Research Briefs

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[Boosting Understanding and Identification of Scientific Consensus Can Help to Correct False Beliefs](#)

Aart van Stekelenburg, Gabi Schaap, Harm Veling, and Moniek Buijzen
Psychological Science

This research suggests that using a communication strategy that increases people's understanding of and ability to identify scientific consensus might lead them to correct their misperceptions in certain domains. Participants who held false beliefs were exposed to either a control activity or a boosting intervention designed to empower them to first understand the value of scientific consensus and then identify it. Afterward, they read a news article about a scientific consensus opposing their beliefs. Compared with the control group, participants exposed to the boosting intervention were more likely to correct their false beliefs. These effects did not occur in all domains, but in the domain of genetically engineered food the boosting strategy was more successful in correcting misperceptions than merely communicating scientific consensus.

[The Effect of Replications on Citation Patterns: Evidence From a Large-Scale Reproducibility Project](#)

Felix Schafmeister
Psychological Science

Schafmeister tested whether the publication of independent replication studies affects the citation patterns of the original studies. Looking at citation patterns before and after the publication of 95 replications conducted under the Reproducibility Project: Psychology, Schafmeister found no changes in citation rates around the time the replications were published. These results indicate that there might be a lack of attention to how replication results are communicated, which could slow down the scientific process's self-corrective ability.

[Mind-Body Practices and Self-Enhancement: Direct Replications of Gebauer et al.'s (2018) Experiments 1 and 2](#)

Thomas I. Vaughan-Johnston, Jill A. Jacobson, Alex Prosserman, and Emily Sanders
Psychological Science

Gebauer and colleagues (2018) reported that mind-body practices such as yoga and meditation increase self-enhancement by boosting self-esteem and narcissism. Using the same procedures as Gebauer and colleagues (2018), Vaughan-Johnston and colleagues conducted a field study with yoga students and a meditation intervention with college students. Although the effect was not clearly obtained in the replication study, an integrative data analysis of the original and replication data suggested that mind-body practices indeed increase self-enhancement (self-esteem and narcissism) rather than quieting the ego.

Psychological Drivers of Individual Differences in Risk Perception: A Systematic Case Study Focusing on 5G

Renato Frey
Psychological Science

What drives people to perceive risks in novel concepts such as 5G, the latest generation of cellular network technology? Frey tested a representative population sample during the initial deployment of 5G in Switzerland, when public debates about it were intense. The researcher analyzed participants' perceived risk, perceived benefit, and policy-related attitudes. He found that differences between individuals' risk perceptions were associated with hazard-related drivers (e.g., trust in institutions regulating 5G) and person-specific drivers (e.g., electromagnetic hypersensitivity), which predicted their policy-related attitudes (e.g., voting intentions). In a longitudinal field experiment, Frey found that individual changes in psychological drivers were linked to changes in perceived risk.

What's in a Name? The Hidden Historical Ideologies Embedded in the Black and African American Racial Labels

Erika V. Hall, Sarah S. M. Townsend, and James T. Carter
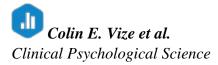*Psychological Science*

Black" and "African American" racial labels are associated with the different ideologies of the historical movements that made each label prominent, and this appears to influence how people associate these labels with discrimination or equality. In two content analyses of editorials in media outlets and a search on Google Images, Hall and colleagues found that "Black" appeared to be associated more often with "bias and discrimination," whereas "African American" appeared to be associated more often with "civil rights and equality." Additionally, results of two experimental studies suggested that White Americans inferred the ideologies of organizations on the basis of the racial labels in the organizations' names.

Placebo Effects: A New Theory

Tao Liu
Clinical Psychological Science

Liu proposes a new model to explain how a placebo's effect on the mind can affect the body, lessening a person's symptoms. According to Liu's model, context-based placebo effects arise from positive treatment beliefs but are directly caused by benefit expectations. Thus, placebos mediate a belief-expectation transformation, triggering therapeutic responses. Specifically, placebos' effects depend on treatment beliefs and how those beliefs are converted into patients' motivations as well as expectations of benefits. Thus, placebo effects shift from weak to strong when patients' belief-based treatment expectations shift from less negative through neutral to positive, changing the patients' motivations.

Antagonism in Daily Life: An Exploratory Ecological Momentary Assessment Study

Colin E. Vize et al.
Clinical Psychological Science

Vize and colleagues explored how antagonistic traits (e.g., manipulativeness, callousness, deceitfulness, grandiosity) manifest in daily life. Participants completed measures of personality disorders, negative affectivity, detachment, disinhibition, and antagonism. Using ecological momentary assessment (EMA) for periods ranging from 7 to 21 days, participants also rated their positive and negative affect, empathy, loneliness, and warm/cold and dominant/submissive perceptions of the self and the other in daily social interactions. Results indicated heterogeneity within antagonism and robust relations of antagonism with some manifestations (e.g., negative affect) but not with others (e.g., empathy).

Digital Technologies for Emotion-Regulation Assessment and Intervention: A Conceptual Review

Alexandra H. Bettis, Taylor A. Burke, Jacqueline Nesi, and Richard T. Liu
Clinical Psychological Science

Bettis and colleagues examine the use of digital technologies to assess emotion regulation and create interventions. They review technologies such as ecological momentary assessment, wearables and smartphones, smart-home technology, virtual reality, and social media. The use of these technologies allows researchers to study the dynamic nature of emotion regulation and its dependence on context and a person's internal state, which the traditional methods of static self-report measurement do not allow.

This capability has already led to changing the definition of emotion regulation to reflect the importance of flexibility across contexts. Bettis and colleagues discuss challenges such as the reliability and validity of the data collected and ethical considerations including issues of consent and data privacy. They also describe areas of future research and application, including the implementation of new models of mental health treatment.

[The Golden Rule as a Paradigm for Fostering Prosocial Behavior With Virtual Reality](#)

Mel Slater and Domna Banakou
Current Directions In Psychological Science

The Golden Rule of ethics states that you should not do to others what you would not want others to do to you, or that you should do to others as you would want them to do to you. This ethical principle can become a paradigm for promoting prosocial behavior in virtual reality, in which participants can directly experience the harm they inflict from the victim's perspective. This is possible because in virtual reality, participants can experience the illusion of owning a virtual body, including that of their own victim. Slater and Banakou describe how this phenomenon has been used to influence implicit attitudes and provide examples of how applying the golden rule in virtual reality can increase helping behavior.

[Transdiagnostic Approaches to Sexual- and Gender-Minority Mental Health](#)

Nicholas R. Eaton, Craig Rodriguez-Seijas, and John E. Pachankis
Current Directions In Psychological Science

Eaton and colleagues argue that transdiagnostic approaches might facilitate understanding and reduction of the mental health disparities affecting individuals from sexual and gender minorities. Contrary to traditional diagnostic approaches, science-based transdiagnostic approaches that account for patterns of disparities and comorbidity across mental health problems might more efficiently help researchers identify the mechanisms linking minority stress to poor mental health, develop interventions to reduce stigma, and identify when treatment of the negative outcomes of minority stress could be the most effective.

[The Predictive Brain Must Have a Limitation in Short-Term Memory Capacity](#)

Sabrina Trapp, Thomas Parr, Karl Friston, and Erich Schröger
Current Directions In Psychological Science

Trapp and colleagues explain how the traditional tasks used to assess short-term memory might conceal the function of short-term memory and the reason for its limited capacity. Specifically, they suggest that asking participants to retrospectively remember sensory input (words, images, or numbers) obscures the role of short-term memory in prospectively predicting future sensory input. Trapp and colleagues suggest that short-term memory's capacity is limited because humans can predict more accurately by focusing on sequences of events that are long enough to allow them to adjust their behavior but short enough to avoid requiring them to compute too many possibilities.

[The Rise, Demise, and Reprise of the Increasingly Protracted APA Journal Article?](#)

Gregory D. Webster, Val Wongsomboon, and Elizabeth A. Mahar
Perspectives On Psychological Science

Scientific articles might be getting longer, Webster and colleagues suggest. The researchers analyzed the length of American Psychological Association journal articles published between 1986 and 2019. Results indicated that article length increased in the 1980s and the 1990s, plateaued in the 2000s, and increased again in the 2010s. Journals with a higher impact factor also had the largest increases in article length. Moreover, it appears that pages per article increased most on average after psychology's credibility crisis. These findings might be related to an increased emphasis on reporting experimental details and transparency.

[The Diversity Gap: When Diversity Matters for Knowledge](#)

Justin Sulik, Bahador Bahrami, and Ophelia Deroy
Perspectives On Psychological Science

Despite the political and ethical value of diversity, research has not always found that it benefits knowledge. Focusing on cognitive diversity, Sulik and colleagues explain that evidence for a benefit from cognitive diversity is mixed. However, the researchers believe that rather than asking only why and how diversity benefits knowledge, scholars must rethink when one should expect these benefits. Sulik and colleagues show that the benefits of cognitive diversity are seen for multistage, complex, and creative problem solving during problem posing and hypothesis generation. In sum, cognitive diversity seems to be particularly beneficial for complex problem solving.

[Individual Differences in Structure Building: Impacts on Comprehension and Learning, Theoretical Underpinnings, and Support for Less Able Structure Builders](#)

Mark A. McDaniel, Elizabeth J. Marsh, and Reshma Gouravajhala
Perspectives On Psychological Science

Structure building involves forming coherent mental representations of conversations, texts, pictorial stories, and other events. McDaniel and colleagues suggest that variances in these abilities influence people's learning outcomes: Individuals with lower structure-building ability tend to perform worse on several comprehension and learning measures than individuals with higher structure-building ability. Lower abilities appear to be related to difficulties in processes including encoding factual content and inhibiting irrelevant information. However, some learning techniques might improve learning outcomes for lower structure builders, including embedding questions into learning materials, providing organizational support, and adding schematic diagrams.

[Citation Patterns Following a Strongly Contradictory Replication Result: Four Case Studies From Psychology](#)

Tom E. Hardwicke et al.
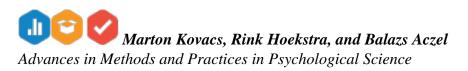*Advances in Methods and Practices in Psychological Science*

Hardwicke and colleagues examined the citation patterns that followed four multilaboratory replication attempts that contradicted or outweighed the original findings. Results indicated that a published replication led immediately to a small decrease in favorable citations of the original article and a small increase in unfavorable citations of the original article. These results suggest a perpetuation of belief in the original findings and only a modest corrective effect. Moreover, the replication studies were not cited as often as the original research in new articles. Thus, it appears that replication results that contradict original findings might not prompt a corrective response from the research community.

[Putting Psychology to the Test: Rethinking Model Evaluation Through Benchmarking and Prediction](#)

Roberta Rocca and Tal Yarkoni
Advances in Methods and Practices in Psychological Science

How should we evaluate models and theories in psychological science? Rocca and Yarkoni suggest that introducing common benchmarks to evaluate psychological science may foster cumulative progress and encourage researchers to consider the practical utility of scientific models. The researchers draw inspiration from fields such as machine learning and provide guidelines and concrete suggestions on how to develop these common benchmarks (each consists of a data set of coded examples and a task specification defining the metrics that will be used to quantify the model's predictions). Rocca and Yarkoni also address potential concerns that may arise during the development of benchmarks.

The Role of Human Fallibility in Psychological Research: A Survey of Mistakes in Data Management

Marton Kovacs, Rink Hoekstra, and Balazs Aczel
Advances in Methods and Practices in Psychological Science

Data management is not immune to human error. Kovacs and colleagues surveyed 488 researchers about the type, frequency, seriousness, and outcome of mistakes made by their research team in the last 5 years. Most researchers indicated low frequency of errors. The most frequent errors led only to minor consequences, such as time loss or frustration. However, the most serious mistakes, though rare in comparison, led to moderate consequences (e.g., affecting some conclusions) for almost half of the researchers and to major consequences for one-fifth of the researchers. The most frequent mistakes included ambiguous naming/defining of data, version control error, and wrong data processing/analysis. These most frequent mistakes were attributed to poor project preparation or management and/or personal difficulties.