

The Grand Challenges of Psychological Science

December 29, 2021



- [Globalization and diversity](#)
- [Research integrity and applicability](#)
- [Collaboration across fields and disciplines](#)
- [Climate change](#)
- [Communication, polarization, and public trust](#)
- [Strengthening theory—and the road ahead](#)

In October, APS invited members to share what they consider to be the “grand challenges”

psychological science must address in the coming years. Our goal was to illuminate worrisome fault lines within the discipline, strengthen the field's collective impact, and draw attention to how scientific psychology can more effectively inform public policy and advance human welfare. We reached out to members around the world, aiming for a collective response that reflects the diversity of experiences and opinions within the multidomain world of psychological research.

Well over 100 of you responded, weighing in from every continent and representing every stage of your careers, from graduate school to more than 50 years postdoctorate. Although respondents were disproportionately White, North American, and male, your concerns were global and inclusive, touching on matters from rigor and relevance to stronger engagement of scientists, policymakers, the media, and society broadly. Many of you identified several overlapping challenges, along with detailed lists of priorities. Some of you suggested future directions for the discipline, whereas others aimed your recommendations squarely at APS. You expressed equal measures of skepticism and hope.

In this article, we spotlight some of the consensus issues that surfaced, excerpting some responses and paraphrasing others. Though we can't include every response, APS is taking them all to heart and will continue to do so as we move through our long-term strategic planning process.

On behalf of APS to all of our members—especially those who responded to this challenge—we are deeply grateful for your time, thoughts, and commitment to psychological science.

Globalization and diversity

Discussions of psychological science's need for greater support of and engagement with researchers outside of Western, educated, industrialized, rich, and democratic (WEIRD) parts of the world emerged again and again in your responses, amplifying the three-part [“Psychological Science Needs the Entire Globe” series](#) that concludes in this issue of the *Observer*. Carryl Baldwin, a cognitive psychologist at Wichita State University, offered a particularly succinct analysis: “We need to broaden our science to facilitate a decolonization approach that recognizes and includes perspectives and contributions from people outside of WEIRD societies.”

Experimental psychologist Braj Bhushan of the Indian Institute of Technology framed the challenge in historic terms. “Since [Wilhelm] Wundt's effort to kickstart scientific psychology in 1879, the scientific endeavor of psychological science is 138 years old now. However, the scientific temper of the field is not homogeneous across different geographical areas,” he wrote. “Experimental study of indigenous concepts and their dissemination through academic journals of repute remains a challenge. This, in turn, hampers fostering diversity that the area should really have. The lack of funding for carrying out timely research is another bigger challenge in many countries. The availability of technology, tools, and techniques for research is highly skewed across the globe.”

APS Fellow Susan Cross, a personality/social psychologist at Iowa State University, elaborated: “The field of psychology MUST grapple with and develop much more extensive knowledge, theories, and research literature on cultural variation in psychological phenomena.” Doing so, she proposed, will

require funding to help scholars recruit more diverse, global samples; more training of journal editors to recognize and value strong cross-cultural research; development of methods and tools that enhance cross-cultural collaboration; the inclusion of indigenous scholars able to question and replace “dominant theories, methods, and data that are biased by Western ideals, values, and beliefs”; and “humility and an ability to think outside one’s cultural and disciplinary constraints on the part of Western researchers.” Means toward these ends include cross-national partnerships among psychological associations to create networks, share information, and inform researchers of opportunities to collaborate. “We must become a more global science or we will consign ourselves to irrelevance.”

English-language proficiency is another obstacle, Bhushan noted. “Even those authors from the non-English-speaking countries who have published in international journals keep receiving comments about the quality of language in the review reports.” He suggested “an inclusive program” of continuing education as one way to help level the playing field in terms of language.

Why does any of this matter? “Taken together, the lack of representation and of transparency greatly threaten both the internal and external validity of our research,” wrote clinical neuropsychologist Luis D. Medina, University of Houston. “As our [society becomes increasingly diverse](#) across multiple domains, our observations, constructs, tools, and other products of our research—largely reliant on data from a limited subset of the global population—will become increasingly limited, or even irrelevant.” Consequently, “rather than working toward better understanding of human psychology and the reduction of human suffering, our field will continue contributing to the perpetuation of health disparities.”

Related content from this issue:

- [Psychological Science Needs the Entire Globe, Part 3: Let’s Talk About the “C” Word: Colonialism and the Challenges of Psychological Science in the Developing World.](#)
- [On the Right Side of Being Wrong:](#) Researchers are embracing a new culture of transparency.
- [Exploring the Mysteries of Self and Consciousness:](#) The myriad ways consciousness influences the highs and lows of human experience.
- [Fully Credited:](#) A new model of “contributorship” addresses the marginalization of early-career researchers in scientific publications.
- [Up-and-Coming Voices:](#) Previews of emerging research on methodology and research practices

Representation extends beyond geography, too. “We must grapple with the White- and male-centric nature of our discipline, making it a priority to listen to our colleagues (and participants) who seek more voice at the table,” wrote APS Fellow Gordon Hodson, a social psychologist at Brock University in Canada. “This will require cultural humility, epistemic inclusion, and the decentering of the default White and European/American ways of knowing and making decisions about the direction of our discipline. Of course, those with power or cultural primacy rarely relinquish it without resistance, and academic psychology will likely be no exception,” he added. “Here, psychology would be well advised to turn to many of our sister disciplines who have made headway on these issues.”

APS Fellow Douglas MacDonald, an associate professor at University of Detroit Mercy, advised

“addressing inequities within the psychological scientific community in terms of race/ethnicity, sex and gender, and socioeconomic differences. This should take the form of improved representation on editorial boards and more equitable practices in the evaluation and publication of research by scholars of different backgrounds and countries.”

Community/social psychologist Crystal Steltenpohl, of Dartmouth College’s Center for Program Design and Evaluation, pinpointed the field’s need to overcome a “reliance on old measures of prestige as a way of determining a researcher’s value.” She mentioned challenges such as “lack of support for undergraduate education, especially at smaller regional schools,” and, in the context of graduate education, “the assumption that all students are going to or should want to become academics.”

“We need to adjust our frames around the radical authenticity movement of gender identity, too,” said Erica Kleinknecht, a cognitive scientist at Pacific University. “According to a recent study, 20+% of Gen Z [individuals from LGBTQ+](#) spaces identify as nonbinary, and when they come into intro psych where print materials still conflate sex and gender into binary divisions, we are making ourselves irrelevant to them. The 20th-century binary frame is wrong, and we need to move beyond it.”

To all these ends, APS Fellow Brian Carpenter, a clinical psychologist at Washington University in St. Louis, wrote that “psychological science needs to address the origins of and solutions for [prejudice, discrimination, and intolerance](#) of differences related to gender, race, national origin, age, sexual orientation, and other facets of identity and experience.”

[Return to Top](#)

Research integrity and applicability

Many APS members prioritized psychological science’s significant concerns with [replicability](#) and the sometimes dubious real-world applicability of research. “The biggest challenge that psychological science must address is to increase its [rigor, reproducibility, and generalizability](#),” wrote APS Fellow Tom Beckers, an experimental psychologist at KU Leuven. “The change in research culture that is needed for this has already started to take hold but is very fragile still.” Granted, other sciences face similar predicaments. “Fields ranging from economics to biomedicine are grappling with similar issues about research integrity and rigor,” wrote freelance writer Scott Sleek in an article about the emerging culture of data sharing and self-correction (see “On the Right Side of Being Wrong”). “But psychological science has stood out for the breadth of its self-correction initiatives.”

Retired experimental psychologist Harold Miller, Brigham Young University, was unsparing in his summation. “Beginning in 2015 or so with the publication in top-tier scientific journals of failures to replicate reports of earlier research published in prestigious psychology journals, the discipline has worn a black eye,” he wrote. “Attempts to counter this trend took the form of long-overdue, broad-based recommendations for replacing long-standing traditions of peer review and editorial decision-making that were now seen as hopelessly biased. Calls for the preregistration of research proposals, the publication of negative results as a matter of course, and the disclosure of potential conflicts of interest by researchers, among other proposed remedies, appeared and were increasingly embraced as standard practices.” Amid these promising indicators, however, Miller noted “discomfiting counterindications,

such as appeared in a recent [Psychological Science](#)—namely, a report that the original articles subsequently discredited as unreplicable still receive the lion’s share of citation.”

Righting the ship may require rethinking the basics, many APS members opined. “It is not clear to me that psychology can continue to call itself a science when most of those practicing it do not know the fundamental methods or statistics of the field,” wrote APS Fellow Pamela Davis-Kean, of the University of Michigan. “When the story outweighs any evidence—then we are just philosophy and squarely in the humanities. We will continue to be challenged with poor training in methods and statistics, poor theory, unvalidated measures, tenure incentive being stronger than scientific integrity, and an aging field that values big names more than rigorous science.”

MacDonald identified “inconsistencies in best practices with respect to executing research in a transparent/open, ethical, and rigorous manner. There is a need for improved training of scientists that includes improvements in teaching what questionable research practices are and how they can be avoided.”

“We need to become more of a science, valuing incremental contributions and robust findings (even if they are not surprising or flashy),” wrote Heather Kappes, a personality/social psychologist at the London School of Economics and APS’s Visiting Behavioral Insights Scholar (see [Kappes’s “Notes From a Scholar” series](#)). “This probably means teaching and training in a range of techniques that are only lightly used at present, including things like computational modeling and qualitative methods. We should be trying to publish fewer papers, but being more careful with each that we do publish.” To that point, developmental psychologist Royette Dubar, of Wesleyan University, called out “the increased pace of publishing at the expense of quality research” and called for “more opportunities to publish (and value) nonsignificant findings that are based on sound theoretical and methodological designs.”

APS Fellow Elizabeth Hayden (University of Western Ontario), who studies developmental psychopathology, remarked that “invalid measurement practices contribute much more heavily to replication problems than people appreciate,” at least in her subdiscipline. “Most of our theories of etiology of psychopathology are based on a research literature that has drawn upon measurement practices that don’t meet modern standards for psychometric development and are developmentally insensitive. I don’t think open science practices can accomplish much without better measures,” Hayden added. “We should be spending more time on measurement development and validation and less time testing etiological models until we know we’re measuring what we want to, reliably and validly.”

Christopher Green, a quantitative psychologist at York University, proposed a three-step corrective course. “(1) We must correct the misuse (including rampant overuse) and the widespread misinterpretation of the meaning of null-hypothesis significance testing. (2) We must greatly improve the state of statistical training that psychology students receive. (3) We must expand the statistical (and, more generally, mathematical) tool kit with which psychologists are familiar and comfortable. We don’t need ever-more-elaborate statistical methods to be misused by researchers who were not adequately prepared to use them correctly. Instead, we need to teach the basics much better.”

How about asking tougher questions and allowing scientific facts to speak for themselves—even if they may be unpopular? “In my long career, I have watched the precarious balance between ideology and science as it teeters one way, then another,” wrote APS Fellow Carol Tavris, a social psychologist in Los

Angeles, California. “At its best, science has been able to overturn, or at least slow, pernicious fads (e.g., recovered memory therapy) and benign but wrong theories (e.g., that women reason ‘in a different voice’). Today, I fear that the greatest challenge for psychological science is maintaining our emphasis on science, even when its findings question the current ideologies of race, gender, and social justice.”

As an example, Tavris wrote that “scientific evidence and ‘rigor’ are increasingly seen as the villains in the war against racism—if research doesn’t show what we want it to, it must be racist, worthy of being silenced and its promoters shunned. This is a tragically misguided belief.... I hope that APS will hold the line for competent, peer-reviewed research and debate.”

On a more hopeful note, cognitive scientist Laird Edman, Northwestern College, sees the replication crisis as “a sign our science is maturing—we have the opportunity to refine our methods and make our science much better by adopting open science methods. However, we also need to understand the limits of our science and have the intellectual humility to embrace a sophisticated epistemology and philosophy of science. Too many psychological scientists are naïve logical positivists but are unaware of how that epistemological position is untenable and long outdated ... Developing a science that is more rigorous and more modest at the same time will serve us well and allow us to grow and give away our science better than we have in the past.”

[Return to Top](#)

Collaboration across fields and disciplines

For years, APS leaders have called for psychological scientists to collaborate across geographic and disciplinary borders and, as current [APS President Jennifer Eberhardt](#) wrote in this magazine, to get “more of the science into the world and more of the world into the science.” APS members echoed these sentiments in their responses.

APS Fellow Paul van Lange, a professor of social psychology at VU Amsterdam, identified behavioral economics and ecological and evolutionary science as fields within and outside of psychology that would benefit from a more integrated approach. “Thinking of the movie *Toy Story*, and the charming character Buzz Lightyear in particular, we need to cross borders—to the future, to the entire world, and beyond,” he wrote. Crossing borders “helps us understand the connection between psychological processes, the focus of the past decades, and the broader context.”

Weighing in from the University of Porto and the biological/neuroscience field, Fernando Ferreira-Santos wrote that “psychological science is, perhaps, the hardest science. Psychological phenomena only emerge when complex biological systems with a long evolutionary history go through a protracted period of ontogenetic development embedded in intricate sociocultural contexts. This means that psychology must be a natural science, branching out of biology and neuroscience, but also a social science, attuned to the systems described by anthropology, sociology, and economics, among other disciplines.”

Kleinknecht characterized the challenges in historic and demographic terms. “With increasing interdisciplinary work that crosses over conventional subfields, our modern scientific discoveries do not

neatly fit in the 20th-century frameworks laid out in most textbooks,” she wrote. “With three generations in the workforce, there are three different worldviews about psychology influencing our practices. My boomer colleagues who were trained in the era/aftermath of behaviorism view our field differently than Millennials. Gen X psychologists were taught in the postbehaviorism era but are teaching Gen Z students. They have to go through a complete about-face as they reconcile how to handle history, bring in modern science findings, and explain away the archaic organization of our textbooks.”

“The way that research projects are so often independently organized by lab and faculty members—and often hidden—is detrimental to the goals of science as a whole,” wrote Manon Ironside, a graduate student at the University of California, Berkeley. “We need more centralization, more collaboration, less of a model that elevates the authority of individual researchers and promotes individual achievement. It is likely that in order for meaningful change to take place in this domain, the incentive structure around publication would need to shift,” she added. “We need more of an emphasis on building the tools to do great science, less of an emphasis on product—especially during the earlier training years, like during the PhD. If this doesn’t change, people will continue to organize projects haphazardly, and psychology labs will remain insular and idiosyncratic, leaving the field open to continued replication crises and away from progress we could make by putting more emphasis on collaboration.”

[Return to Top](#)

Climate change

As a basic matter of societal survival, [addressing climate change](#) stood out among the priorities of APS members in every generational cohort. “In my list of top 10 priorities for urgent research, application, and outreach attention, climate change would occupy Positions 1, 2, and 3, and probably a couple more slots as well,” wrote Geoff Cumming, a retired APS Fellow and quantitative psychologist from La Trobe University. “So many other urgent priorities, such as food supply, severe weather events, inequality, violence, disease and pandemic risks, safe water supply, livable housing, discrimination ... all are exacerbated by climate change. Basically, if we don’t make massive strides on climate change mitigation and adaptation, then our children and grandchildren will have little or no chance of a decent life.” Effecting positive action, he added, “requires attitude and behavior change—the very core business of psychological science.” He called upon all research fields within the discipline “to take on relevant climate change topics, challenges, and opportunities.”

Breaking down steps within that call to action, APS Fellow Craig Anderson, a personality/social psychologist at Iowa State University, implored researchers to devote more time to understanding “(1) the implications of rapid climate change for human behavior (e.g., development of violence-prone adolescents and adults, intergroup prejudice and violence, war); (2) the role that electronic media have played in science denial; and (3) ways that electronic media can be used to improve the general public’s understanding of this crisis and their support for action at the individual, group, and political levels.” Anderson has written several works on psychology and rapid climate change, most recently a monograph published by Cambridge University Press.

Health psychologist Donald Edmondson, of Columbia University Medical Center, called for “understanding [how psychology and behavior will change as the climate crisis deepens](#), as well as how changes in psychology/behavior can influence the climate crisis. Whereas previous widespread changes to political, social, and other systems yielded changes in psychology/behavior, historically, systemic changes have been limited to one (or a few) dimensions of everyday life and have never impacted every human. The impacts of the climate crisis are expected to touch every dimension of human existence. This unprecedented global transformation has been described as akin to ‘moving to another planet.’ Our field has not yet begun to seriously grapple with how this harsh new planet will change us.”

Indeed, effecting action on climate change may be as much a matter of persuasion and communication as scientific research, members noted. Social psychologist Diane Sunar, professor emerita at Istanbul Bilgi University, pointed to “a wide spectrum of potential applications of psychological science to these issues, from finding the best ways to encourage ecologically sound individual practices (messaging, incentives, norm formation, etc.), to disaster management in response to weather and climate-related events, to ameliorating heightened social anxieties and resentments aroused by the international migrations resulting from drought, sea level rise, and the like. But the most urgent is the challenge of how to change the behavior of entrenched interests such as the carbon-based energy industry in all its forms. It is critical that decision-makers in the energy industry and other economic sectors that impact the environment and climate turn from their short-term interests to long-term interests. Do we know what persuasive techniques, messages, arguments, incentives can compete with short-term profits?”

APS Fellow Janet Ruscher, a personality/social psychologist at Tulane University, amplified those concerns, noting the need to motivate “individuals and organizations to incur personal immediate costs (e.g., potentially lower income/dividends, restrictions on personal preferences, inconveniences) for the overall good of other people and the planet (e.g., living wages and health care for all, public health over personal freedoms, mitigating climate change). We need to understand how humans can learn to play ‘the long game.’”

[Return to Top](#)

Communication, polarization, and public trust

Few would deny that recent years have seen sharp increases in [political polarization](#) and [entrenched rejections of scientific findings](#), regardless of how clearly and consistently they are reported and otherwise communicated. According to Julie Morrison, an experimental psychologist at Glendale Community College (Arizona), the grandest challenge in this scenario is, “most fundamentally, trust in science. Without that, we can’t move forward with science-based interventions.”

Although reports on this topic have mostly focused on the United States, it appears to be common globally.

APS Fellow Kevin McConkey, a retired cognitive psychologist at the University of New South Wales, observed that “the rejection of expertise is a trend across much of the world, often associated with increased authoritarian attitudes and behaviors. We need to investigate more bravely and to communicate more broadly about these matters.”

“A key focus we largely ignore in our research is how to gain public trust in our science” wrote Kumar Yogeewaran, a social psychologist at the University of Canterbury. “In several nations, there are many people who don’t trust social scientists, and this limits the impact of our research. Our replication crisis did not help with this, but just like efforts to improve our credibility through open science practices, we also need to try harder to improve our credibility among the wider public. While important work is being done to persuade government and policymakers of the importance of our science, persuading only those at the top will not suffice. As the pandemic has taught us, a public that does not trust scientists has a negative collective impact on us all. This means we need to make efforts to better understand what contributes to public distrust of psychological science, engage better with diverse communities across any racial/ethnic, religious, and political divides, and work to build trust from the bottom up so we are seen as an honest broker when we weigh in on important societal issues.”

Graduate student David Grüning, of Heidelberg University, noted that the COVID-19 pandemic has underscored “how essential [the thoughtful communication of science](#) beyond researchers’ professional realm is for society. Specifically, psychology had to tackle the Herculean task of communicating insights to the public for, for instance, battling misinformation or increasing vaccination endorsement. In this process we have recognized communicative gaps that still need to be bridged.”

Rob Chavez, a social neuroscientist at the University of Oregon, wrote that misinformation and disinformation “and their potential for harm became particularly salient during COVID-19 pandemic. As psychological scientists, we need to be assertive in our approach to understanding these issues. However, it is also imperative that we be humble in the degree to which we suggest that psychological interventions are always the appropriate solutions to these problems, when perhaps institutional or other systemic changes would be more effective.”

To those ends, “The single most important challenge faced by psychological science is how to bring our increasing knowledge about human nature and motivation to bear on public policy decision-making,” wrote APS William James Fellow Lynn Nadel, an emeritus professor of cognitive science and psychology at the University of Arizona. “We know a lot more every year about the explicit and implicit drivers of human behavior, but we remain incapable as a species of doing the right things most of the time. Much of this has to do with the disjunct between our short life spans and the relatively longer-term nature of the critical problems we are now facing. Our inability to get beyond short-term thinking and drives has put us all in danger—our species and the planet we live on together ... We are challenged to shed light on why humans are so susceptible to misinformation, and so easily led down destructive paths.”

APS Fellow Delphine Dahan, a cognitive psychologist at the University of Pennsylvania, noted the divergent trajectories of scientific discovery and public discourse. “As the field of psychology is growing and as more and more knowledge is accumulating, answers to questions will become more and more complex,” she wrote. “A significant challenge for psychological science will become to remain accessible and relevant to other disciplines and to the general public while also pursuing complex problems and providing complex answers. I fear that the public’s hunger for simple explanations to complex phenomena may lead the field astray.”

To Tom Hilton, a retired industrial/organizational psychologist and navy officer who worked at the National Institutes of Health, “a huge hurdle is lack of public awareness of what psychological science

actually is. The public still stereotypes psychology as all about mental illness and psychotherapy—not science.” And the fact that relatively few researchers show the public how scientific psychology contributes to everyday life “doubtless attracts fewer students to our field, and it hides our science behind a stereotype of mental health.” (Learn about some of Hilton’s work applying psychological science to policy in [“Making Noise That Can’t Be Missed”](#) in this issue of the *Observer*.)

Moreover, much of the world has little exposure to psychological science of any kind. In Hong Kong, for instance, “the demands of psychological services enhance, but the awareness and acceptance have not increased,” wrote Ching Sum Sin, a registered nurse who has a master’s degree in psychology. Better awareness and detection of mental health problems have led to rising demand for mental health services, but challenges remain in “removing the stigma associated with using psychological health services and promoting the allocation of resources to psychological science by the government and universities.”

And in India, developmental psychologist Aradhana Gambhir wrote, “it’s a taboo to consult a psychologist for psychological problems ... and by and large still a stigma to admit that one is suffering from depression. As a teacher, I emphasize the need to give importance to emotional problems and to reach out to professionals.”

[Return to Top](#)

Strengthening theory—and the road ahead

Applied matters and empirical procedures were not the only challenges APS members identified. Others stressed the need for greater understanding of the theoretical underpinnings of psychological science, along with continued efforts to build a science with solid theoretical foundations.

“My own opinion is that psychological science needs to refocus attention from defensive obsessing about minutiae of methodology and the replicability of tiny effect sizes to making important discoveries about human behavior and mental life—important in the sense of revealing interesting and nonobvious facts that can be understood in the context of rigorous theoretical frameworks,” wrote Andrew M. Colman, a cognitive psychologist at the University of Leicester. “And by rigorous theoretical frameworks I do not mean mere hypothesized relationships between variables but formal structures that provide explanation and real insight into psychological mechanisms or processes.”

Peter Prudon, a retired clinical psychologist in the Netherlands, wrote that “the multitude of micro and mini theories to justify empirical investigations, undertaken to comply to the pressure to publish at all, and empirically in particular, is undesirable. It should be compensated by a much stronger emphasis on theoretical analysis and integration, with more attention to human existence as a whole.”

Also, writing from Leiden University, [APS Janet Taylor Spence Award](#)ee Eiko Fried elaborated on the importance of strengthening theoretical knowledge and application. “Psychology is hyper-empirical. We are good at testing things, but not good at theorizing,” wrote the clinical psychological scientist. “There is no shame in that, and there is great value in establishing phenomena: robust features in the world that require explaining (i.e., explananda). But such explanations happen in the form of theories that explain

them (i.e., explanantia), and there are two grand theory challenges that psychological science must urgently address.

“First, we don’t have many great explanations in psychology,” Fried continued. “As Robert Cummins put it in 2000: ‘We are overwhelmed with things to explain, and somewhat underwhelmed by things to explain them with.’ Recent reforms in psychological science were focused on improving methodological and statistical practices to establish more replicable findings. That helps with the explananda part of psychology, but not at all with the explanantia part.”

Second, wrote Fried, “psychological theories are often weak theories, narrative descriptions that do not allow us to precisely deduce how data would look if the theory was true. This makes it difficult to decide in many psychological studies whether data actually support a theory or not. Often, we simply have to take the theorist’s word for it.”

To address both of these challenges, Fried advised “drawing on the rich disciplines of cognitive and mathematical psychology, and other areas outside of psychology, which feature strong theories: precise axioms or assumptions aiming to explain phenomena. Such theories can be represented via mathematical notation as formal theories, with several advantages. For one, the theory and all its auxiliary assumptions are now spelled out clearly and unambiguously. The theory, not its theorist, makes predictions via simulations. Further, formal theories are interdisciplinary, enabling collaborations.”

Getting back to fundamentals, educational psychologist A. Alexander Beaujean of Baylor University observed that “perhaps the biggest challenge is the lack of technical concepts. Concepts such as ‘executive functioning,’ ‘working memory,’ etc., are polysemous, so two psychologists employing the same terms often mean different things. As a scientific discipline, we will quickly reach a plateau in what we can learn without technical concepts that have shared meaning. At such a point, research will increasingly consist of busywork that has no importance outside of the lab in which it originates.”

APS members singled out numerous other tasks facing the field, from re-embracing the “lost art” of data modeling, to strengthening training in fields such as forensic psychology, to incorporating findings from neuroscience and technological advancements (e.g., developments in artificial intelligence), to more effectively addressing major societal problems involving poverty, racism, mental health, and social isolation.

Hodson expressed pessimism about the field’s willingness to grapple with the many challenges requiring redress. “But I have little doubt about our ability to do so, should we collectively decide to reshape how our science is done.”

APS looks forward to supporting conversations on these matters and more as we—representing the global community of psychological scientists—endeavor to advance science and contribute insights and solutions to society.

Feedback on this article? Comment below or send an email to apsobserver@psychologicalscience.org.