

New Content From *Current Directions in Psychological Science*

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[Parsing ADHD With Temperament Traits](#)

Joel T. Nigg

Nigg suggests that attention-deficit/hyperactivity disorder (ADHD) exemplifies the need to better understand variation within psychiatric conditions (heterogeneity) and co-occurrence of different conditions. Developing the understanding of ADHD heterogeneity appears promising when researchers consider dimensions of trait affectivity. These dimensions can include surgency (i.e., high levels of sociability, activity, and positive emotion) and negative affectivity; their constituent lower-order traits, such as irritability; and the integrative function of self-regulation. Several lines of investigation focusing on ADHD and temperament traits (related to emotional regulation and dysregulation) are proving useful. Work in this area has the potential to improve theory, nosology, and clinical assessment in the future, Nigg writes.

[Magnitudes for Nervous Systems: Theoretical Issues and Experimental Evidence](#)

Giorgio Vallortigara, Elena Lorenzi, Andrea Messina, and Matilde Perrino

Vallortigara and colleagues review the literature on how different nervous systems process information about quantities (i.e., magnitudes). They present evidence suggesting that subcortical brain regions play an important role in magnitude estimation, as do the cortical brain regions already known to participate in that function. The researchers discuss interactions between different domains of magnitude and formulate a hypothesis to account for the associations between discrete and continuous magnitudes. Finally, they suggest how the distinction between the number and the discrete quantity should foster more attention to the role of sensory brain regions in assessing discrete quantities.

[Cross-Modal Interactions of the Tactile System](#)

K. Sathian and Simon Lacey

Sathian and Lacey describe how recent research has indicated the potential for robust and abundant

interactions between the senses. We commonly use touch and vision to obtain information about object properties; these senses share perceptual and neural representations in many domains. Visuotactile interactions contribute to the sense of body ownership. Touch and hearing both rely in part on temporal-frequency information, which leads to audiotactile interactions reflecting perceptual and neural overlap. Researchers in sensory neuroscience and psychophysics are now focused on characterizing the multisensory interactions that lead to humans' panoply of perceptual experiences.

Chasing Unknown Bandits: Uncertainty Guidance in Learning and Decision Making

Maarten Speekenbrink

Human learning, attention, and exploration are guided by uncertainty, Speekenbrink argues. In repeated decision problems that foster learning from experience, people should seek out uncertain options to improve future decisions. Research using multiarmed-bandit tasks supports this prediction. These tasks involve repeated decisions between options with initially unknown reward distributions and require balancing learning about relatively unknown options (exploration) and obtaining high immediate rewards (exploitation). The best way to resolve this exploration-exploitation dilemma is to consider the estimated value of each option and the uncertainty in these estimations. Results from these tasks and computational modeling support Bayesian theories of cognition, which naturally quantify uncertainty, and underpin the fundamental role of subjective uncertainty in both learning and decision making.

Secret Agents of Influence: Leveraging Social Norms for Good

P. Wesley Schultz

Social norms refer to an individual's beliefs about common and accepted behaviors within a group. Research has shown that communications highlighting the large number of people who engage in a behavior can effectively promote change across a wide range of behaviors, including pro-environmental behavior. Contemporary research continues to uncover moderators of the effectiveness of social norms, Schultz explains. These moderators include the magnetic middle (the same message can increase and decrease the frequency of behaviors for those below and above the norm, respectively), deviations from the norm, personal values, culture, norm activation, reference to changing frequency, and social identity.

Implementing Evidence-Based Mental-Health Treatments: Attending to Training, Fidelity, Adaptation, and Context

Shannon Wiltsey Stirman

Stirman reviews some key considerations in the field of implementation science concerning clinical psychology. These include recent findings regarding treatment fidelity, adaptation of treatments, clinical outcomes, and training therapists to provide evidence-based therapies as they were designed to be delivered, ensuring they have the skills and ability to adapt as needed to ensure better fit regardless of where clients receive treatment. Stirman concludes by considering implications for implementing and sustaining new treatments and supporting their fidelity and adaptation, as well as directions for future research.

Sidelining Bias: A Situationist Approach to Reduce the Consequences of Bias in Real-World Contexts

Jason A. Okonofua, Lasana T. Harris, and Gregory M. Walton

Okonofua and colleagues suggest that instead of conceptualizing bias as an automatic response, researchers and practitioners should presume that people are inherently complex, with multiple, often contradictory, selves and goals. Thus, it might be possible to ask when biased selves are likely to emerge and whether this bias can be sidelined—whether situations can be altered in ways that elevate alternative selves and goals for which bias would be nonfunctional. The authors show how sidelining bias has led to meaningful improvements in real-world outcomes, including higher academic achievement, less recidivism to jail, and less stereotyping in mass advertisements.

Interdependence of Emotion: Conceptualization, Evidence, and Social Implications From Cultural Psychology

Yukiko Uchida, Masataka Nakayama, and Kimberly S. Bowen

Emotions can be defined as emerging primarily from the individual (i.e., more independent) or as being shared with other people and arising from social contexts and collective situations (i.e., more interdependent). In a review of studies that investigated emotion interdependence across cultures, Uchida and colleagues suggest that people from non-WEIRD cultures (i.e., cultures that are not Western, Educated, Industrialized, Rich, and Democratic) are more likely than others to experience emotions as interdependent. The researchers highlight examples of interdependence, such as happiness and awe. They also discuss mechanisms and functions of emotion interdependence using the example of a current collective threat, COVID-19.

Work Identity and Future Research on Work as a Calling

Americus Reed, II, Samuel Jones, and Bryan J. Dik

People who view their work as a calling they can actively live out usually experience both career-related and general well-being. Reed and colleagues propose a cognitive framework for constructing a sense of work as calling. This approach builds on four key work-identity precursors: effort calculation (i.e., evaluating the effort needed to produce high-quality work outputs), reflection on one's work-related skills and engagement in self-development, appraisal of one's work through the eyes of others, and fusion (i.e., the belief that one's work is an extension of oneself). These processes may illuminate how people come to perceive a calling.

The Promise and Peril of Genetics

Danielle M. Dick

Dick provides an update on advances in the field of behavior genetics in the last 20 years. Scientists can now comprehensively scan the genome, testing variation across millions of genetic markers. Large consortia of scientists are analyzing data from millions of individuals. Multivariate methods enable scientists to identify genes involved in “normal” processes rather than specific disorders or traits. These advances can have a widespread effect on medicine and society. However, such rapid progress brings ethical, social, and legal challenges, including the need for increased diversity to ensure that all people benefit from advances in the field.

Theories of Context Effects in Multialternative, Multiattribute Choice

Jennifer S. Trueblood

Researchers in psychology, neuroscience, marketing, and economics have been keen to understand the effects of context in decision making involving multiple alternatives with multiple attributes. These effects violate classic decision theories and have led to the development of computational and mathematical models that explain how underlying cognitive and neural mechanisms give rise to the effects. Trueblood reviews dynamic models of context effects, noticing that most incorporate an attention mechanism. This suggests that attention plays an important role in multialternative, multiattribute decision making. Trueblood hypothesizes that changes in attention could be responsible for unexpected context effects, recently described in the literature.

Winner Takes All! What Are Race Models, and Why and How Should Psychologists Use Them?

Andrew Heathcote and Dora Matzke

The processes that mediate between stimuli and response cannot be directly measured but instead must be inferred from observed responses. Race models, by accounting for both response choices and response times, have been key enablers of such inferences. Different types of race models generally posit that: (a) one or more cognitive processes (i.e., the “runners”) take time to complete a task (i.e., the race); (b) these processes may or may not interact with each other in a way that affects their timing; and (c) the runner, or set of runners, that finishes first determines subsequent processing. Examples of such models appeared contemporaneously with the cognitive revolution and have since become increasingly prominent and elaborated, so that psychologists now have a powerful array of race models at their disposal. Heathcote and colleagues showcase the state of the art for race models and describe why and how they are used.

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