Research Briefs

January 06, 2021

[Broken Physics: A Conjunction-Fallacy Effect in Intuitive Physical Reasoning](#)

Dawoon Choi, Laura J. Batterink, Alexis K. Black, Ken A. Paller, and Janet F. Werker

Psychological Science

Individuals appear to be prone to the conjunction fallacy—rating a conjunction of specific events as more likely to occur than only one of the events, despite this being a logical impossibility—when reasoning about physics. Participants viewed videos of physical scenarios and judged the probabilities that single and combined events would occur. Regardless of the type of scenario or phrasing, participants rated the combined events as more likely than the single events. These findings indicate that intuitive physical reasoning can be affected by a fallacy thought to affect only other types of cognitive activities.

[Personality Changes Predict Early Career Outcomes: Discovery and Replication in 12-Year Longitudinal Studies](#)

Kevin A. Hoff, Sif Einarsdóttir, Chu Chu, Daniel A. Briley, and James Rounds

Psychological Science

Personality changes from adolescence to adulthood appear to impact early career outcomes. Hoff and colleagues measured personality traits over 12 years (ages 17 to 29 years) in Icelandic youth and found that participants reported higher career satisfaction when they experienced growth in emotional stability, conscientiousness, or extraversion. Participants also reported higher income when they experienced growth of emotional stability and higher job satisfaction when they experienced growth in extraversion. These findings suggest that policy actions that help young people develop personality-based skills might improve human well-being.

[Prosocial Influence and Opportunistic Conformity in Adolescents and Young Adults](#)

Gabriele Chierchia, Blanca Piera Pi-Sunyer, and Sarah-Jayne Blakemore

Psychological Science

Social influence can be both a vulnerability and an opportunity to boost prosocial behaviors. Participants between 11 and 35 years old received 50 tokens (with real monetary value) and decided how many, if any, they wished to donate to different charities. After making their decisions, participants were informed of others' decisions and allowed to revise their donations. Older participants were least likely to revise their donations after learning about others' donations. Contrary to previous research findings, adults were as likely to conform to selfish others and to prosocial others, just like adolescents.

[Early Effects of the COVID-19 Pandemic on Relationship Satisfaction and Attributions](#)

Hannah C. Williamson

Psychological Science

Rather than deteriorating relationship satisfaction, the forced close proximity brought by the COVID-19 pandemic appears to have made individuals more forgiving of their partners' behaviors. Individuals in romantic relationships provided data about their relationships before the onset of the pandemic and during its early stages. Overall relationship satisfaction did not change, but individuals became less blaming of their partners' negative behaviors by attributing them less to their partners' characteristics. Couples who initially reported less conflict and better coping strategies were likely to see improvements in relationship satisfaction, whereas those with negative functioning were likely to see decreases in

satisfaction.

[The Altered Course of Learning: How Alcohol Outcome Expectancies Are Shaped by First Drinking Experiences](#)

Hayley Treloar Padovano, Tim Janssen, Alexander Sokolovsky, and Kristina M. Jackson

Psychological Science

How do first drinking experiences change a person's expectations about the outcomes of drinking alcohol? Treloar Padovano and colleagues surveyed more than 1,000 youths from early to mid-adolescence. Across time, participants identified their expectancies about drinking (e.g., have fun, act stupid) and their drinking milestones (i.e., first sip, first full drink, and first heavy-drinking experience). Positive expectancies tended to increase and negative expectancies tended to decrease over adolescence, but these trajectories were altered by the reported drinking milestones, which made positive expectations more concrete and invalidated negative expectancies.

[Difficult Turned Easy: Suggestion Renders a Challenging Visual Task Simple](#)

Mathieu Landry, Jason Da Silva Castanheira, Jérôme Sackur, and Amir Raz

Psychological Science

Hypnotic suggestion can transform a difficult visual task into an easy one, this research suggests. Participants observed moving occluded shapes (e.g., diamonds, triangles) and indicated the direction of their motion. Participants were more accurate if they scored high on a scale of hypnotic suggestibility and received the hypnotic suggestion that they would be able to perceive nonexistent shapes occluding the moving shapes, compared to participants who scored low in hypnotic suggestibility or did not receive a suggestion. These results indicate that hypnotic suggestion can add perceptual information to facilitate performance in a visual task.

[The Factor Structure of Social Cognition in Schizophrenia: A Focus on Replication With Confirmatory Factor Analysis and Machine Learning](#)

Philipp Riedel, William P. Horan, Junghee Lee, Gerhard S. Hellemann, and Michael F. Green

Clinical Psychological Science

Social cognition (the processes needed to use information for adaptive social interactions) might help to explain heterogeneity in functional outcomes in schizophrenia and develop interventions to improve

functional recovery. Thus, Riedel and colleagues aimed to clarify the factor structure of social cognition in schizophrenia, using confirmatory factor analysis and machine learning. Results validated a three-factor model for social cognition—low-level (e.g., emotion recognition), high-level (e.g., empathy), and attributional bias factor (e.g., tendency to over attribute hostile intentions to others). Each of these factors showed different patterns of correlation with clinical symptoms, nonsocial cognition, and functional outcomes.

[Anxiety Modulates Preference for Immediate Rewards Among Trait-Impulsive Individuals: A Hierarchical Bayesian Analysis](#)

Nathaniel Haines, Theodore P. Beauchaine, Matthew Galdo, et al.

Clinical Psychological Science

Haines and colleagues tested three groups of participants with different levels of substance use (indicating different levels of impulsivity) on a task that measured impulsive decision-making. The authors also analyzed participants' trait impulsivity (strong preference for immediate over delayed rewards and difficulty inhibiting their behaviors) and state anxiety (i.e., momentary anxiety, contrasting with constant anxiety as a stable trait). Individuals with high trait impulsivity and experiencing high state anxiety appeared to make more optimal, future-oriented, and nonimpulsive decisions than when they were experiencing lower anxiety. Thus, among impulsive individuals, anxiety can diminish a preference for immediate rewards.

[Derationalizing Delusions](#)

Vaughan Bell, Nichola Raihani, and Sam Wilkinson

Clinical Psychological Science

Bell and colleagues argue that models of delusions should not solely focus on impairments to domain-general reasoning but should also account for processes involved in affiliation, group perception, and relationship management. The researchers suggest that models of delusions that include alterations to these social processes can account for the fact that delusions are socially themed, show reduced sensitivity to social context, and can be induced through adaptive social cognitive processes that also contribute to social integration. Bell and colleagues further suggest that the role of dopamine in both delusions and social organization supports these models.

[A Developmental Science Perspective on Social Inequality](#)

Laura Elenbaas, Michael T. Rizzo, and Melanie Killen

Current Directions in Psychological Science

What do we know about children's and adolescents' awareness, beliefs, and behavior regarding social inequalities? Elenbaas and colleagues use a social reasoning developmental (SRD) model to describe when, in our development, we become aware of social inequalities, how children and adolescents generate explanations for those inequalities, and how that reasoning informs what they think should be done to address inequality. Research indicates that children's concerns for fairness emerge early and allow them to identify and try to correct inequality. Elenbaas and colleagues suggest that continued investigation in this area may help to foster a more just society.

[What Your Nose Knows: Affective, Cognitive, and Behavioral Responses to the Scent of Another Person](#)

Marlise K. Hofer, Frances S. Chen, and Mark Schaller

Current Directions in Psychological Science

People associate body odors with different types of information, such as personal characteristics or emotional states. Hofer and colleagues review recent research on responses to strangers' body odors (e.g., the scent of a sick person leads perceivers to judge them as less "likable"; the scent of a fearful person increases the perceiver's anxiety) and new research about the consequences of loved ones' scents (e.g., a loved one's body odor reduces stress and enhances sleep). Hofer and colleagues suggest that future research should explore how people acquire the knowledge they use to make odor-based inferences.

[When Ignoring Negative Feedback Is Functional: Presenting a Model of Motivated Feedback Disengagement](#)

Felix Grundmann, Susanne Scheibe, and Kai Epstude

Current Directions in Psychological Science

Sometimes people ignore negative feedback to feel good (i.e., hedonic-goal attainment), Grundmann and colleagues argue. They propose that the negative affect induced by negative feedback might make people more motivated to feel good (i.e., pursue a hedonic goal) than to improve their performance (i.e., pursue an improvement goal). Thus, after forming the intention to regulate their emotions, feedback recipients implement an emotion-regulation strategy that can include engagement (reappraisal and feedback focus) or disengagement (distraction and feedback removal). These strategies will impact feedback results differently.

[Why Facts Are Not Enough: Understanding and Managing the Motivated Rejection of Science](#)

Matthew J. Hornsey

Current Directions in Psychological Science

The public in general can deny the validity of scientific findings (e.g., climate change, vaccination). Hornsey suggests that motivated reasoning might explain why it is so difficult to change science-

skeptical attitudes—that is, if people are motivated to hold a belief, they selectively interpret evidence that reinforces their belief. He proposes that scientific communication might be more effective if it relies on understanding six reasons and motivations for science-skepticism: ideologies, vested interests, conspiracist worldviews, fears and phobias, personal-identity expression, and social-identity needs.

[Drinking Together and Drinking Alone: A Social-Contextual Framework for Examining Risk for Alcohol Use Disorder](#)

Kasey G. Creswell

Current Directions in Psychological Science

Creswell proposes a framework for examining the risk for alcohol use disorder (AUD) that focuses on the importance of the context in which drinking occurs. The author reviews research comparing antecedents and consequences of social and solitary drinking in adolescents and young adults. Creswell shows that social drinking appears to be linked to enhancing positive emotions and social experiences, whereas solitary drinking appears to be linked to coping with negative emotions. This social-contextual account of AUD might allow clinicians to better understand why individuals drink and help to identify the best approach for clinical interventions.

[Contact Tracing: A Memory Task With Consequences for Public Health](#)

Maryanne Garry, Lorraine Hope, Rachel Zajac, Ayesha J. Verrall, and Jamie M. Robertson

Perspectives on Psychological Science

Contact tracing—the process through which public health officials identify people who contacted someone infected with a virus or other hazard—is among the most powerful weapons against COVID-19. Contact tracing's efficacy depends on the quality of information that infected people may provide; thus, it might be affected by the same challenges that affect witnesses and investigative interviewing. Garry and colleagues identify these challenges (e.g., imprecision, memory mistakes, omissions) and possible approaches to address them (e.g., use of questions and instructions that promote detail and accuracy, development of good rapport).

[Asymmetries in Mutual Understanding: People With Low Status, Power, and Self-Esteem Understand Better Than They Are Understood](#)

Sanaz Talaifar, Michael D. Buhrmester, Özlem Ayduk, and William B. Swann, Jr.

Perspectives on Psychological Science

People who perceive themselves as having low status, even when they do not, understand others better than they are understood. Talaifar and colleagues show that people with low self-esteem as well as people with low status or power tend to understand those with high self-esteem, status, and power—but this understanding is not reciprocal. Several studies indicate that providing the latter group with information about people with low self-esteem, status, and power and increasing that group's motivation

to understand those with lower status might reduce these asymmetries in mutual understanding.

Your Coefficient Alpha Is Probably Wrong, but Which Coefficient Omega Is Right? A Tutorial on Using R to Obtain Better Reliability Estimates

David B. Flora

Advances in Methods and Practice in Psychological Science

In this tutorial, Flora describes alternative forms of the coefficient omega—an alternative to the coefficient alpha, for conveying reliability estimates—and provides guidelines for choosing the appropriate omega estimates. He shows several examples and demonstrates how to perform omega calculations using R. The different forms of coefficient omega are reliability estimates calculated from models that represent associations between a test's items and the construct the test is intended to measure. This coefficient appears to reflect reliability better than alpha coefficients, which depend on restricted and unrealistic psychometric models.

Measurement Schmeasurement: Questionable Measurement Practices and How to Avoid Them

Jessica Kay Flake and Eiko I. Fried

Advances in Methods and Practice in Psychological Science

Flake and Fried define questionable measurement practices that jeopardize the validity of measures and study results. They also offer practical actions to avoid these practices, arguing for the transparency of measurement decisions. Reporting the following information may help to ensure transparency about measurement practices: construct definition and its theoretical/empirical support; justification for the measure selection; existing validity evidence; measure and administration procedure; response coding and transformation; detailed score calculation; all psychometric analyses; detailed descriptions of measurement modifications; and creation of any new measures and their detailed description and justification.