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Do Funny Article Titles Garner More Citations?

Thinking about spicing up your next empirical article with a catchy title? Results from two studies show how a humorous title might affect the impact of your paper.

The Science of Humor Is No Laughing Matter

Laugh it up! Humor is universal across human cultures — and fuels psychological research on everything from social perception to emotion regulation.

Presidential Column
Psychological Science in the European Union

In a guest column, APS Fellows Mark H. Johnson and Denis Mareschal from Birkbeck, University of London, United Kingdom, reflect on the progress that APS has made in achieving its longstanding goal of supporting psychological science worldwide.

Speaking of Science
Sharing a Shift in Emotion Science

While writing her latest book on emotion science, APS Past Board Member Lisa Feldman Barrett tapped dozens of lay readers to peruse her drafts and tell her when her prose was becoming too technical. Barrett shares this tip and other steps she took in crafting her tome, from concept to publication.
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Teaching Current Directions in Psychological Science
Featured articles: “Confront and Contest Your Stigma” and “To Make it Memorable, Bring it to Life”
Psychological Science in the European Union

In 2006, APS changed its name from “American Psychological Society” to the more outward-looking “Association for Psychological Science” to reflect the fact that the original name did not adequately represent our members outside of the United States and to strengthen the internationalization of the society. I asked APS Fellows Mark H. Johnson and Denis Mareschal, codirectors of the Centre for Brain and Cognitive Development, an international research center based at Birkbeck, University of London, United Kingdom (UK), who also have lived and worked in North America, to reflect upon the progress the association and the field have made toward this goal in the last decade.

-APS President Susan Goldin-Meadow

As in other branches of science, within psychology there has been a push for greater internationalization and for the formation of networks of expertise and joint projects that span countries and even continents. APS has followed this trend with its name change and has now established a series of interdisciplinary conferences held outside the United States (such as the recent International Convention of Psychological Science in Vienna, Austria). While many different factors drive efforts for the globalization of our field, until recently these had been supported by favorable political winds. Now that some of these winds have turned into a chilly backdraft, we reflect on perhaps the biggest coordinated funding effort to harmonize research and training across multiple countries — the European Union (EU) and its research programs — and highlight some of the benefits of and future challenges to this enterprise. We present the case that the Europeanization of psychology has had an accelerating effect on our science as a field and has significantly shifted the global “balance of power” toward younger generations.

Psychology as a science can trace its roots back fairly evenly to Europe on the one hand and to North America on the other (although undergraduates tend to get their own continent’s viewpoint in their history-of-the-field lectures). Casting time back several decades to when one of us (Johnson) was a recent PhD, promising graduate students from leading institutions in Europe were encouraged to get their postdoctoral “BTA” (Been-To-America) before returning to take up a faculty position at a good university. Sometimes this migration was enhanced by periods of financial austerity (e.g., the “Thatcher years” in the United Kingdom), when many talented individuals sought out better-resourced environments outside Europe.
In 1974, the European Commission (EC) established the European Science Foundation to harness untapped potential by running lab exchanges and advanced training courses. At this time, it was fair to say that the landscape of psychology in Europe consisted of isolated peaks of excellence interspersed with large barren plains in which the field was either generations behind or simply nonexistent. In 1984, the first of many 5-year “Frameworks for research funding” was established by the EU (we are currently in Framework 8, otherwise known as “Horizon 2020”). These framework programs were, until recently, primarily directed at using scientific collaborations as a means to promote greater integration across the EU, rather than to promote scientific research per se — that is, they were primarily driven by politics rather than by science. Finally, in 2007, the European Research Council was founded to support specific projects led by excellent individual scientists wherever they exist across the EU. These funds now extend even to attracting top scientists to move to Europe from elsewhere.

What has been the effect of these initiatives for psychology? Although quantitative data are hard to obtain, it is our experience that these initiatives have been transformative in several European countries, accelerating the development of our field to the extent that it can now compete with other “big science” projects for major national funding initiatives (e.g., a recent “gravitation” grant on individual development from the Dutch Science Foundation (NWO) — a substantive 10-year award more typically given to the physical and medical sciences) and for large-scale European networks (e.g., “EU-Aims,” funded in 2011 through the EU Innovative Medicines Initiative). But arguably, it is the investment in training young scientists that may have the biggest payoff in the long-term.

So far, so good — but on June 23rd last year, the UK voted for Brexit. The UK has been a net beneficiary of the EC funding schemes, coordinating 20% of the currently funded Horizon 2020 projects. The Brexit vote sent shock waves through UK academia, with leading universities now planning for significant cuts in funding. On average, UK universities get approximately 16% of their research funding and 15% of their staff from the EU, but these proportions are much higher in pockets of international research excellence. For example, in our own research center, approximately 40% of our funding and 33% of our staff and students are from the EU (excluding the UK). While the UK government has pledged an additional £2 billion in science funding by 2020 to compensate for the loss of EU funds, this is directed to UK-based scientists only. And this financial compensation cannot fix the devastation of morale amongst many of our PhD students and postdocs, and the loss of the goodwill of our European colleagues.

Recent developments have shown that the political desire for prioritizing the national interest is not unique to the UK, and in these times scientists need to have their voices heard. For this reason, vocal and organized international societies such as APS are now more important than ever. After all, the future of our science is too important to be left to the politicians.
Remembering Irving I. Gottesman, a Pioneer in Behavior Genetics

The idea that individual characteristics and disorders arise from complex interactions between genes and environment is so widely accepted today that it’s practically common knowledge — which makes it all the more remarkable that Irving I. Gottesman championed this idea more than 50 years ago. A special section in the March issue of Clinical Psychological Science pays homage to Gottesman, who passed away June 29, 2016, and highlights his many contributions to psychological science, both as a scientist and as a mentor.

Long before data from national longitudinal studies became available, Gottesman applied scrupulous methodology to his own study of personality in twins, reporting the results in his doctoral dissertation in 1963. Building the foundation for a long and productive career, Gottesman’s dissertation “set a standard for methodological rigor, careful analysis, and sophisticated interpretation,” Michael F. Pogue-Geile (University of Pittsburgh) and APS James McKeeen Cattell Fellow Scott O. Lilienfeld (Emory University) write in their introduction to the special section. Not only that, the work represented “an extremely bold move for a young psychologist at a time in the 1950s and 1960s when the study of genetic influences on human behavior was viewed by most as anathema.”

Just a few years later, Gottesman embarked on a groundbreaking program of research with collaborator James Shields that produced the now-landmark Maudsley twin study of schizophrenia. Just as with Gottesman’s previous work, the study was methodologically and conceptually rigorous, but it was by no means conservative. In contrast to the prevailing thinking among clinicians at that time, the researchers provided evidence for the genetic roots of schizophrenia, challenging the idea that the disorder resulted from “schizophrenogenic” mothering or other problems in the family environment.

Over the course of their collaboration, Gottesman and Shields integrated the separate worlds of biological and behavioral research, applying the concepts of polygenic risk and endophenotypes to the scientific understanding of behavior. Based on their analyses of twin and family data, the researchers proposed that schizophrenia emerges when many small genetic influences combine to exceed a particular threshold.

This multifactorial threshold model of schizophrenia was astoundingly forward-thinking, challenging accepted wisdom about how genes lead to pathological outcomes:

“Published at a time when most genetic researchers believed in a single major locus model of schizophrenia, this polygenic model remained very much a minority view until relatively recently, when it has been resoundingly affirmed by large-scale genome-wide association studies that have revealed hundreds to thousands of common genetic variants, each providing only a very small increase in risk,” Pogue-Geile and Lilienfeld note.

In 2013, Gottesman received the APS James McKeen Cattell Fellow Award, honoring a lifetime of achievements in applied psychological research. That same year, he also received the Grawemeyer Award for Psychology, which specifically recognized his role in applying the multifactorial threshold model to schizophrenia.

Commenting on a news item about the Grawemeyer award on the APS website, Gottesman noted that the credit was to be shared with his longtime collaborator Shields, who had died in 1978.

“My Grawemeyer Award has its roots in the research I have conducted with my late close friend James Shields going back to 1962 when we began our twin study of schizophrenia at the MRC Psychiatric Genetics Unit in London under Eliot Slater,” he wrote. “Now, at age 82, I can counsel ‘patience’ to my younger and deserving peers.”

The special section honoring Gottesman includes remembrances and contributions from his former mentees and colleagues, including: APS Fellow Lisabeth F. DiLalla (Southern Illinois University School of Medicine) and David DiLalla (Southern Illinois University), APS Fellow Keith H. Nuechterlein (University of California, Los Angeles), Carol A. Prescott (University of Southern California), Irwin Waldman (Emory University), APS Fellow Thomas J. Bouchard, Jr., (University of Minnesota), Peter McGuffin (King’s College London, United Kingdom), and APS Fellow Eric N. Turkheimer (University of Virginia). Unanimously, the contributors remember Gottesman as not only a giant in the field of behavior genetics, but also as a constructive critic, supportive mentor, and vocal advocate for ethics in the use of genetic information.

Scott O. Lilienfeld will speak at the 2017 APS Annual Convention, May 25–28, in Boston, Massachusetts.
Multilab Replication Project Examines Cooperation Under Time Pressure

In 2012, a trio of psychological scientists reported research showing that people who made quick decisions under time pressure were more likely to cooperate than were people who were required to take longer in their deliberations. A new multilaboratory effort was partially successful in replicating those results.

In the original study, participants who did not follow the instructions to respond quickly (or slowly) were excluded from the data analyses. In the replication project, approximately 65% of participants failed to adhere to the time pressure constraints, and the results depended on whether or not such noncompliant participants were included in the analysis. When noncompliant participants were excluded, as in the original study, the pattern replicated the original results: People responding under time pressure cooperated at a higher rate than did those who had to delay their responses. However, when those noncompliant participants were included in the analysis, time pressure had little or no effect on cooperation. The findings raise questions about the best approach to measuring the relationship between time pressure and cooperation.

The results are published as part of a Registered Replication Report (RRR) in Perspectives on Psychological Science. The RRR, proposed by psychological scientists Samantha Bouwmeester and Peter P. J. L. Verkoeijen of Erasmus University Rotterdam, the Netherlands, aimed to replicate a study conducted in 2012 by David G. Rand (Yale University), Joshua D. Greene (Harvard University), and Martin A. Nowak (Harvard University).

The original study tested one prediction of the social heuristic hypothesis, which holds that when people make cooperative decisions intuitively, they default to the behavior that is typically optimal in their daily lives. Because cooperation usually pays off in the long run for most study participants, this means that their automatic responses should favor prosocial behavior. Given time to make a more deliberative decision, though, decision makers tend to give more selfish responses.

In the original study, Rand and colleagues manipulated the amount of time participants had to decide how much money they would contribute to a communal pot. Participants randomly assigned to the “intuition” group were told to make their decision about how much to allocate in less than 10 seconds, whereas participants in the “deliberation” group were told to wait 10 seconds before deciding.

Many of the participants in the intuition group in the original study did not respond quickly enough, and the researchers chose to exclude data from noncompliant participants in their analyses. Among compliant participants, those who were told to decide quickly contributed more money to the communal pot than did those who were told to wait.

Some follow-up studies replicated the original study’s result, while others did not. With this in mind, Bouwmeester and Verkoeijen proposed a preregistered replication of the original 2012 study. The replication’s primary analysis examined data from all participants, compliant and noncompliant, because of concerns that excluding data from noncompliant participants undermines random assignment. More participants tend to be excluded from the time pressure condition, and those excluded participants may differ in systematic ways from the ones who adhered to the time constraints. For example, it’s possible that fast participants are also more likely to cooperate — if this is true, excluding participants who respond too slowly would lead to a time pressure group with a disproportionate number of the more cooperative, “fast” participants.

The researchers developed the RRR protocol with input and guidance from Rand, first author on the original study. A total of 21 labs from 12 countries participated in the RRR, testing a sample of 3,596 participants. All labs used the same experimental materials and scripts (translated when necessary) and preregistered their implementation of the protocol. A meta-analysis combining data from all participating labs showed no effect of time pressure on cooperation when all participants were included in the analyses.

When only compliant participants were included, however, the results indicated that participants under time pressure cooperated more than those who delayed their response did, in line with the original study.

“The most straightforward interpretation of the pattern of results is that the difference in the compliant-only analysis resulted from selection biases and that the RRR does not provide evidence for an effect of speeded versus delayed responses on cooperation,” the RRR authors conclude.

In a commentary accompanying the RRR report, Rand thanks the replicators for their time and effort, noting that he was glad to see that the RRR results with compliant participants echoed those reported in the original 2012 study.

He also acknowledges that “the lack of effect when including noncompliant participants in the RRR does raise important questions about the existence of a causal effect of time pressure on cooperation,” because the RRR results are ambiguous: They are consistent with both a true causal effect and with selection bias. Rand provides additional analyses to support the argument that the positive effect when excluding noncompliant participants reflects a real effect of time pressure and not just selection bias.

“I hope the results of this RRR, and the questions that they raise, will inspire future work to more fully illuminate the impact of time pressure — and intuition more broadly — on human cooperative behavior,” Rand concludes.
Eyewitness Confidence Can Predict Accuracy of Identifications, Researchers Find

Many individuals have been falsely accused of a crime based, at least in part, on confident eyewitness identifications, a fact that has bred distrust of eyewitness confidence in the US legal system. But a new report challenges the perception that eyewitness memory is inherently fallible, finding that eyewitness confidence can reliably indicate the accuracy of an identification made under certain “pristine” conditions.

APS Fellow John T. Wixted (University of California, San Diego) and APS James McKeen Cattell Fellow Gary L. Wells (Iowa State University), leading researchers in the field of eyewitness memory, joined forces in authoring the report, taking an in-depth look at the available science on eyewitness identifications. Based on their comprehensive analysis, Wixted and Wells conclude that recent advancements in identification procedures warrant reconsideration of the role that eyewitness confidence can play in the legal system.

“The purpose of our article is to explain why a blanket disregard for eyewitness confidence is not only at odds with what has been learned in recent years but can also contribute to both the wrongful conviction of innocent suspects and the unwarranted removal from suspicion of a guilty suspect,” the researchers write.

The report is accompanied by commentaries from several notable experts, including Senior Circuit Judge Andre M. Davis of the United States Court of Appeals for the Fourth Circuit and renowned memory researcher and APS Past President Elizabeth F. Loftus of the University of California, Irvine. The report and commentaries are to be published together in Psychological Science in the Public Interest (PSPI).

The one factor that matters most in interpreting an eyewitness statement of confidence is timing, Wixted and Wells find. Confidence is only informative at the time that eyewitnesses first make their identification, before they are exposed to various influences that can compromise memory. This is often where courts have erred, the PSPI authors note, in allowing witnesses to make confidence statements “at pretrial hearings or at trial, well after the witness might have undergone serious confidence inflation from repeated identifications, coaching, confirmatory feedback, and so on.”

In addition to timing, accumulated evidence suggests several other procedures that can enhance the reliability of eyewitness identifications. Wixted and Wells provide five recommendations for ensuring these “pristine conditions,” such as including only one suspect in a lineup and ensuring that the person administering the lineup does not know who the suspect is.

Data suggest that when these pristine conditions are followed, a high-confidence identification implies a high-accuracy identification. When eyewitnesses express low confidence in their identifications, however, the conditions do not matter — low confidence always signifies a high risk of error.

“Instead of being ignored, an initial expression of low confidence should take center stage — overshadowing all other considerations — when a jury’s goal is to evaluate the reliability of a suspect ID,” Wixted and Wells explain.

Jurisdictions in the United States are increasingly adopting these kinds of evidence-based eyewitness identification procedures. In fact, the US Department of Justice drew on the PSPI report in drafting its recently released evidence-based guidelines for law enforcement officers to follow when collecting eyewitness identification information.

Yet improvements remain needed. In their commentary, Loftus and coauthor Rachel Greenspan (University of California, Irvine) report findings showing that some of the pristine conditions are commonly used by US law enforcement agencies, while others are not. This reality raises the question of what conclusions can be drawn in the many instances when conditions are not pristine.

To this point, commentary authors Laura B. Mickes (Royal Holloway, University of London, United Kingdom), APS Fellow Steven E. Clark (University of California, Riverside), and APS Fellow Scott D. Gronlund (University of Oklahoma) present evidence from Wixted and Wells’s analyses showing that confidence can indicate accuracy even when the identification conditions are not pristine — thus, for a jury assessing the accuracy of an identification, knowing how confident the eyewitness was may be more useful than knowing whether she made the identification under pristine conditions.

With these issues in mind, Loftus and Greenspan note that “it is important to emphasize that Wixted and Wells have called to our attention important new findings, significant reanalyses of earlier findings, and provoked a hugely important societal conversation.”

As Judge Davis concludes, “One can be hopeful that this latest contribution to the ever growing literature will further the ultimate goal of our criminal justice system: to assure, as much as humanly possible, the exoneration of the innocent, while achieving, fairly and transparently, the conviction of the guilty.”

Gary L. Wells will speak at the 2017 APS Annual Convention, May 25–28, in Boston, Massachusetts.
SEP Gives Lifetime Achievement Awards to F. Gregory Ashby, Mary ‘Molly’ Potter

The Society for Experimental Psychologists (SEP) has given honors to seven APS Fellows, including two who are recipients of lifetime achievement awards.

APS Fellow F. Gregory Ashby has been awarded the 2017 Howard Crosby Warren Medal, which SEP gives annually in recognition of outstanding achievement in experimental psychology in the United States and Canada. APS Fellow Mary “Molly” Potter has received the 2017 Norman Anderson Lifetime Achievement Award in recognition of her groundbreaking discoveries about the human mind’s ability to rapidly extract meaning from words, images, and visual scenes.

In addition, APS Fellow Jeffrey D. Karpicke has received SEP’s Early Investigator Award, and APS Past President Susan T. Fiske, as well as APS Fellows John E. Hummel, Andrew N. Melzoff, and Jeffrey N. Rouder, are among the 2017 SEP Fellows. The award recipients were recognized at SEP’s 2017 conference, March 3–4, at Vanderbilt University.

Ashby, a professor in the Department of Psychology at the University of California, Santa Barbara, is credited with bridging mathematical and cognitive psychology through his early work on stochastic models of elementary psychological processes. His work on general recognition theory in the 1980s and 1990s provided a framework for studying the complex cognition required for categorizing multidimensional spaces and tasks. This research has helped illuminate how people classify objects in their environment.

As part of a new research program called dynamical neuroscience, Ashby is integrating psychological science with molecular and cellular biology, genetics, computer science, artificial intelligence, nonlinear systems, statistical processes, and physics.

Potter, a professor in the Department of Brain and Cognitive Sciences at the Massachusetts Institute of Technology for nearly 50 years, has garnered international acclaim from the scientific community for her research on the very rapid processes involved in perceiving, comprehending, and remembering what we’ve seen or heard. Her research has demonstrated that people discern the meaning of a picture or a word within a fraction of a second — much faster than the 1 to 2 seconds required for forming a brief memory of the stimulus. Potter developed the pioneering rapid serial visual representation paradigm, which allows researchers to examine the earliest levels of visual information processing.

Potter’s research also includes seminal contributions to attention and language comprehension, including the discovery of repetition blindness and the theory of attentional blink. In 2016, she lent her extensive expertise as a coauthor on a comprehensive Psychological Science in the Public Interest report on the shaky science of speed reading.

Karpicke, the James V. Bradley Associate Professor at Purdue University, studies human learning and memory, cognitive science and education, learning and cognitive strategies in children, and educational technology. In a 2012 review published in Current Directions in Psychological Science, Karpicke emphasized the importance of retrieval-based learning, an approach that holds that retrieval of information not only enforces it through repetition but also helps develop long-term knowledge.

In 2014, Karpicke received the Presidential Early Career Award for Scientists and Engineers, the highest honor bestowed on early-career researchers in science and engineering. He is also a 2011 APS Rising Star.

Fiske (Princeton University) is best known for her work investigating how stereotyping, prejudice, and discrimination are encouraged or discouraged by social relationships. (See more about Fiske on page 12.) Employing methods ranging from neuroimaging to representative sample surveys, she has devoted her career to investigating how stereotyping, prejudice, and discrimination are encouraged or discouraged by social relationships. She is an APS William James Fellow and will receive the 2017 APS James McKeen Cattell Fellow Award on May 26 at the APS Annual Convention in Boston, Massachusetts.

Hummel, a professor of psychology and philosophy at the University of Illinois at Urbana-Champaign, investigates the representation and processing of relations in perception and cognition. He employs both behavioral experiments and computational modeling to investigate perception of spatial relations, shape perception, relational reasoning, the acquisition of relational concepts, and belief revision.

Melzoff, and internationally renowned expert on infant and child development, holds the Job and Gertrud Tamaki Endowed Chair and is the Co-Director of the University of Washington Institute for Learning & Brain Sciences. Melzoff has used novel
Psychological Science Informs American Academy of Arts and Sciences Recommendations on Language Learning

The American Academy of Arts and Sciences has released a new report on language education in the United States, with a psychological research perspective informing the findings and recommendations.

The report, produced by the Commission on Language Learning convened by the Academy, marks the first national study of language learning in 30 years and came at the request of a bipartisan group of US senators and representatives interested in how language learning influences economic growth, cultural diplomacy, and the productivity of future generations. The 18-member commission included a variety of language experts, including APS Fellow Philip Rubin.

Noting that the vast majority of Americans are monolingual, the Commission concludes that the nation needs to significantly increase access to language learning to remain competitive in today’s global economy.

“While English continues to be the most commonly used language for world trade and diplomacy, there is an emerging consensus among leaders in business and government, teachers, and scientists that proficiency in English is not sufficient to meet the nation’s needs in a shrinking world,” American Academy President Jonathan Fanton said. “And parents are beginning to understand that there are real benefits to teaching their children a second or third language in addition to English: cognitive benefits, important habits of mind, and new and valuable perspectives on the world.”

Rubin is Chief Executive Officer Emeritus and former Senior Scientist at the Connecticut-based Haskins Laboratories, a nonprofit research institute focused on the science of speech, language, and reading. He now serves as Senior Advisor to the President of Haskins, which is affiliated with Yale University and the University of Connecticut.

Rubin said he helped the Commission devote serious attention to a number of key issues, including:

• the cognitive impact of bilingualism and multilingualism on learning and education;
• the impact of human-systems interaction, including the current use and future potential of emerging technologies; and
• the importance of research in such areas as cognitive science, linguistics, education, language acquisition, speech and gestural perception; and computer science in shaping language education.

The Commission reports that the 65 million US residents who speak a language other than English at home represent only 20.7% of the total population, and only a fraction of this cohort is considered proficient in reading, writing, and speaking a second language. The group recommends a national strategy to improve access to as many languages as possible for people of every region, ethnicity, and socioeconomic background, with goals of valuing language education as a persistent national need similar to education in math or English and of ensuring that proficiency in a second language is within every student’s reach.

The Commission’s report, “America’s Languages: Investing in Language Education for the 21st Century,” contains specific recommendations centered on five goals that aim to:

• increase the number of language teachers at all levels of education so that every child in every state has the opportunity to learn a language in addition to English;
• supplement language instruction across the education system through public-private partnerships among schools, government, philanthropies, business, and local community members;
• support heritage languages already spoken in the United States and help these languages persist from one generation to the next;
• provide targeted support and programming for Native American languages as defined in the Native American Languages Act; and
• promote opportunities for students to learn languages in other countries by experiencing other cultures and immersing themselves in multilingual environments.

The report is available for free at http://www.amacad.org/language.
DeRubeis, Fiske, Wells Honored With Cattell Fellow Awards

APS is honoring leading researchers in the areas of stereotypes, eyewitness identification, and treatment of depression with the 2017 James McKeen Cattell Fellow Awards. Robert J. DeRubeis, APS Past President Susan T. Fiske, and Gary L. Wells each will be presented with APS James McKeen Cattell Fellow Awards — which recognize a lifetime of outstanding contributions to the area of applied psychological science — at the 2017 APS Annual Convention in Boston. Each recipient also will give an award address at the convention.

DeRubeis, an APS Fellow and the Samuel H. Preston Term Professor in the Social Sciences at the University of Pennsylvania, is internationally renowned for both his research and his theoretical approach to psychotherapy and its causal mechanisms for treatment outcomes. His area of study, primarily examining depression and the effective treatments for it, is designed to focus on the individual patient as opposed to the broad, overarching category and style of treatment for the disorder. As a graduate student, DeRubeis made the groundbreaking finding that cognitive behavioral therapy is as efficacious as antidepressant medication, but that unlike antidepressants, cognitive behavioral therapy protects against relapse. Since then, he has produced a lifetime of compelling research on treating depression and the contextual factors for each patient. Utilizing varied demographic information including personality factors, genetics, and patients’ neuropsychological states, his lab is currently working on a model to determine the best treatment for depressed patients. DeRubeis’s award address is titled “Moderation in All Things: A Call to Focus on Individual Differences in Mental Health Treatment Research.”

Fiske, the Eugene Higgins Professor of Psychology and a professor of public affairs at Princeton University, has written more than 350 articles and book chapters. Her multiple books include several editions of Social Cognition. She is considered a leading expert on stereotypes, prejudice, and discrimination. Her research had a real-world impact on a 1989 US Supreme Court case, Price Waterhouse versus Hopkins, in which Fiske substantiated the presence of gender discrimination based on submitted comments evaluating Hopkins; Hopkins later won the landmark case. She also has testified before President Clinton’s Race Initiative Advisory Board and in many discrimination cases in workplaces ranging from shipyard and assembly-line settings to international investment firms. Currently, her research is examining emotional prejudices (e.g., pity, contempt, envy, pride) at the cultural, interpersonal, and neural levels. Fiske’s award address is titled “Ambivalent Stereotypes Support Inequality and Conflict — or Peace.”

Coauthor of a recent report in Psychological Science in the Public Interest that is already spurring changes in the US and UK criminal justice systems, Wells is a leading expert on eyewitness testimony and an APS Fellow. His seminal research introduced the concept of a double-blind lineup in eyewitness identification — that is, one in which the administrator does not know who the suspect is and so could not inadvertently influence the witness. In 1998, Wells was asked by the US Attorney General to join a US Department of Justice task force that went on to write the new, informative training manuals and guides for law enforcement officials on how to collect eyewitness testimony. Wells is a Distinguished Professor and the Wendy and Mark Stavish Chair in Social Sciences at Iowa State University. Over the course of his career, he has written more than 200 articles and book chapters, as well as two books. Wells has appeared on CNN, Oprah, NBC World News Tonight, and 60 Minutes, and his research has been discussed in publications such as The Atlantic, The New Yorker, The New York Times, Chicago Tribune, Time, and more. His award address is titled “Understanding and Controlling Mistaken Eyewitness Identification: Contributions of Psychological Science.”
Sharing a Shift in Emotion Science

In her new book, How Emotions Are Made: The Secret Life of the Brain, APS Past Board Member Lisa Feldman Barrett talks about what she sees as a paradigm shift in the science of emotion. As part of this recurring series on communicating science to lay audiences, Barrett discusses the development of the book from concept to publication, and how she hopes it will change the public’s understanding of emotion.

Observer (OBS): Why did you decide to write this book?
Lisa Feldman Barrett (LFB): About 7 to 8 years ago, I began speaking with the press more frequently to help educate the public about the benefits of psychological science. It’s also important for people to understand how research money is spent — what they’re getting for their tax dollars. Every journalist would ask me, “Why does it matter if our understanding of emotion is incorrect? What are the implications for the average person?” To be honest, I found these questions annoying at first. I wondered why psychology and neuroscience can’t be interesting for their own sakes. I mean, nobody asks a physicist to explain how the Higgs boson will immediately improve people's lives. I felt the science of the mind was held to a different standard, and it was frustrating.

But then in 2013, a journalist from Boston Magazine, Shannon Fischer, interviewed me extensively for a feature article. In speaking with her, I realized that classical views of emotion are guiding policies and practices that actively harm people. I’m talking about medical research that assumes fear has a biological essence, a legal system that assumes cognition and emotion are separate systems in the brain doing battle with one another, and airport security training that wasted $900 million of taxpayer money. Not to mention the billions of dollars that companies such as Google and Facebook are pouring into emotion-reading gadgets based on flawed assumptions.

The issue that put a fire in my belly, though, was the impact on families who have children with autism. I imagined being a parent of such a child, which is devastatingly difficult because the child's struggles directly impact the child–parent relationship. The things I cherish most about my own daughter’s young childhood can be lost to these parents. Then I imagined someone telling me that my child could improve her social relationships if she simply learned to recognize six basic facial expressions. I imagined her struggling to learn them, and succeeding in the lab, as the research shows these children do. But the research also shows that this learning doesn’t translate into better social functioning in the real world. That loss of hope would be devastating, but it would be even worse to find out that scientists have had evidence for a long time that should have made them question whether the whole approach would work in the first place! Scowls in anger, pouts in sadness, widened eyes in fear, and so on, are stereotypes that were stipulated by scientists, not discovered by them. Learning to recognize a scowl as anger does not prepare you for the diverse facial movements that people make when angry. (When is the last time an actor won an Academy Award for scowling when angry?) My empathy for these families was a key factor that drove me to write the book.

Around the same time, my daughter, Sophia, emerged into adolescence and faced the traditional struggles that adolescents do. I wanted to write a book that she could read to understand what she was feeling and why. I figured that other parents and teens could also use the book to negotiate the same difficulties we were facing.

OBS: What was the biggest challenge you faced in writing this book?
LFB: Classical views of emotion assume that emotions have essences. Essentialism is straightforward and easy to understand. But the real world is complicated. It’s simple to draw a picture of a brain with an arrow pointing to a brightly colored blob in the amygdala and say, “Fear lives right here.” Simple — but wrong.

To move beyond these essentialist notions, I had to explain — in language for the average young adult — that instances of emotion are made, on the fly, within the interacting networks of a brain housed in a body full of interacting systems, in an environment largely created by that brain, and also populated by other brains in bodies. I had to introduce new ideas like predictive coding, emergence, complex systems, degeneracy,
and ad hoc concepts without making people's heads explode. I'm very happy with how it all turned out, but the simplification process was challenging.

Fortunately, I had the benefit of more than 40 test readers, many of whom are not academics, to keep me from getting too cerebral. My husband Dan, in particular, is an experienced writer and editor and was my first and most important reader. He spared no opportunity for constructive criticism, shall we say. Actually, some days we were so at odds over wording that we resorted to handheld signs, one that said "Science" and the other "Readability," as tools to halt arguments. Other key editing insights came from my two editors at Houghton-Mifflin-Harcourt (Courtney Young and Alex Littlefield) and James Ryerson at The New York Times.

**OBS: Emotion science appears to be going through a paradigm shift.** What are the most important takeaways from your book that you would point to?

**LFB:** Takeaway 1: Population thinking, straight out of Darwin's *On the Origin of Species*, also applies to emotion. A species is not a collection of individuals who share an essence, but a category full of variety with no essence at its core. Variation is signal, not error. It allows a species to thrive in varied environments. The same applies to emotion categories. There is no universal "fingerprint" in the face, body, or brain for fear, happiness, or any other emotion category. Each one is a diverse population of varied, situated instances.

Takeaway 2: There is no brain area "for" emotion — the emotions we experience emerge from core brain systems. Emotions aren't made in dedicated neurons that reside in discrete brain regions, networks, or sprawling patterns. They are constructed through the interaction of domain-general networks — the same networks that implement thoughts, perceptions, and other mental phenomena.

Takeaway 3: Classical views of emotion are portrayed as "the" evolutionary view of how emotions came to be, but they actually represent just one evolutionary hypothesis. The ideas have their roots in Darwin's thinking about emotion, which, ironically, didn't include population thinking or natural selection! Ernst Mayr, the evolutionary biologist, considered these to be among the most revolutionary ideas in Darwin's *On the Origin of Species*. My theory of constructed emotion is an evolutionary view of emotion that incorporates them. Newer evidence from evolutionary biology shows that natural selection almost never results in systems of independent functional modules, whether in the brain or elsewhere. Instead, variation is the norm. A modern concept like degeneracy (multiple paths to the same outcome), which is a prerequisite for and consequence of natural selection, makes for a much more realistic theory of emotion.

Takeaway 4: **Context** is important. Science is not about finding universal laws, which tend to lose their universality in the face of new discoveries (think Newtonian physics vs. relativity theory or quantum mechanics). It's time for psychological science to take this insight seriously. Psychological science, and science in general, discovers the conditions under which an effect is likely (or doubtful). Einstein didn't replace Newton's laws; he just discovered their boundary conditions. The so-called replication crisis in psychology, in my view, is actually a philosophical misunderstanding of what science is and how it works. When an experiment doesn't replicate, it doesn't necessarily imply that the original discovery is false. It might mean that some psychologically potent but as-yet unappreciated bit of context was different across experiments. It's an opportunity for discovery. That is the definition of scientific progress.

**OBS: What are your hopes or expectations about how the book will change our understanding of emotion science?**

**LFB:** There is a paradigm shift going on in certain branches of psychology and neuroscience. We're moving away from essentialism, which asks where in the brain psychological phenomena are located, and toward a constructivist approach, which asks how a brain creates thoughts, feelings, perceptions, and actions. Other sciences have had similar paradigm shifts away from essentialism: Darwin's discovery of population thinking is a prime example. So is Einstein's theory of relativity, and quantum mechanics. Some areas of psychology, such as memory, vision, and action, seem to be ahead of the game. The science of emotion has lagged behind, but now it is rapidly catching up.

"A disease is usually thought of as some sort of disorder having some symptoms and causing some debilitating outcomes on a body — in this case, the body of knowledge. Reflecting on how science is done, I noticed that the outcome — what is being published — is oftentimes disease-riddled. … My conclusion is that the (a) collective practice of how science is done, (b) the conditions under which it is done, and (c) what incentives are given to researchers by journals, research sponsors, or universities, appear to be largely responsible for creating the breeding ground for these diseases." —APS Fellow John Antonakis, new editor of The Leadership Quarterly, in interview for Retraction Watch.
I hope that the theory of constructed emotion outlined in my book will encourage a different approach to the science of emotion. A robust, replicable science requires that we understand emotions in all their variability, not just the stereotypes of a couple of emotion categories that come from a highly selective reading of Darwin. We must study emotion in context, high-dimensionally (measuring many systems simultaneously), and dynamically (e.g., changes over time using Big Data approaches to understand an individual mind). We’ve wasted a lot of precious time and funding in the pursuit of static “emotion fingerprints.” Right now, other disciplines offer us the methods and analytics to bridge lab and world, and to modernize the study of emotion.

I also have a secret wish that the theory of constructed emotion will inspire us, as educators, to reflect on and revise how we train our students to do science. They need different mathematical and experimental skills, not to mention a different philosophy that treats essentialism as a topic of study, not as a set of assumptions to guide scientific inquiry. All that stands between us and this bold new approach is the will to challenge our own familiar, comfortable ways of doing things.

OBS: How do we know when we’re channeling unconscious cultural biases? And how do we rise above them?

LFB: A human brain runs an internal model of the world, using past experiences as predictions. These predictions guide our actions and determine our perceptions and experiences. Everything we see and hear and do is rooted in memory. The wiring of the brain guarantees it. So, to some extent, we always channel unconscious cultural biases.

How to rise above these biases? In the moment, make an effort not to presume that your perceptions reveal reality. (Avoid naïve realism.) Be curious about what other people are thinking or feeling. Even if you are supremely confident in your own perceptions, try and remember that confidence is just a feeling. It’s not evidence of mental X-ray vision.

As my book points out, your responsibility to avoid cultural bias extends beyond the present moment. Your mind is a computational moment that is conjured in a predicting brain. It’s effortful for a brain to try and correct predictions once they’ve been launched, but you can proactively shape your brain’s future internal model (i.e., its future predictions) by cultivating certain experiences and avoiding others. For example, if you grow up surrounded by racism, it’s helpful to seek out and curate experiences to seed more egalitarian predictions, which, in turn, automatically shape your behavior.

The motivation to rise above your cultural biases isn’t some touchy-feely liberal bull. Regardless of your world view, it’s pragmatic. We are a social species, and we have flourished as a species because we live in social groups. This means we are constantly negotiating the dilemma of getting along versus getting ahead. Cultural biases are barriers to both. You’ll be more successful at whatever you do if your brain can flexibly shift its internal model according to the context. Communicating across a cultural boundary, whether it is the border between two countries or the threshold between the street and a mosque or synagogue, requires a brain that can predict in sync with others. Ridding yourself of cultural biases helps you get ahead. Persuasion is the art of translating your beliefs and goals into terms that others care about and ultimately make their own. Dissolving biases also helps you get along; this is so obvious it needs no explanation.

Reducing cultural biases is just one way for you to be the architect of your experience. Even though your brain makes your mind, you’re not consciously controlling every thought, feeling, and action, and they can catch you off-guard in the moment. You can’t just snap your fingers to have a different life. But you can take steps now to influence your future, to sculpt who you will be tomorrow.
Governments and international organizations around the globe are becoming increasingly interested in the happiness of citizens. They’re not just aiming to eradicate the misery associated with depression and other mental illnesses, but also to promote emotional well-being. Psychological scientists should know about these rapidly moving developments, and should even get involved in these initiatives. At the levels of both organizations and governments, we are seeing leaders wanting to be actively involved in furthering subjective well-being, healthy relationships, meaning and purpose in life, and other forms of positivity that go beyond merely the reduction of suffering. This rising trend might be due to postmaterialistic values in the economic world, to the growing science of well-being and happiness, or to both.

We met in February with the Minister of State for Happiness for the United Arab Emirates (UAE), Her Excellency Ohood Al Roumi. Yes, she is the minister of well-being for the country and is carrying out programs to enhance the emotional lives of people in the UAE. For example, she instituted 100 days of positivity in the schools, during which time children learned about and practiced positive interactions with others. The minister can have considerable influence in the UAE because she works closely with the prime minister.

Our meeting with the minister took place in Dubai at the World Government Summit, at which about 130 nations were represented. The first day of the summit was devoted to presentations about happiness and emotional well-being, with economists, psychological scientists, and policy-makers from many nations weighing in. One of us (Ed Diener) presented data showing that emotional well-being is beneficial for health, longevity, effective functioning, and resilience. APS William James Cattell Fellow Mihaly Csikszentmihalyi discussed his seminal research on “flow,” the term he created to describe the gratifying experience of being completely immersed in an activity for its own sake. And APS William James and James McKeen Cattell Fellow Martin E. P. Seligman gave a talk on positive psychology in which he said that we could be at a turning point in human history. Seligman remarked that as more and more people’s security and basic needs are met, we can now focus on fulfilling, rewarding lives and orient ourselves more toward positive growth rather than simply avoiding terrible things, as was true in the past.

Both of us also met with the Minister of Good Living from Ecuador, Freddy Ehlers, who occupies a post similar to that of the UAE’s Minister of Happiness. The prime minister of Bhutan was at the summit, as were leaders from many other nations.

Despite their rich body of research on factors that influence emotional well-being, psychological scientists have little input into a number of government initiatives to foster happiness, say Ed and Carol Diener.
in passing legislation that provided $1 billion additional dollars of funding for mental health services for underserved populations. He and his colleague, APS Fellow David M. Clark from Oxford University, United Kingdom, authored a book called *Thrive: The Power of Evidence-Based Psychological Therapies*. In this work, they presented data based on well-being surveys showing that mental illness produces more misery than any other disease, and yet its treatment is grossly underfunded compared with other sicknesses.

One month earlier, Ed Diener attended a meeting on emotional well-being at US Surgeon General Vivek H. Murthy’s office in Washington, DC. For his final 2 years in office, Murthy is creating an initiative to further emotional well-being among the American people. His office is currently collecting and considering ideas to attain that goal — such as including mindfulness training in the schools. APS Fellow Todd B. Kashdan also presented ideas about well-being from a psychological perspective during the meeting. Attendees from the Department of Veterans Affairs called for programs that would help the emotional well-being of military veterans. Many other constituencies were represented as well, including popular author and psychological scientist Jon Kabat-Zinn and APS William James Fellow Richard J. Davidson. The meeting had the feeling of a brainstorming session, with specific concrete initiatives to be planned in the future.

The United Nations accepted a resolution that says that happiness should be one goal of governments, and the Organisation for Economic Co-operation and Development has been involved in evaluating measures of well-being to be used for public-policy purposes. There is increasing interest in creating national accounts of well-being, which the UK has now taken part in by instituting a short survey of well-being of citizens, measuring constructs such as life satisfaction, positive feelings, negative feelings, and meaning and purpose in life.

Al Roumi is planning another global happiness meeting next year at the World Government Summit, which would include government officials who have initiatives or interests in emotional well-being and happiness. At this meeting, there will be discussion on what nations are doing — and what they can do — to enhance the well-being and happiness of citizens.

Programs to enhance well-being and national accounts of well-being are no longer just a hope for the future, although one thing that concerns us is the relative absence of psychological scientists in most of these endeavors. Psychological researchers should have the most expertise on the topic of emotional well-being, and yet they have had little input in a number of current initiatives. We encourage more psychological scientists to become actively involved; this movement appears to be a real opportunity for our field to have an influence on national policies that affect all citizens.

These government movements seem to be gathering momentum quickly, but we worry they are not always being guided in scientifically sound directions. Many programs purported to raise well-being lack adequate evidence of efficacy. Conversely, psychological scientists have amassed a great deal of data on the various influences on well-being, and can inform programs that are likely to increase it. Thus, our hope is that scientific psychologists get more involved in the government efforts to guide policy-makers in sound directions.
Reducing the stigma associated with mental illness can be every bit as challenging as the basic research, but Stephen P. Hinshaw’s trajectory has been to tackle both.

Understanding normative patterns of development should facilitate knowledge about psychopathology, and understanding atypical development should enhance the study of normal development. Right? That’s the core idea behind developmental psychopathology, as APS James McKeen Cattell Fellow Stephen P. Hinshaw of the University of California, Berkeley, explained in his Award Address delivered at the 2016 APS Annual Convention in Chicago. He has dedicated his career to researching the underlying mechanisms that lead to conditions such as attention-deficit/hyperactivity disorder (ADHD) and to using clinical trials to further understand core processes of change. But, as he elaborated, the translation from basic developmental science, cognitive science, and neuroscience to child and adolescent mental disorders is far from smooth.

Even more, solutions to reducing the stigma of mental illness may be just as elusive — but just as important — as understanding the biological and contextual underpinnings of these conditions in the first place.

Hinshaw decried the reductionist thinking that still persists in too many corners of the field. The underlying symptom dimensions of inattention and hyperactivity/impulsivity in ADHD have a heritability of between .75 and .8, higher than the genetic liability for schizophrenia, defying the myth that these patterns are the product of weak personal will or lax parenting. The heritable mechanisms include delayed development of the frontal cortex, deficits in executive functioning and inhibitory control, and reduced levels of intrinsic motivation. But it’s also clear that maladaptive parental responses to early disruptions in temperament and behavior fuel continuation of the symptoms and foster escalations of additional impairments. Such is the case even in adoptive families, in which the effects of gene–environment correlation are removed. According to Hinshaw, it’s integration, rather than either/or thinking, that’s the key with respect to both basic research and clinical efforts.

People with ADHD are at heightened risk for a number of negative outcomes including academic underachievement, increased risk for accidental injury, and peer rejection. Yet incredibly common, Hinshaw says, is “the oft-held contention that ADHD is just a societal excuse for bothersome behavior. If you want to see real ridicule, just look at the op-eds about ADHD in The New York Times [saying] the medications are poison and it’s a made-up disorder. You don’t see this same kind of discussion about the legitimacy of PTSD [post-traumatic stress disorder] or bipolar illness. There’s something about ADHD that’s attracting a lot of negative attention — fueling stigma.”

Yet some skepticism may be deserved. After all, most ADHD diagnoses are made by a pediatrician (or, for adults, by a general practitioner) during the course of a 10- to 15-minute office visit, often without the use of any evidence-based practices. Accordingly, rates of diagnosis have skyrocketed over the past decade — a 42% increase in youth over the past 10 years. “That’s an epidemic,” Hinshaw says. “But ADHD is of course not a communicable disease, so what would explain this increase?”

There may be valid reasons, including increased survival of low-birthweight babies and greater recognition of the condition’s validity. Though ADHD was once overwhelmingly diagnosed in White, middle-class boys, Hinshaw reports that the disorder is actually an equal-opportunity condition — but the diagnosis is increasing especially rapidly in low-socioeconomic-status minority kids. His research has illuminated how shifts in social and educational funding policy have contributed to the rise of the ADHD epidemic. As US public schools have been incentivized to maintain high standardized test scores, Hinshaw has found...
Meta-analyses examining mental illness and stigma in the United States have shown that although public knowledge about the underlying causes of mental illness has grown tremendously over the past 50 years, negative perceptions have remained flat or even increased.

"If you think that ADHD is simply a categorical box in [the] DSM, you’d be mistaken," Hinshaw argues. "Rather than static, it’s an extremely dynamic set of traits interacting with multiple contextual influences across development."

When it comes to stigma, it would be logical to believe that it should decrease as public knowledge about mental disorders increases, right? Well, not quite.

We have assumed that, as knowledge about the biological, genetic, and environmental mechanisms underlying conditions such as ADHD progresses, the social stigma of mental illness inevitably will decline. But, as more and more research has found, merely educating the public about these mechanisms has failed to erase stigma.

"Is the solution that we just need to call mental illness a brain disease — a disease like any other? Cancer is a disease; so mental illnesses are diseases of the brain, often highly heritable. And if we give this biogenic ascription — it’s an uncontrollable cause — stigma will go down. But this contention is wrong," Hinshaw says. "As it turns out, when you believe that mental illness is caused biogenetically you blame the individual less, but you also believe that he or she will never get better — after all, it’s in their genes — and you don’t want to be anywhere near that person; that is, social distance magnifies."

Meta-analyses examining mental illness and stigma in the United States have shown that although public knowledge about the underlying causes of mental illness has grown tremendously over the past 50 years, negative perceptions have remained flat or even increased. Hinshaw points out that today more than 3 times as many Americans believe that mental illness is inevitably linked to violence as was the case in 1955. Stigma prompts a lack of funding for mental disorders, a lack of access to care, and the internalization of stigma by people experiencing relevant conditions.

So what can be done to prevent stigma? Contact, rather than factual knowledge, is crucial, Hinshaw says. He has been working with a group called Bring Change 2 Mind to establish high school clubs focused on changing the way young people talk about mental illness.

The Let’s Erase Stigma (LETS) clubs meet once a week with a teacher — not a mental health care provider — as the advisor, just like any other school club. This provides kids with a space to talk about mental health topics in a safe, supportive environment.

The goal is to foster open discussion about topics like bullying, LGBTQ issues, and what actions can be performed to open up dialogue and normalize conversations about mental health and encourage peer-to-peer learning.

"Attitudes towards gay marriage have changed radically in the last 20 years, mainly because of people under 30," Hinshaw adds. "It’s going to be young people turning on their natural empathy and activism to make a big difference."

In a quasieperimental test, Hinshaw and colleagues found that while a semester of participation in these clubs didn’t greatly improve knowledge of symptoms of mental illness, it did reduce social distance and promote positive attitudes toward mental health in general. Hinshaw’s team is currently working on a clinical trial in which LETS clubs are randomly assigned to start early or later in the school year to see if this kind of self-help model can decrease social distance and lead to increased antistigma actions.

"It’s a moving time for me to be an award winner at APS. I’ve been a scientist my whole life, because I grew up in a family with a lot of mental illness and a lot of high achievement, often in the same people," Hinshaw says.

Stigma in mental health remains a huge issue: The World Health Organization data show pretty clearly that the burden of mental illness worldwide is increasing rather than decreasing. Suicide is now the leading cause of death for adolescent girls, the interplay of biological and environmental risk.

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Stigma in mental health remains a huge issue: The World Health Organization data show pretty clearly that the burden of mental illness worldwide is increasing rather than decreasing.

Suicide is now the leading cause of death for adolescent girls, globally. It’s going to take a game-changing group of efforts to address this issue. With the right scientific approaches, however — tests of mediation, multiple levels of analysis, experimental trials when possible, global Big Data analyses — and a public and government motivated to change, we might actually reduce the burden of mental illness, Hinshaw concludes.

-Alexandra Michel

To watch video of Stephen P. Hinshaw’s award address, visit www.psychologicalscience.org/r/adhd.
More than 35,000 people are using Wikipedia to learn about psychology every month. Yet, of the more than 8,000 psychology-related articles in Wikipedia, fewer than 0.01% have been assessed to have the quality of a professional encyclopedic entry. Hundreds of articles are missing accurate content and reliable citations.

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APS is collaborating with the Wiki Education Foundation at wikiedu.org, which has developed a targeted set of resources for classroom use. For more information, go to www.psychologicalscience.org/apswi
Digging Deeper Into Bias
Keith B. Maddox
Tufts University

While there are countless psychological studies on racial bias, social scientists have spent far less time examining prejudice between members of the same racial category. Keith B. Maddox has been working to inject this topic into social psychology research, exploring skin-tone bias and possible ways to mitigate it. His experiments have shown that both Black and White people attribute negative stereotypes to dark-skinned Blacks and have more positive views of light-skinned Blacks. Maddox’s lab also explores ways to minimize identity threats associated with interracial interactions. This work demonstrates that helping Whites to acknowledge their anxiety can increase the likelihood that they will engage (rather than avoid) Blacks in interracial dialogues about racial bias.

Culture In Personal Remembering
Qi Wang
Cornell University

Our memories are shaped by a mix of sociocultural forces. Qi Wang studies how cultural variables sustain autobiographical memory by affecting information processing within the individual, by shaping mnemonic practices between individuals and by prioritizing particular views of selfhood and modes of remembering in a society. Her work has contributed to the theoretical understanding of autobiographical memory as not merely an individual product but a sociocultural construction. Integrating developmental, cognitive, and sociocultural perspectives, she further examines a variety of social–cognitive skills, including self, future thinking, and emotion knowledge, in relation to the development of autobiographical memory. Her new line of research investigates the influence of social media as a cultural force on memory and self. As part of her research, she analyzes data from lab experiments, everyday personal storytelling, autobiographical writings in Western and Chinese literature, and even blogs and Facebook posts.

Qi Wang is cochair of the ICPS Program Committee.

Modeling the Brain and Mind
Rogier Kievit
Medical Research Council – Cognition and Brain Sciences Unit, Cambridge, United Kingdom

Cognitive neuroscientists study people at two explanatory levels: the brain and behavior. Using psychometric models and brain imaging tools, Rogier Kievit explores how theoretical psychology, neuroscience, and philosophy of mind can be used to understand the links between the brain and behavior. His current research relates brain function and structure (using MRI) and cognition in aging populations using structural equation models and network analysis. With the goal of increasing health in older populations, Kievit’s particular interests are in models that effectively capture how cognitive changes across lifetime relate to brain reorganization, adaptation, and compensation.
The Science of Humor Is No Laughing Matter

By Alexandra Michel
In 1957, the BBC aired a short documentary about a mild winter leading to a bumper Swiss spaghetti crop in the town of Ticino. In a dry, distinguished tone, BBC broadcaster Richard Dimbleby narrates how even in the last few weeks of March, the spaghetti farmers worry about a late frost, which might not destroy the pasta crop but could damage the flavor and hurt prices. The narration accompanies film footage of a rural family harvesting long spaghetti noodles from trees and laying them out to dry “in the warm Alpine sun.”

Naturally, the hundreds of people who called the BBC asking where they could get their own spaghetti bushes hadn’t noticed the air date of the news clip: April 1st. The prank was so successful that even some BBC staff were taken in, leading to some criticism about using a serious news show for an April Fool’s Day joke.

Why April 1st became a holiday devoted to pranks and laughter remains a mystery, although some historians trace it back to the Roman holiday of Hilaria. Humans start developing a sense of humor as early as 6 weeks old, when babies begin to laugh and smile in response to stimuli. Laughter is universal across human cultures and even exists in some form in rats, chimps, and bonobos. Like other human emotions and expressions, laughter and humor provide psychological scientists with rich resources for studying human psychology, ranging from the developmental underpinnings of language to the neuroscience of social perception.

**The Hidden Language of Laughter**

Theories focusing on the evolution of laughter point to it as an important adaptation for social communication. Studies have shown that people are more likely to laugh in response to a video clip with canned laughter than to one without a laugh track, and that people are 30 times more likely to laugh in the presence of others than alone.

“The necessary stimulus for laughter is not a joke, but another person,” writes laughter expert and APS Fellow Robert R. Provine, professor emeritus at University of Maryland, Baltimore County, in an article in *Current Directions in Psychological Science*.

Just look at the canned laughter in TV sitcoms as an example: The laugh track has been a standard part of comedy almost from the birth of television. CBS sound engineer Charley Douglass hated dealing with the inappropriate laughter of live audiences, so in 1950 he started recording his own “laugh tracks.” These early laugh tracks were intended to help people sitting at home feel like they were in a more social situation, such as sitting at a crowded theater. Douglass even recorded varying types of laughter, including big laughs and small chuckles, as well as different mixtures of laughter from men, women, and children.

In doing so, Douglass picked up on one of the qualities of laughter that is now interesting researchers: A simple “ha ha ha” communicates an incredible amount of socially relevant information.

For example, a massive international study conducted in 2016 found that across the globe, people are able to pick up on the same subtle social cues from laughter. Samples of laughter were collected from pairs of English-speaking college students — some friends and some strangers — recorded in a lab at the University of California, Santa Cruz. An integrative team made up of more than 30 psychological scientists, anthropologists, and biologists then played audio snippets of this laughter to 966 listeners from 24 diverse societies spanning six continents, from indigenous tribes in New Guinea to urban working-class people in large cities in India and Europe. Participants then were asked whether they thought the two people laughing were friends or strangers.

On average, the results were remarkably consistent across all 24 cultures: People’s guesses about the relationship between the laughers were correct approximately 60% of the time.

Researchers also have found that different types of laughter can serve as codes to complex human social hierarchies. Across the course of two experiments, a team of psychological scientists led by Christopher Oveis of University of California, San Diego, found that high-status individuals had different laughs than low-status individuals, and that strangers’ judgments of an individual’s social status were influenced by the dominant or submissive quality of the person’s laughter.

“Laughing in the presence of others indicates the interaction is safe,” the researchers explain. “While the norms of most social groups prevent direct, unambiguous acts of aggression and dominance, the use of laughter may free individuals to display dominance because laughter renders the act less serious.”

In the first study, the researchers wanted to know whether high- and low-status individuals actually do laugh differently. To test this, 48 male college students were randomly assigned to groups of four, with each group composed of two low-status members (“pledges” who had just joined a fraternity a month earlier) and two high-status members (older students who had been active in the fraternity for at least 2 years).

Laughter was recorded on video as the group members engaged in a teasing task. Each member of the group took a turn in the hot seat, receiving light teasing from his peers. The teasers came up with a nickname based on randomly generated sets of initials (e.g., L. I. became “Loser Idiot”) and then told joking stories about why they chose the nickname.

One team of coders (naive to the study hypotheses) identified all of the instances of laughter in the video, and a second team of coders (also blind to the study hypotheses) watched the video and rated how submissive or dominant each laugh sounded using a scale of −3 (definitely

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submissive) to 3 (definitely dominant). Laughs receiving average ratings of 2 or higher were classified as dominant, whereas laughs receiving average ratings of −2 or lower were classified as submissive.

A third team of coders, also blind to the hypotheses, coded the audio of each laugh on specific sound characteristics — loudness, pitch, pitch range, pitch modulation, airiness, and burst speed — that are associated with disinhibited behavior.

“If dominant laughs are more disinhibited than submissive laughs, as we hypothesize, they should exhibit greater vocal intensity, more pitch range and modulation, and greater burst speed,” Oveis and colleagues explain.

The analysis revealed that, as predicted, high-status fraternity brothers produced more dominant laughs and fewer submissive laughs relative to the low-status pledges. Dominant laughter was higher in pitch, louder, and more variable in tone than submissive laughter. In this regard, dominant laughter appears to share some of the features researchers have identified in genuine (compared with fake) laughter: greater irregularities in pitch and loudness and faster bursts of sound.

Previous research published in Psychological Science demonstrated that holding a position of power can influence the acoustic cues of our speech. The voices of individuals primed with high-power roles tended to increase in pitch and were, at the same time, more monotone. Listeners who had no knowledge of the experiment were able to pick up on vocal cues signaling status: They correctly rated individuals in the high-power group as being more powerful with a surprising degree of accuracy — about 72% of the time.

Findings from the fraternity-brother experiment also showed that low-status individuals were more likely to change their laughter based on their position of power; that is, the pledges produced more dominant laughs when they were in the “powerful” role of teasers. High-status individuals, on the other hand, maintained a consistent pattern of dominant laughter throughout the teasing game regardless of whether they were doing the teasing or being teased themselves.

In another study, the research team tested out whether naïve observers could detect an individual’s social status based just on their laughter, and whether the type of laugh (dominant or submissive) could influence judgments of social status.

A group of 51 college students was randomly assigned to listen to a set of 20 of the laughs recorded from the fraternity brothers. Each participant listened to an equal number of dominant and submissive laughs from both high- and low-status individuals. Participants then estimated the social status of the laugh using a series of 9-point ratings scales. And indeed, laughers producing dominant laughs were perceived to be significantly higher in status than laughers producing submissive laughs.

“This was particularly true for low-status individuals, who were rated as significantly higher in status when displaying a dominant versus submissive laugh,” Oveis and colleagues note. “Thus, by strategically displaying more dominant laughter when the context allows, low-status individuals may achieve higher status in the eyes of others.”

However, regardless of whether raters heard a dominant or a submissive laugh from a high-status individual, they rated that person as being relatively high in status.

It’s unclear whether this was because high-status laughs include characteristics that were not measured in the current study or whether high-status fraternity brothers just didn’t have very convincing low-status laughs while being teased.

Too Soon?

When it comes to comedy, it’s often a thin line between love and hate. What qualities make something funny (or not) is a question that philosophers have been attempting to answer for thousands of years. But a pair of psychological scientists have come up with a theory that explains why we might laugh at a dark joke about murder as well as a silly pun or play on words.

Psychological scientists Peter McGraw (University of Colorado, Boulder) and Caleb Warren (University of Arizona) propose that negativity is an intrinsic part of humor — without violating a norm or rule of some kind, a joke just isn’t funny. But violations can’t stray too far; otherwise, they become unappealing or even disgusting and upsetting. According to the researchers’ Benign Violation Theory, a violation is humorous when it breaks a rule or norm but is benign.

McGraw and Warren’s Humor Research Lab (HuRL) has conducted several studies examining the exact criteria that cause us to perceive a comedic situation as benign or not. Along with the severity of the norm violation, a sense of psychological distance from the violation — by space, time, relationships, or imagination — is a key ingredient for turning an unpleasant situation into a humorous one, they posit.

For example, in a study published in Psychological Science, the researchers looked at the effect of psychological distance in terms of time. Inspired by the classic Mark Twain quote, “Humor is tragedy plus time,” the research team investigated how the passage of time can influence one’s perception of an event as funny or painful.

“If distance increases the humor in severe violations (i.e., tragedies), but decreases the humor in mild violations (i.e., mishaps), then autobiographical events that get funnier over time should feature more severe violations than those that get less funny over time,” the researchers write.

One study found that the events from people’s lives that became funnier over time were more severe events (like a car accident), while events that lost their comedic effect over time were seen as minor violations (like stubbing a toe).

Another study examined distance by manipulating whether an image was seen as hypothetical or real. A group of 67 students was asked to rate the humor of images from a website. Those in the close condition were told they would be looking at real photos that “have not been altered using image design software”; participants in the distant condition were told they would be viewing “fake pictures” that “have been altered using image design software.”

One picture portrayed a severe abnormality: a Cronenbergian image of a man sticking a finger up through his nose out of his eye socket. The other portrayed a mild abnormality — a man with large icicles hanging from his frozen beard. Using a 6-point scale, participants rated how funny they thought the photos were.
The students rated the more disturbing image of the empty eye socket as more humorous when they were told it was fake, and they reported the less disturbing frozen-beard image as more humorous when they thought it was real.

“These findings suggest that there’s a real sweet spot in comedy — you have to get the right mix between how bad something is and how distant it is in order for it to be seen as a benign violation,” McGraw said.

**The Energizing Effect of Humor**

Having trouble finishing a project on deadline? Well, put down that Red Bull and head over to YouTube. No joke — watching funny cat videos at work may not be such a bad thing after all. A study conducted by Australian National University management professors David Cheng and Lu Wang suggests that exposure to humorous stimuli may actually help people persevere in completing tedious tasks.

Across two studies, Cheng and Wang found that people who watched a funny video clip before a task spent approximately twice as long on a tiresome task compared with people who watched neutral or positive (but not funny) videos.

Prior research has found that humor can help facilitate recovery from stressful situations, even prolonging people’s tolerance for physical pain. In the business world, many successful organizations such as Zappos, Virgin, and Google deliberately build play areas into their workspaces and organize fun events to ameliorate the stressful nature of work, boost morale, and increase productivity.

Indeed, in a 2007 article published in *Current Directions in Psychological Science*, APS William James Fellow Roy F. Baumeister (Florida State University), APS Fellow Kathleen D. Vohs (University of Minnesota), and APS Fellow Dianne M. Tice (Florida State University) point to humor as a factor that can moderate or counteract the effects of mental depletion.

In line with this idea, Cheng and Wang hypothesized that humor may provide a respite from tedious situations in the workplace. This “mental break” might not only prevent work-related depletion, but also might facilitate the replenishment of mental resources, ultimately allowing people to persist longer on difficult tasks.

To test this theory, for their first study the researchers recruited 74 students studying in a business class to come into the lab, ostensibly for an experiment on perception. First, the students performed a mentally depleting task in which they had to cross out every instance of the letter “e” contained in two pages of text. The students then were randomly assigned to watch a video clip eliciting either humor, contentment, or neutral emotions.

For the humorous video, students watched a clip of the BBC comedy “Mr. Bean.” In the contentment condition, participants watched a scene with dolphins swimming in the ocean. The students in the neutral condition were treated to an 8-minute video about the management profession designed for students studying business. Immediately after watching the videos, participants reported their responses to a list of 16 discrete emotions (e.g., amusement, anger, disgust) using a 7-point scale.

Then the students completed a persistence task in which they played what amounted to an unwinnable game. The students were asked to guess the potential performance of employees based on provided profiles and were told that making 10 correct assessments in a row would lead to a win. However, the computer software was programmed such that it was nearly impossible to achieve 10 consecutive correct answers. Participants were allowed to quit the task at any time.

Students who watched the humorous “Mr. Bean” video clip ended up spending significantly more time working on the task, making twice as many predictions as the other two groups.

Cheng and Wang then replicated these results in a second study, during which they had participants complete long multiplication questions by hand. Again, participants who watched the humorous video spent significantly more time working on the task and completed more questions correctly than did those who did not watch the funny video.

“Although humor has been found to help relieve stress and facilitate social relationships, the traditional view of task performance implies that individuals must concentrate all their effort on their endeavors and should avoid things such as humor that may distract them from the accomplishment of task goals,” Cheng and Wang conclude. “We suggest that humor is not only enjoyable but more importantly, energizing.”

Kathleen D. Vohs will speak at the 2017 APS Annual Convention, May 25–28, in Boston, Massachusetts.

**References**


Do Funny Article Titles Garner More Citations?

“Punning is a talent which no man affects to despise but he that is without it.” -Jonathan Swift

Science is serious business, but some journal authors enjoy spicing up the titles of their articles with puns, alliterations, and humorous references. Does a sense of humor actually help a scientific paper get noticed, read, and cited? A couple of studies published in the *Journal of Information Science* have taken a look at whether amusing titles actually increase the impact of psychology publications.

In a 2008 study, Itay Sagi and psychological scientist Eldad Yechiam (currently an associate professor of behavioral sciences at the Technion – Israel Institute of Technology) rated the titles of more than 1,000 psychology journal articles published in *Psychological Bulletin* and *Psychological Review* between 1985 and 1994.

Sagi and Yechiam’s analysis revealed that funnier titles actually tended to garner fewer citations over time: The most amusing titles (those with scores higher than two standard deviations from the average) had “a 33.4% reduction in the number of citations.”

The comedic content of the journal titles was evaluated by a group of eight psychology graduate students. Each journal was assigned to a team of four judges (two men and two women) who used a 7-point scale to rate their list of titles on the qualities of being amusing and pleasant. Even after controlling for title length, number of authors, year of publication, and article type (regular article vs. commentary), highly amusing titles still garnered significantly fewer citations compared to less droll titles.

This isn’t to say that a clever title dooms a paper to obscurity, however. “Articles with highly amusing titles did have a modest level of citations but they did not ‘reach the stars,’” Sagi and Yechiam explain.

A title’s pleasantness — whether extremely high or extremely low — had no impact on how often the article was cited. Although it’s unclear why humorous titles took a citations hit, the researchers suspect that a funny title may ultimately “signal low quality” or hurt the credibility of a paper. They also suggest that funny titles might include fewer technical keywords, ultimately making these papers more difficult to find in database searches.

“Although the reasons for the negative association between the use of amusing titles and subsequent citations are not entirely clear, the findings do suggest that authors should be cautious about including humorous contents in article titles,” the authors note.

A 2013 follow-up study conducted by psychological scientist Siniša Subotić (CEON/CEES, Serbia) and Bhaskar Mukherjee (Guru Ghasidas University, India) reexamined the relationship between title characteristics and citations by comparing a sample of the most-downloaded psychology articles (collected from *ScienceDirect*’s Top 25 Hottest Articles)
to a matched sample of less-downloaded psychology articles.

Again, the researchers concluded that a hilarious title
gave no boost to a paper’s garner citations.

A sample of the 25 most-downloaded psychology articles
from across all available psychology journals was collected
for each quarter of 2008, 2009, and 2010. After removing
duplicate articles that appeared in the top 25 list more than
once, the researchers had a sample of 129 articles. After this,
Subotić and Mukherjee randomly selected the same number
of articles from the same corresponding journal volumes
(and issues when possible) to serve as a comparison sample
of less popular articles. In total, the full sample included 258
articles from 40 different psychology journals.

Following the original procedure used by Sagi and
Yechiam, a group of seven judges rated all of the article
titles for pleasantness and amusement. A few examples of
titles rated as highly amusing included “How extraverted
is honey.bunny77@hotmail.de? Inferring personality from
e-mail addresses” and “Taking a new look at looking at
nothing,” while the title “Cognitive control, hierarchy, and
the rostro–caudal organization of the frontal lobes” received
a very low amusement score.

The results of this study showed that a title’s amusement
rating was slightly correlated with a higher download rate,
but in contrast to the previous experiment, there was no
association with the number of citations received. There
was, however, an interesting relationship among title length,
citations, and journal impact score: “Our findings fully
support the notion that journal impact plays the key role
here, as it seems that shorter title articles tend to get more
citations since they are published more often in higher impact
journals and articles from higher impact journals tend to
receive more citations.”

Subotić and Mukherjee suspect that an amusing title may
lead more people to give the article a look (hence the slightly
higher download rate), but ultimately has minimal impact on
the paper’s citations.

But based on the admittedly small scale of research on
humor and scientific journal titles, authors shouldn’t let these
findings have a major influence on their titles just yet, Subotić
and Mukherjee suggest.

“[A] tentative recommendation supported by our find-
ings would be to preferably keep the title short and amusing,
within common sense and good taste, and that colon usage
probably does not matter,” they advise. ●

-Alexandra Michel

References
Sagi, I., & Yechiam, E. (2008). Amusing titles in scientific
journals and article citation. Journal of Information
Subotić, S., & Mukherjee, B. (2014). Short and amusing: The
relationship between title characteristics, downloads, and
citations in psychology articles. Journal of Information
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In the summer of 2016, seven undergraduate students from across the United States participated in the University of Missouri’s first Alcohol Research Training Summer School (MU-ARTSS), an internship geared toward training students from diverse backgrounds in the psychological science of alcohol use and dependency.

MU-ARTSS provides undergraduate students with an intensive research and research ethics experience and is supported by a grant (R25 AA023687) from the National Institute on Alcohol Abuse and Alcoholism (NIAAA) awarded to APS Fellow Kenneth J. Sher, who has conducted extensive research on the causation and progression of substance abuse disorders.

During the 9-week program, each student participated in a week-long lecture series followed by an 8-week lab-based internship that focused on conducting alcohol research alongside an MU-ARTSS affiliated University of Missouri (MU) professor. This internship was supplemented with collaborative lab demonstrations, discussions, and lunches focusing on research skills and professional development. Participants even attended weekly movie nights that showcased classic films about alcohol, with the goal of helping students contextualize the importance of the research in the public sphere.

Allie Choate, a senior psychology major at MU, had research experience in borderline personality disorder and psychopathy coming into the program. However, she sought to conduct independent research to better prepare for graduate school, as she is interested in pursuing a PhD in clinical psychology in the fall of 2017.

“It was nice to have a say on what I specifically wanted to learn.” Choate said. “[MU-ARTSS] increased my autonomy within my research and really helped me to prepare for my [Honors] Capstone.”

Choate feels confident that the program equipped her for “what’s to come” in graduate school. She said that coming up with her own hypothesis, gathering data (including real-time collection of biomarker data via smartphones), and running her own data analyses under APS Fellow Timothy J. Trull’s guidance provided valuable insight into what graduate students do on a daily basis.

The program is designed for undergraduate students interested in pursuing psychological research as a potential career path. Students are encouraged to independently propose a project, conduct literature reviews and data analyses, and give a poster presentation at the university’s undergraduate research conference, all under the direction of an expert in the field.

The students who shared their stories with APS said that learning at least one statistical software package — such as SPSS, SAS, or mPLUS — was necessary for completing their projects, but proved to be the most challenging aspect of the internship. They all agreed, however, that learning these quantitative skills was worthwhile and will help them better prepare for graduate school and a research-driven career.

As Shanaliz Natta, a junior at the University of the Virgin Islands, St. Thomas, explained: “I get to put that on my resume.”

And while the internship’s foundation lies in psychological science, nonpsychology majors also benefitted from the program. A biology major hoping to pursue a PhD in biomedical science, Natta was initially concerned that she would not be able to apply
her biology background to the internship even if she was accepted into the program. Fortunately, in working on a comparative project exploring alcohol use among twin adolescents in rural and urban areas, she realized that genetics and epigenetics bring together the biological and psychological sciences quite well.

Natta said that “learning something about a different field and making the connection between my biology field and psychology and seeking how they correlate and help one another hand-in-hand” was one of the most rewarding aspects of the experience.

Interacting with other undergraduate students further expanded Natta’s academic network. In addition to MU-ARTSS’s lectures, film screenings, group check-ins, and lunches, the students met other undergraduates from across the United States through MU-wide summer seminars and lunch outings. Natta, who was visiting the mainland United States for the first time, found the campus community — both students and faculty — “very welcoming.”

For Samuel Valle, a psychology major at California State University, Long Beach, MU-ARTSS was one of the few undergraduate research possibilities available to students in his circumstance. Valle is part of Deferred Action for Childhood Arrivals (DACA), an immigration program that not all academic and professional opportunities currently accommodate. Fortunately, MU-ARTSS is able to accept DACA recipients, allowing Valle to work in a lab on an independent research project with experts in the field.

“A lot of the things that I was doing I have not done at all back at home,” says Valle.

Interested in quantitative and social psychology, Valle worked with APS Fellow Bruce D. Bartholow on the motivations behind drinking alcohol (e.g., drinking for enhancement, drinking to cope) and how these factors map on to alcohol consumption and its consequences. As a result of his MU-ARTSS experience, Valle hopes to continue in this line of work.

MU-ARTSS organizers attribute the success of the program in part to its emphasis on welcoming diverse groups of participants. Unfortunately for many undergraduates, particularly students from historically underrepresented communities, cost can be a barrier to attending summer research programs. Thanks to the NIAAA grant and contributions from the university, however, MU-ARTSS provided all participants with a $3,600 stipend, room and board, and even an hour of academic credit from MU. Students were only responsible for travel costs.

Needless to say, these perks were a few of the many reasons why Choate, Green, Natta, and Valle chose to participate in MU-ARTSS. As more and more universities and colleges introduce undergraduate research programs, more students from diverse socioeconomic backgrounds will have access to similar training and experiences.

And while not all of these MU-ARTSS students might pursue careers investigating alcohol use and dependency, the skills they acquired will prove invaluable as they move into graduate programs and future research careers.

As Green concluded: “I traveled to a place I’d never been to before, I got to present my research, and got to be a part of such a great program with such amazing people.”

- Gabriela M. Galeano
CROSS-CUTTING THEMES

The Many Flavors of Relationships
Patrick Davies
University of Rochester
Katherine Jewsbury Conger
University of California, Davis
Shigehiro Oishi
University of Virginia
Belle Rose Ragins
University of Wisconsin-Milwaukee
Sheldon A. Cohen
Carnegie Mellon University

The Science of Fear: From Basic Psychological Mechanisms to Impact on Society
Daniela Schiller
Mt. Sinai School of Medicine
Nnamdi Pole
Smith College
Steven L. Neuberg
Arizona State University, Tempe
Linda M. Isbell
University of Massachusetts Amherst
Arie W. Kruglanski
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Doing the Most for the Many: Psychological Scientists Who Inform Public Policies
Ruth B. Balser
Massachusetts Legislature State Representative
Elana J. Eisman
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Patrick DeLeon
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Confront and Contest Your Stigma

By David G. Myers


A stigma — originally a branding-iron mark on a prisoner or slave — serves as a mark of disgrace. To carry the stigma of a bankruptcy, an HIV infection, an addiction, a reviled religion, or another negatively stereotyped social group is to be dishonored, disapproved, or even dehumanized by others.

For those scarred by a stigma, note Cynthia S. Wang, Jennifer A. Whitson, Eric R. Anicich, Laura J. Kray, and APS Fellow Adam D. Galinsky (2017), the psychological effects may be either overt or covert.

A possible overt result is discrimination: Those stigmatized are often avoided, not hired, unloved. A possible covert result is internalization of the stereotypes and slurs: Women may lose their motivation to lead others; the elderly may presume they are too slow for the demands of work; gay youth may harbor suicidal thoughts.

Before turning to the heart of the Wang et al. essay — how people confront and contest their stigma — instructors might engage students by having them:

Write a paragraph or two that describes how they or someone they know has experienced stigma and how they dealt with it. The reason for the stigma can vary; people’s experiences may be related to their race, their weight, their disability, their age, their gender, their religion, their family status, or even their college major (think of “jocks” and “nerds”).

Then, using the “snowball technique,” have students crumple their sheet into a “snowball” and, all at once, throw their snowballs into the air around the room.

Have each student collect one of the crumpled snowballs and invite selected students to read theirs to the class. (Note how the snowball discussion format engages students in active writing, stimulates class participation, and protects anonymity. Still, be sure to explain the process before students write, so they know that their paragraph may be read out loud by someone else.)

Finally, ask students: Are there any commonalities across the examples — perhaps of people being hurt by bullying or discrimination, or of people internalizing self-loathing?

To protect themselves from toxic stigma, people may seek to escape from the stigmatized group. Or they may challenge the stigma, either by reframing the stigma as a strength or by embracing the stigma with self-labeling.

Escape. Much like the Apostle Peter’s denial that he was one of Jesus’s maligned disciples, people may dis-identify with the
stigmatized group. They may disavow their group identity or stay in the so-called closet.

Reframe. Instead of evading a stigma, people may confront it and reframe a negative stereotype as a strength. Stereotypically feminine traits such as empathy, which sometimes are perceived as weaknesses for women in the workplace, can be transformed into gifts. In negotiations, for example, building trust through empathic understanding of the other’s concerns can facilitate a better deal; thus, a liability can become a valued asset.

Self-labeling. “By self-labeling,” observe Wang et al., “stigmatized group members transform a slur’s connotative meaning from demeaning to empowering.” Once used to degrade gay people, the word “queer” now is used as a term of self-empowerment. Yesterday’s “deaf and dumb” becomes today’s proud Deaf culture. Donald Trump’s Hillary-Clinton-disparaging “nasty woman” comment prompts the proud “nasty women” artists, marchers, and T-shirt wearers.

Are any of these coping strategies evident in the snowballed case examples? Ask the class to reflect on whether they heard examples of people coping by escaping, reframe, or self-labeling when the snowballs were read aloud. And invite them to remember how social stigmas often beget both discrimination and internalization.

To Make it Memorable, Bring it to Life

By Cindi May and Gil Einstein


What makes things memorable? This question has intrigued people from all walks of life, and for good reason, as there are tremendous advantages to improving the memorability of information. We could learn more effectively; we could reduce costly and embarrassing mistakes that result from forgetfulness; we could improve our relationships by remembering important dates (e.g., anniversaries, birthdays) and names (e.g., friends, coworkers, classmates).

Knowing what makes something memorable also may help us understand how our memories work and the types of problems that memory is designed to help us solve. Rats, for example, have strong memory for spatial locations, which helps them find food and avoid predators.

We have some sense of the factors that make items stick in our memory. For example, we more easily remember words that are concrete (e.g., table) versus abstract (e.g., justice), in part because it’s easier to create a mental picture of a table than of justice. Bizarre, rather than mundane, items also get lodged in memory. It’s easy to remember a dog riding a bicycle. It’s easy to forget that same dog chasing a bicycle. Emotionality, familiarity, frequency, and meaningfulness also matter.

Nairne and colleagues (2017) suggest an additional factor that offers a potentially even more potent memory benefit: animacy. They posit that the distinction between the living and the nonliving is highly salient to the human mind: We may be hardwired to detect and remember animate information.

You can demonstrate the influence of animacy on memory in the classroom by having students complete two simple exercises, which together should take about 8 minutes.

1. **Memory for animate versus inanimate objects** (from Nairne, VanArsdall, Pandeirada, Cogdill, & LeBreton, 2013).

   For this demonstration, present the following list of words to students:

   - BABY TENT SLIPPER BEE JOURNAL TURTLE
   - DUCK DOLL OWL SPIDER DRUM RAKE
   - KITE MINISTER STOVE TROUT PYTHON WOLF
   - VIOLIN WHISTLE HAT ENGINEER SOLDIER
   - PURSE

   You can read them aloud or present them one at a time using a visual display. After a short delay, have students try to recall the words.

2. **Animacy processing** (from VanArsdall, Nairne, Pandeirada, & Blunt, 2013).

   For this demonstration, present each of the following nonsense words and properties visually to students one at a time and ask them to rate the likelihood that each item is animate using a scale of 1 (nonliving) to 6 (living). Allow 10 seconds per item:

   - FRAV (enjoys cooking)
   - JOTE (has a hollow center)
   - BRUG (is round)
   - TORP (believes in God)
   - DONK (dislikes tomatoes)
   - CHAL (gives off light)
   - LIRT (has a smooth surface)
   - MOOG (laughs when tickled)
   - NENE (loves to travel)
   - RUTO (dissolves when wet)

   After you complete this task, ask students to write down all the nonsense syllables they can remember.

   When students have completed both tasks, have them review their answers. In the first task, did they remember more animate than inanimate items? Nairne et al. (2013) found a strong advantage for the animate items, despite the fact that the animate and inanimate items were intentionally matched on 10 mnemonically relevant dimensions such as imagery, emotionality, and familiarity. This finding has been replicated in other labs even when the words are drawn from small categories (e.g., four-footed animals and furniture; VanArsdall, Nairne, Pandeirada, & Cogdill, 2016), or when pictures are used instead of words (Bonin, Gelin, & Bugaiska, 2014).

   In the second task, did students recall more nonsense syllables that had animate properties than those that had inanimate properties? VanArsdall et al. (2013) found that meaningless
nonsense syllables associated with animate properties were more memorable than those associated with inanimate properties.

Animacy — as both an inherent property of an item and as a way of thinking about an item — seems to convey a significant memory advantage. Does this mean that our cognitive systems are tuned to detect and remember animate things? Nairne and colleagues think so. Ask students what other evidence might convince them that animacy is central to cognition.

Nairne and colleagues detail the following converging lines of evidence:

- Early in the first year of life, human infants understand that animate, but not inanimate, objects are capable of self-propelled movement (Markson & Spelke, 2006).
- Preschool children as young as 3 or 4 years of age can easily distinguish between living and nonliving things (Heyman & Gelman, 2000).
- People are faster and more accurate in detecting changes to a visual scene when the changes involve an animate object than when they do not (New, Cosmides, & Tooby, 2007).
- We remember objects touched by a person or animal (e.g., a ball touched by a pitcher) better than objects touched by other inanimate objects (e.g., a ball touched by a mitt; Cogdill, Nairne, & Pandeirada, 2016).

If students are compelled by these findings, it might be worthwhile to consider two issues. First, how might they apply these findings to enhance memory in their everyday lives? As one example, note that it may be easier to learn a foreign language by starting with terms for animate objects. VanArsdall, Nairne, Pandeirada, and Blunt (2013) showed that participants learned foreign language terms that matched animate English terms faster than those paired with inanimate English terms.

The second issue to consider is a methodological one: Ask students to define animacy. At first blush, the distinction between living and nonliving things seems straightforward, but there are a number of items that fall in a gray area. For example, how would students classify blood? What about objects like robots that have animate qualities (think Siri or Alexa)? An essential task of science is to make a priori predictions about human behavior. To do that, we have to carefully understand and define concepts like animacy.

**References**


Research assistants (RAs) across the different subfields of psychology may experience psychological, social, and physical risks when carrying out their assigned tasks (for a review, see Naufel & Beike, 2013). As someone who investigates such risks, I often am told stories pertaining to RA harm. Recently, a graduate student shared such a personal anecdote with me. In one of the studies for which she was serving as an RA, she had the responsibility of observing participants react to a graphic video featuring torture. Unlike the participants, who only saw the video once, she witnessed the torture repeatedly — sometimes for several consecutive hours, multiple times per week, and over multiple weeks. “I was having nightmares,” she said. “It was horrible.” She later followed up, “I can still see every single scene in my head.” The experience clearly had distressed her, and although she told me her supervisor took steps to mitigate her stress, this story — and the other stories of harm that RAs share with me — sting my heart. With a little awareness and planning, much of the trauma that she and others have experienced could have been reduced or prevented altogether.

RAs in psychology can experience psychological risks when carrying out their assigned tasks. Those include vicarious traumatization or symptoms similar to those induced by post-traumatic stress disorder from repeatedly seeing stressful stimuli, transcribing personal essays, or interviewing study participants about distressing topics like sexual assault. RAs also can experience social risk when they act as rude, incompetent, or sexually inappropriate confederates. For example, Naufel and Beike (2013) discuss an anecdote in which an RA’s responsibilities entailed watching sexually explicit media in front of female participants, some of whom were students in his other classes. The debriefing was withheld until the end of the semester, and the RA explained that he felt as if his classmates perceived him as being perverted during that time (p. 9).

Amplifying this risk is the fact that participants are often college students in psychology courses. RAs may be peers of participants — or worse, an RA may later become a teaching assistant or instructor for the participants (Naufel & Beike, 2013). Graduate students may agree to act in videos or model in photographs used as stimuli in research. Later, when they become instructors, they may feel embarrassment when they realize students are participating in studies still using those stimuli (for a specific example, see Naufel & Beike, 2013).

RAs also face several physical risks, including the risk of being assaulted by angry participants; for a review and discussion, see Naufel & Beike, 2013. Recently, when the Georgia state legislature discussed the possibility of a new campus carry bill, my lab members and I talked about potential increased physical risks for certain research protocols. We had been discussing paradigms similar to those used when studying the southern culture of honor. In such research, a confederate runs into participants in the hall and calls them a derogatory name, an action which yielded an aggressive response in southern participants (Cohen, Nisbett, Bowdle, & Schwartz, 1996). Though we acknowledge it would probably be unlikely, we questioned the extent that study paradigms that intentionally provoke participants could put our RAs in grave danger.

After I present information about RA risks at conferences, graduate students or faculty members often approach me to share personal anecdotes. Our conversations often focus on identifying and describing the risks; rarely do I hear how they are actually addressed. After a near-decade of investigating this issue, I feel that it is unacceptable to simply continue recognizing the risks — it is time to prevent them from occurring.

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Currently, institutional review boards (IRBs) are not required to have formal policies that protect RAs from the previously stated risks (Naufel & Beike, 2013). On the other hand, graduate students are in a unique position to protect RAs from harm, as they can mentor undergraduate RAs, teach, or serve as RAs themselves. Resources such as the Research Assistant Bill of Rights (Naufel & Beike, 2013) and the Table for Identifying Risks to RAs (Naufel & Le, in press; see supplemental table online) exist to help graduate students identify, prevent, or reduce risks to students and themselves.

The best way to prevent such risks to RAs is to think preemptively. When designing a study, consider the extent that a procedure could harm an RA; if such harm seems likely, seek a safer approach. The supplemental table provided online offers a questionnaire to determine if a method might pose a risk to RAs with alternative methods to curb that risk (from Naufel & Le, in press). Preemptive planning not only can curtail risks to RAs, it also can result in improved research quality. For instance, my graduate student was examining how college students reacted to either stigmatizing or nonstigmatizing comments about people with mental illness. The student first considered creating a video for this manipulation; however, we realized that the people who could act in the videos were either graduate students teaching or about to teach Introduction to Psychology courses or undergraduate RAs. This created a social risk for RAs: We worried that participants might see their instructors or peers as actually endorsing the stigmatization of mental illness. To counter this risk, we decided to use text paired with audio recordings. Participants now had less of a chance of identifying the person from voice alone, which protected the assistants who made the recording. Additionally, the use of text made it easier to standardize the message across the two conditions.

Unforeseen harm, however, can occur even with preemptive planning. Therefore, it is important for principal investigators to consider how such fallout will be handled. The Research Assistant Bill of Rights, which can be found at http://bit.ly/2msJCbI, is a document that outlines the protections and benefits for RAs, and it provides guidelines for how to address situations should unanticipated harms occur (Naufel & Beike, 2013). It also prompts thinking about how to handle unanticipated risks. Data collection could be slowed if an RA drops out unexpectedly for any reason. The Bill of Rights prompts supervisors to plan for conditions in which an RA may need to stop or slow the process of research.

Although graduate students are in a position to protect RAs, they also are sometimes RAs themselves, and thus similarly susceptible to risks. Encouragingly, many faculty members are beginning to take precautions to protect RAs. For instance, a colleague’s research involved having RAs code participants’ traumatic experiences; based on her personal experiences with this line of study, she recognized that RAs may develop psychological symptoms as a result of this coding. In her IRB proposal, she therefore proactively addressed how she would handle risks to both participants and RAs.

Unfortunately, not all faculty members consider reducing risks to RAs. For some, the perceived pressure to collect data may overshadow such consideration — for others, it may simply go unnoticed. A student could therefore make carefully-worded inquiries that encourage planning for possible harms. The question, “What is the protocol if a participant gets physically aggressive with me?” could prompt a mentor to think about the physical risks of a study. The question, “I teach a lot of these students, and their recognition of me may make the study less believable. How can we change this?” could give rise to a discussion about alternative methodologies that both protect the RA and strengthen the research design.

It is important to create a culture in which thinking about RA risks is the norm rather than the exception. When talking about study designs with others, include discussions of RA risks. When teaching about Milgram’s (1974) experiments in introductory psychology courses, have students consider the ethical dilemmas to both the participants and RAs. When writing IRBs, mention the steps you are taking to protect RAs even though it is not required. By repeatedly doing so, you are making the risks to RAs known — and thus making their safety a priority.

Please see the supplemental table of resources for identifying risks to RAs and potential solutions for handling risk at www.psychologicalscience.org/risks.

References and Suggested Readings


Larissa Barber, Northern Illinois University, TIME, February 9, 2017: You Need to Deal With Your Work Stress. Here’s How.


Jonathan Haidt, New York University, Vox, January 28, 2017: White Fear of Demographic Change is a Powerful Psychological Force.


Brian Little, University of Cambridge, UK, BBC, February 1, 2017: The Secret to Living a Meaningful Life.

Brenda Major, University of California, Santa Barbara, Vox, January 28, 2017: White Fear of Demographic Change is a Powerful Psychological Force.


Robert Outten, Trinity College, Vox, January 28, 2017: White Fear of Demographic Change is a Powerful Psychological Force.


Jennifer Richeson, Yale University, Vox, January 28, 2017: White Fear of Demographic Change is a Powerful Psychological Force.

Nancy Segal, California State University, Fullerton, CBS, February 5, 2017: Just Alike: Twins Separated at Birth.


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Carleton College Psychology Health & Neuroscience Visiting Professor

The Department of Psychology at Carleton College invites applications for a half-time, one-year visiting position, beginning September 1, 2017, at the rank of assistant professor or instructor (Ph.D. preferred). We are looking for candidates with a strong research and teaching background in health psychology and neuroscience. Responsibilities include teaching a mid-level health psychology course with accompanying laboratory in one term and an additional mid-level course or an upper-level seminar in neuroscience in a separate term, and supervising undergraduate thesis work. (For comparison, a full-time one-year teaching load is six courses spread equally across three trimester terms of ten weeks each.) Office space and shared research facilities would be available for the entire academic year. This position is eligible for benefits. Carleton College is a highly selective undergraduate liberal arts institution located about 45 minutes south of Minneapolis/St. Paul. We seek candidates committed to teaching a diverse student body. Carleton College does not discriminate on the basis of race, color, creed, ethnicity, religion, sex, national origin, marital status, veteran status, actual or perceived sexual orientation, gender identity and expression, status with regard to public assistance, disability, or age in providing employment or access to its educational facilities and activities. To apply, please visit the Carleton College Web site at https://jobs.carleton.edu and submit an online application, including a letter of application, CV, statement regarding teaching skills and interests along with evidence of teaching ability, and description of research interests, particularly that which can be carried out during the appointment at Carleton. In addition, please submit contact information for three letters of reference to be uploaded to the website. DEADLINE: Applications will be evaluated starting March 15, continuing until the position is filled.
The Department of Psychology at The University of Texas at Austin invites applications for a tenured faculty position in human neuroscience at the rank of Associate Professor or Full Professor to begin in Fall 2017. We seek candidates with outstanding research programs aimed at understanding cognitive function using functional magnetic resonance imaging techniques. Strong candidates will be those whose research aligns with current strengths of our department and crosses multiple areas of inquiry, including decision making, development, high-level cognition, learning, memory, motivation, and social cognition. Successful candidates will be expected to have a strong record of conducting extramurally funded research. In addition, candidates should have an established record of undergraduate and graduate teaching, mentorship of graduate students, successful research productivity, and commitment to service.

**QUALIFICATIONS**
Candidates must have a PhD in Psychology or related field, an excellent record of research and service, and an exemplary teaching record at the university level. We are particularly interested in candidates who are dedicated to supporting and enhancing a diverse learning and work environment.

**APPLICATION INSTRUCTIONS**
Applicants should submit a letter of interest, current curriculum vitae, statement of research interests, a teaching statement, and contact information for three references to: apply.interfolio.com/39928. Interfolio accounts are free to applicants – simply press “apply”. Also, the link to apply can be found by going to The College of Wooster posting: http://wooster.edu/offices/hr/jobs/faculty/visiting-psych-2/index.php. Review of applications will begin immediately and continue until positions are filled. Please contact Amber Garcia (agarcia@wooster.edu), Chair of Department of Psychology and Search Committee Chair with questions. The College of Wooster is an independent college of the liberal arts and sciences with a commitment to excellence in undergraduate education. The College values diversity, strives to attract qualified women and minority candidates, and encourages individuals belonging to these groups to apply. Wooster seeks to ensure diversity by its policy of employing persons without regard to age, sex, color, race, creed, religion, national origin, disability, veteran status, sexual orientation, gender identity and expression, or political affiliation. The College of Wooster is an Equal Opportunity/Affirmative Action Employer. Employment is subject to federal laws requiring verification of identity and legal right to work in the United States as required by the Immigration Reform and Control Act. Drug-free workplace.

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Applicants should submit a letter of interest, current curriculum vitae, statement of research interests, a teaching statement, and contact information for three references to: apply.interfolio.com/39928. In the letter of interest, candidates should indicate three to five of their most significant publications to date. Review of applications will begin immediately and will continue until the position has been filled. Proof of conferred degree and a background check will be conducted on final candidate. Position funding is pending final budgetary approval. Questions can be directed to the search chair, Alison Preston at: apreston@utexas.edu. The University of Texas at Austin strongly values multiculturalism and diversity and strives to be a family friendly environment. Information about the University’s life and work policies can be found at http://provost.utexas.edu/faculty-affairs/life-and-work. UT Austin is an EEO/AA employer.
ANNOUNCEMENTS
Send items to apsobserver@psychologicalscience.org

MEETINGS

29th APS Annual Convention
May 25–28, 2017
Boston, Massachusetts, USA
www.psychologicalscience.org/convention

10th Biennial Meeting of the Society for the Study of Human Development
October 6–8, 2017
Providence, Rhode Island, USA
www.support.sshdonline.org/conference-links/

Behavior, Energy, & Climate Change Conference
October 16–18, 2017
Sacramento, California, USA
www.beccconference.org/

58th Annual Meeting of the Psychonomic Society
November 9–12, 2017
Vancouver, Canada
www.psychonomic.org/page/2017annualmeeting

GRANTS

Grants Announced for Child Care, Head Start, Family Strengthening, and Behavioral Intervention
The Administration for Children and Families is excited to announce that the Office of Planning, Research, and Evaluation has forecasted their intent to fund Child Care, Head Start, Family Strengthening, and Behavioral Interventions graduate student dissertation grants in 2017. Please visit grants.gov for more information.

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