe powerful social forces at work in others . . . and in ourselves.

This essay is adapted from David Myers’ blog at TalkPsych.com.
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APS invites applications for nonrenewable grants up to $5,000 to launch new projects broadly addressing the categories below:

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- Meetings and Conferences: Grants in this category support efforts that facilitate communication among teachers of psychological science who share common challenges and who would benefit from sharing ideas and resources.

- Technology and Website: Grants in this category support projects leveraging technological resources to enhance the teaching and learning of psychological science, and to increase the reach and efficient dissemination of related resources.

NEXT APPLICATION DEADLINE: OCTOBER 1, 2020
For details, go to: www.psychologicalscience.org/smallgrants
Questions? Contact teachfund@psychologicalscience.org

The Teaching Fund was established with the support of The David and Carol Myers Foundation.
MANAGING PRODUCTIVITY
IN THE TIME OF COVID-19
By Amanda Merner

Amanda Merner
Case Western Reserve University

We’re living in unprecedented times. With campuses moving to remote coursework, students and faculty instructed to stay at home, and research being slowed or halted completely, it is easy to become overwhelmed by all the sudden changes. However, amid the chaos, we are still in the midst of our graduate training. The clock is always ticking, so how do we shift gears and get creative when it comes to staying productive?

First, take a moment and remind yourself that nearly every graduate student is experiencing a drop in their productivity; we are all trying to navigate new hurdles to getting work done. This reminder may be good to keep on a Post-it note at your desk so you can continue to reference it until it sinks in. It has been 2 weeks at the time I write this, and I assure you, my Post-it is still up.

The Day-to-Day
Making a schedule and trying your best to follow it can be extremely helpful. Working from home is very different than working from your office or laboratory space. Many people struggle with having their couch and TV so close to them at all times. It is effortless to get sucked into a Netflix series, only to come to 8 hours later in the same pajamas, with the same email draft open on your laptop. By adapting your previous schedule to fit the new home restrictions many of us are facing, you can help maintain a sense of normalcy, and avoid getting sucked into the trap of lying around.

If you are usually a morning gym-goer, keep waking up at the same time and go for a run or bike ride, or take advantage of some of the free online workouts being offered. Many gyms and fitness studios are posting virtual classes on Facebook, Instagram, and YouTube, modified so people can complete them at home with little or no equipment. If it’s accountability you need, invite friends to compete in fitness challenges or to use FaceTime or Zoom to take the class with you. Even if the workout isn’t as rigorous as your usual gym routine, it can help you stick with your schedule, de-stress a little bit, and combat any additional self-isolation snacking you have been doing.

Get dressed. I know by this time you may have convinced yourself your work pajamas are very different than your sleeping pajamas, but if you take a hard look, you may notice they’re quite similar. And if you can work this way, then great! However, if you’re anything like me, loungewear signals to the brain that it is time to lounge. For me to be productive, I have to get dressed each morning in something that I would have worn to campus. It doesn’t have to be presentation-level formal, but real pants and a sweater can do wonders for sending the message to your brain that it’s time to work.

Time to Run the Numbers
Many of us have projects that rely upon in-person testing sessions, undergraduate research pools for subject recruitment, or equipment that can’t be used outside of a laboratory, making data collection more challenging or impossible. If your lab doesn’t have other data in the analysis stages, this might seem even more overwhelming. Again, look at that Post-it as a reminder: We’re all navigating this together.

The best place to start is by scheduling a brief meeting or call with your advisors and lab mates. Take this time to talk through the status of each project in your lab and determine how to proceed. If a study can be moved online, make a plan for each step of the process, including the IRB (Institutional Review Board) amendment, divide up the work, and start checking things off your list one by one. If you have collected data but are unsure if you can access at home, call your IRB and discuss potential options for setting up remote access so you can remain productive without violating any confidentiality clauses. The important thing is to have a clear understanding and agreement about the next steps for each project.

APSSC Student Notebook Editor and incoming APSSC President Amanda Merner is a third-year doctoral student specializing in affective neuroscience at Case Western Reserve University. Her research focuses on the neural underpinnings of emotion regulation and how individual differences in executive functioning affect the ability to regulate emotion, both in healthy populations and in those with various neurodegenerative diseases. You can follow her on Twitter at @armerner_psych.
Writers’ Retreat
Data collection on hold? No data in the pipeline for analysis? Again, you’re not alone. There are other things you can do to remain productive and make the best of your time in graduate training.

We’re all being asked to stay home and limit our contact with others. The media is calling this self-isolation, but in the world of academia, we can think of this as an indefinitely long writing retreat. You may want to begin by taking inventory of your poster presentations and any manuscripts you’ve been working on with colleagues. If you’ve had manuscript in-prep on your CV for a while, or presentations you’ve meant to turn into papers for publication, now is the time to get working on those writing projects.

If you manage to get through all of those projects, there are always review papers. Literature reviews and meta-analyses are notoriously challenging and time-consuming, so this is a great time to tackle larger projects like these. If you’re looking for some advice on where to start and other helpful resources, check out the Student Notebook in the March issue of this magazine. Taking time to review the literature can also inspire new project ideas, or help you identify components of the introduction to a thesis or dissertation.

For those who were in the project-development stages when COVID-19 restrictions went into place, you may consider working on the project’s protocol as soon as you’re able to return to the lab. Now could be an ideal time to write out the protocol, submit your IRB application, and preregister your project with the Center for Open Science on the Open Science Framework. For projects that require programming an experiment, try using a program that you’re not familiar with, and take this extra time to build the specialized skills section of your CV. Step outside your comfort zone and add in exploratory analyses using a new program or method that you can spend some of your time learning at home. Or, if you’re applying for funding for an upcoming project, consider working on the draft of your grant application and sending it out for feedback.

Work Independently, Together
You don’t have to work on these projects in complete isolation. Reach out to some of the graduate students in your department and see if they’d be willing to have a virtual writing or programming workshop each week. Develop a schedule so you all have goals for the weekly meeting, and rotate which student’s writing project is sent out to the group for feedback. And there’s no reason you have to restrict these virtual groups to just your department, either. Check out the APS Student Caucus Facebook or Twitter page to connect with fellow APS members and graduate students around the world.

We’re all trying to find ways to navigate these waters and build the skills we entered graduate training to grow—no need to do it all on your own.

APS Student Caucus Executive Board Welcomes New Members

The APSSC Executive Board is responsible for creating strategic plans, goals, and initiatives throughout the year with the purpose of serving the unique needs of APS student affiliates. The board is also responsible for planning student programming at the APS Annual Convention. The following students will begin their term in June for the 2020-2021 academic year:

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<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>University/Position</th>
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<tbody>
<tr>
<td>Amanda Merner</td>
<td>President</td>
<td>Case Western Reserve University</td>
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<tr>
<td>Kelsie Dawson</td>
<td>Graduate Advocate</td>
<td>The University of Alabama</td>
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<tr>
<td>Lorilei Alley</td>
<td>Past-President</td>
<td>Justus Liebig University Gießen</td>
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<td>Timothy Valshtein</td>
<td>Undergraduate Advocate</td>
<td>New York University</td>
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<td>Tran Le</td>
<td>(RISE Coordinator)</td>
<td>Texas Tech University</td>
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<tr>
<td>Anna Drozdova</td>
<td>(Communications &amp; Marketing Officer)</td>
<td>University of Texas, El Paso</td>
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<tr>
<td>Luiz Santana</td>
<td>Student Research Coordinator</td>
<td>University of California, Los Angeles</td>
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<tr>
<td>Serena Zadoorian</td>
<td>(Membership &amp; Volunteers Officer)</td>
<td>University of California, Riverside</td>
</tr>
<tr>
<td>Ryan Thompson</td>
<td>(Student Notebook Editor)</td>
<td>Palo Alto University</td>
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Association for Psychological Science

STUDENT RESOURCES

1. Funding & Recognition
   - Student Grant Competition
   - Student Research Award
   - RISE Research Award

2. Build Your CV
   - Become a Reviewer
   - Serve on the APS Student Caucus Executive Board
   - Write for the Student Notebook
   - Represent APS on Your Campus

3. Connect & Keep Current
   - Mentorship Opportunities
   - Student Programs and Events at the APS Convention
   - Access to Research and News Online and on Social Media
   - And More!

Learn More at psychologicalscience.org/students
Indiana University
Bloomington, IN
Assistant/Associate Clinical Professor

The Indiana University Department of Psychological and Brain Sciences invites applications from candidates who are deeply committed to innovative clinical psychological training within an evidence-based, translational, and interdisciplinary model of doctoral training. We are seeking an individual with training and clinical experience in evidence-based intervention techniques and a commitment to intervention development, implementation, and outcome assessment. A strong interest in translational research and practice with a focus on moving interventions from the lab/clinic to the community is desirable. Primary responsibilities will include: (1) supervision of predoctoral psychology students in clinical practicum training; (2) coordination with, and oversight of, external practicum sites; (3) teaching clinical courses in the department; (4) assisting with administrative and accreditation activities in the clinical science doctoral program.

Qualifications include a Ph.D. in Clinical Psychology from a PCSAS and/or APA accredited program; licensure in the State of Indiana (eligible), training and clinical experience in evidence-based services; clinical supervisory experience; interest in university level teaching; and commitment to pedagogical advancement. This will be a full time non-tenure track, faculty appointment beginning August 2020. Rank and salary commensurate with experience.

The Clinical Science Program at Indiana University is nationally recognized for an emphasis on translational research on mechanisms and intervention. Clinical and research training is highly integrative, often involving approaches from medicine, cognitive science, neuroscience, behavioral genetics, informatics, social and developmental psychology. The Department of Psychological and Brain Sciences’ in-house training clinic serves adult, family, and child populations and is integrated with active programs of research. Faculty overseeing its operation are supported by administrative staff. The University is located in Bloomington, Indiana, a university town which offers an exceptional cultural, educational and recreational environment.

Interested candidates should submit a letter of application, CV, teaching, and diversity and inclusion statements, and letters of recommendation as described at: indiana.peopleadmin.com/postings/8766. Review of all applications will begin on March 31, 2020 and will continue until the position is filled. Questions regarding the position or application process can be directed to: Cherlyn Crees, Assistant to the Chair, ATTN: Clinical Professor Search, Department of Psychological and Brain Sciences, 1101 E. 10th Street, Bloomington, IN 47405-7007 or chcrees@indiana.edu.

The College of Arts and Sciences is committed to building and supporting a diverse, inclusive, and equitable community of students and scholars.

Indiana University is an equal employment and affirmative action employer and a provider of ADA services. All qualified applicants will receive consideration for employment without regard to age, ethnicity, color, race, religion, sex, sexual orientation, gender identity or expression, genetic information, marital status, national origin, disability status or protected veteran status.
NIH Encourages Studying the Social Contagion of Substance Abuse

The National Institute on Drug Abuse (NIDA) invites grant applications proposing to study the social contagion of behavior and substance abuse. Proposed research should apply social network theory—the study of how people, organizations, and groups interact in a network. Applications are open through January 8, 2023.

Social contagion, defined by NIH, is the “spread of affect or behavior from person to person and among larger groups.” NIDA recognizes “social network theory can also be applied to chronic behavioral conditions, including substance use disorders, as social factors and their interactions with age and sex are important determinants of substance use.”

Models that examine how substance abuse and peer use/misuse develops in peer groups should make use of big data sets and data science to form computational models required for social network analysis.

Learn more about NIDA’s Notice of Special Interest: Modeling Social Contagion of Substance Use Epidemics (NOT-DA-20-009) at grants.nih.gov/grants/guide/notice-files/NOT-DA-20-009.html

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). The program has five goals:

- Identifying research with the potential for commercialization
- Supporting proof-of-concept work,
- Promoting sustainable partnerships between academia and the private sector
- Developing multi-disciplinary innovation ecosystems
- Providing professional development, mentoring, and advice in entrepreneurship

The solicitation supports efforts on two different tracks. The Technology Translation track provides the opportunity to turn NSF-funded research into technological innovations with promising social impact. The Research Partnerships track has similar goals but supports larger, complex, multifaceted technology development projects that require the involvement of more than one researcher or institution. This track requires the creation of a partnership between academic researchers and a third-party organization (e.g. industry, a federal laboratory, a public or nonprofit technology organization).

Deadline: January 13, 2021

Learn more about the PFI program at bit.ly/3ac7JDw.
ICPS 2021 has been postponed to ensure the health and well-being of the global APS community. New meeting dates will be announced in autumn 2020.

For the latest information, please visit www.ICPS2021.org
You are an organizational psychologist studying teamwork in space and space analogue (SSA) environments. What do you do in this capacity?

I study which individual, group, and contextual factors enable long-term, successful human collaboration under conditions of isolation, confinement, and extremeness. Typically, we find these conditions in work contexts such as the polar regions, oil platforms, mines, submarines, and space. I use a mixed-methods approach: I combine qualitative and quantitative methods with measures collected during field work and remotely to triangulate data and gain a deeper knowledge of what drives effective teamwork in SSA environments.

What led to your scientific interest in applying organizational psychology to space and space-analogue environments?

I have always been interested in studying how and what people change to solve challenges they encounter in the workplace. Space and space-analogue environments are fertile ground for this research. Humankind has its eyes set on the stars again, and this time it feels like it is for real. Very soon we will have the first Moon and Mars colonies! I have the opportunity to contribute to this endeavor, hopefully by helping to unpack the factors that drive effective teamwork under extreme conditions (e.g., microgravity, boredom).

You just spent some time in Antarctica, doing research related to the Portuguese Polar Program. Can you tell us more about that experience?

The Portuguese Polar Program is one of the youngest Polar programs in the world. I’ve been working with an international team since 2017, including Jan Schmutz (Switzerland), Mirko Antino (Italy), Walter Eppich (USA), and Travis Maynard (USA), to learn how Antarctica teams adapt to unexpected challenges during their summer campaigns. This year we got the support from the Interdisciplinary Network for Group Research and the Negotiation and Team Resources Institute. So far, I have completed two Antarctic campaigns on King George Island. We worked in three Antarctic research stations, becoming quickly and deeply immersed in the research environment. We have gathered more than 50 interviews covering scientists, managers, and staff; performed more than 200 hours of field observation; and collected quantitative data on more than 60 adaptation events.

What main findings has the project yielded thus far?

We found that different teams’ processes are meaningful for team adaptation at different phases. For example, contingency planning and building cohesion are mostly relevant before the campaign (the term for when the teams are placed into action to achieve the desired goal). During the campaign, the relationships between scientists and the station staff are the main predictors of team adaptation.

What are your plans for applying and/or extending these findings?

What we learn from SSA environments can help to design the organizational and management structures of other work environments, such as oil platforms, mining stations, or, ultimately, space stations. This will probably allow us to create a broader model of human behavior that we can export to a Moon colony or a Mars colony. The type of social structures that we will have in space will likely be similar to what we see in Antarctica.

Read a longer version of this interview at psychologicalscience.org/observer/quinteiro.
Time-Sensitive Material

APS COVID-19 Resources

A collection of psychological science research and insights from the APS community.

psychologicalscience.org/covid-19