

Research Briefs

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Research Briefs features summaries of selected articles published recently in [APS's six journals](#). APS members receive weekly summaries of all new journal articles through the This Week in Psychological Science newsletter.

[Transfer of Learned Cognitive Flexibility to Novel Stimuli and Task Sets](#)

Tanya Wen, Raphael M. Geddert, Seth Madlon-Kay, and Tobias Egner

Psychological Science

This research indicates that people may extract statistical information about how variable their environment is and use it to guide their flexibility in other environments. Participants performed a card-sorting task in environments where the task's rules changed with either high or low volatility (requiring high or low cognitive flexibility, respectively) before switching to medium volatility. When the first task required more cognitive flexibility, participants were faster to adapt to rule changes in the subsequent task. This effect was independent of task and stimulus, indicating that how we form and generalize knowledge of our environmental structures may guide cognitive control.

[Visual Short-Term Memory Persists Across Multiple Fixations: An n-](#)

Back Approach to Quantifying Capacity in Infants and Adults

Bret Eschman and Shannon Ross-Sheehy



Psychological Science

Infants show a similar relation between fixation and visual working memory to that of adults, this research suggests. Eschman and Ross-Sheehy tracked eye movements as infants (5- and 11-months-old) and adults viewed an array of four colored circles. After a blank interval, the researchers presented an array that either was identical to the previous array or identical except for one circle that had changed color. They measured change detection for the last fixated item (one-back), the second-to-last fixated item (two-back), or the nonfixated item (change-other). Results for all ages indicated memory for up to two sequentially fixated objects (i.e., one-back, two-back), with moderate evidence for nonfixated array items.

The Development of Spatial Cognition and Its Malleability Assessed in Mass Population via a Mobile Game

Shan Xu, Yiying Song, and Jia Liu



Psychological Science

To determine the developmental trajectory of spatial cognition and the best years in which to improve spatial skills, Xu and colleagues used a mobile game involving mental rotation. They tested a large sample of people from China, ranging from under 10 years old to older than 60, who played the game multiple times on their mobile devices. Results indicated that performance peaked at the age of 28, whereas the benefit of training peaked at 18. This asynchrony in development suggests that malleability may lay the foundation for developing spatial ability. Children showed low malleability, possibly because of their underdeveloped ability of mirror-image discrimination.

Well-Being and Cognitive Resilience to Dementia-Related Neuropathology

Emily C. Willroth et al.



Psychological Science

Well-being might be a key factor to prevent and delay the onset of dementia, this research suggests. Willroth and colleagues analyzed data from older adults in the United States and found that people with higher eudaimonic and hedonic well-being showed better-than-expected cognitive functioning relative to their neuropathological burden (e.g., beta-amyloid, vascular pathologies, hippocampal sclerosis). The protective effect of eudaimonic well-being was present regardless of known cognitive resilience factors (e.g., socioeconomic status, cognitive activity) and dementia risk factors (i.e., apolipoprotein E [ApoE] genotype, medical comorbidities). Thus, people with higher levels of well-being might tolerate higher levels of neuropathology associated with Alzheimer's disease and related dementias without experiencing memory and thinking impairments (i.e., greater cognitive resilience).

Mnemonic Content and Hippocampal Patterns Shape Judgments of Time

Brynn E. Sherman, Sarah DuBrow, Jonathan Winawer, and Lila Davachi

Psychological Science

This research suggests the content and accessibility of memories shape time perception. Participants judged the duration of events (i.e., how long a colored square stayed on a screen) while Sherman and colleagues collected functional MRI data. The researchers found that event boundaries (e.g., when the square changed colors during the presentation), which have been shown to disrupt ongoing memory integration processes, resulted in temporal compression (i.e., events were judged as shorter). When participants judged the events as longer, fMRI indicated greater changes in the left hippocampus. Thus, memory disruptions and time distortions may be linked via the hippocampus.

Development and Feasibility Pilot Study of Indigenous Recovery Planning: A Community-Engaged Approach to Addressing Substance Use in a Native Community

Monica C. Skewes et al.

Clinical Psychological Science

As part of a community-based participatory research project involving 5 years of relationship building and three preliminary studies, Skewes and colleagues developed an intervention to help tribal members of a rural American Indian reservation recover from substance use disorders. The Indigenous recovery planning (IRP) intervention consisted of six weekly sessions designed to provide inroads to existing community resources, affirm and enhance Native identity, address culturally relevant risk factors, and build on strengths. Results from a pilot study suggest that IRP is feasible to implement and acceptable to the community. Although there was insufficient statistical power to conduct hypothesis testing, IRP had positive results for recovery within the community from substance use disorders.

Sociopolitical Values as the Deep Culture in Culturally Competent Psychotherapy

Richard E. Redding and Cory Cobb

Clinical Psychological Science

Although the consideration of client and therapist values is considered a core component of culturally competent psychotherapy, sociopolitical attitudes and values (SPAVs) specifically have been almost entirely neglected in the literature, Redding and Cobb suggest. They argue that research in behavior genetics, neuroscience, and personality and social psychology suggests that SPAVs often play a substantial role in people's self-concept, behaviors, relationships, and life choices. Thus, cultural competence requires that therapists consider the ways in which both the client's and therapist's SPAVs, and the interaction between them, can affect therapeutic processes and outcomes.

The Role of Personality in the Mental and Physical Health of World Trade Center Responders: Self-Reports Versus Informant-Reports

Joshua R. Oltmanns et al.

Clinical Psychological Science

Responders to the 9/11 attacks on the World Trade Center, along with their spouses, family members, and friends (informants) completed five-factor model personality measures and assessments of stressful events, functioning, mental disorders, 9/11-related treatment costs, body mass index (BMI), and daily activity across 3 years. Self-reports were uniquely related to stressful events and functioning. A combination of self-reports and informant-reports was more valid than either type of report alone for mental disorder diagnoses and treatment costs. For daily activity and BMI, informant-reports were more valid than self-reports. The findings suggest that informant-reports of personality may be more valid indicators of objective health outcomes.

System-Centered Care: How Bureaucracy and Racialization Decenter Attempts at Person-Centered Mental Health Care

Miraj U. Desai, Nadika Paranamana, John F. Dovidio, Larry Davidson, and Victoria Stanhope

Clinical Psychological Science

Desai and colleagues explored structural biases in mental health organizations in the context of person-centered care—an emerging framework for health systems globally. Findings obtained via qualitative interviews indicated how institutional structures may create a risk that clients will be seen as racialized or bureaucratic objects instead of individuals. Specifically, the researchers explain how racial profiles could become determinants of care within institutions and how another, covert form of institutional objectification could emerge in which clients are reduced to bureaucratic objects. The findings suggest a basic psychosocial process—a type of “bureaucra-think”—through which staff could become unwitting carriers of system-centered care.

A Meta-Analysis of the Relationship Between Worry and Rumination

Elizabeth C. Stade and Ayelet Meron Ruscio

Clinical Psychological Science

Worry and rumination, as indexed by current self-report measures, appear to have common as well as distinct features, this research suggests. Stade and Ruscio conducted a series of meta-analyses evaluating the relationship between worry and different forms of rumination. They analyzed 719 effect sizes and found that: (a) worry was associated with global rumination and with the brooding and emotion-focused subtypes of rumination, and (b) worry showed a smaller, though still significant, association with the reflection subtype of rumination. Given that worry and rumination appear to reflect related but nonredundant constructs, researchers might want to study them together, when possible.

Pride-and-Prejudice Perspectives of Marginalization Can Advance Science and Society

Tiffany N. Brannon

Current Directions in Psychological Science

Research that conceptualizes marginalization as tied to pride and prejudice—or as simultaneously a source of strengths and stigma—is well positioned to address social problems and foster progress for

science and society, Brannon writes. Focusing on marginalization associated with race-ethnicity, social class, refugee status, and gender identity and sexual orientation, the author highlights growing research that harnesses pride-and-prejudice perspectives to advance psychological theory and application linked to (a) inclusion among marginalized groups and (b) intergroup attitudes among more dominant or privileged groups. Brannon suggests policy directions that can foster inclusion and facilitate positive intergroup attitudes.

Impacts of Learning One's Own Genetic Susceptibility to Mental Disorders

Woo-kyoung Ahn and Annalise M. Perricone

Current Directions in Psychological Science

Ahn and Perricone review the possible consequences of knowing one's genetic susceptibility to mental disorders. Upon learning of elevated genetic risks for a mental disorder (e.g., depression), people may become more pessimistic and misremember their symptoms as being more serious. Why? Because they misconceive genes as immutable and defining of their identity. In contrast, upon learning that they are not genetically predisposed to a mental disorder (e.g., alcohol use disorder), people may underplay symptoms even when they experience them. The researchers suggest that further research should study ways in which genetic feedback can be misunderstood and redress genetic misconceptions.

Rational Choice in Context

Shlomi Sher, Craig R. M. McKenzie, Johannes Müller-Trede, and Lim Leong

Current Directions in Psychological Science

Human decisions are context dependent, violating classical norms of rational choice. However, these norms implicitly depend on assumptions that are often unrealistic, such as the assumption that information is constant across contexts. Sher and colleagues review recent evidence that some important context effects reflect dynamically coherent belief and preference updating in response to ecologically valid cues (embedded in frames, procedures, or menus) to which human decision makers can be highly sensitive. This evidence, which supports the idea that human decision makers are not mere puppets of the choice architecture, might foster a richer view of rational choice in context.

Water From the Lake of Memory: The Regulatory Model of Nostalgia

Tim Wildschut and Constantine Sedikides

Current Directions in Psychological Science

Wildschut and Sedikides organized the literature on triggers and functions of nostalgia—an emotion elicited by experiences that are appraised as unique, temporally or psychologically distant, and predominantly pleasant but irretrievable. The researchers advance a regulatory model in which nostalgia serves as a homeostatic corrective (i.e., a process that establishes and maintains a relatively stable psychological equilibrium) that countervails the negative effects of psychological perturbations and adverse environmental conditions. They illustrate complementary approaches to testing this model as it applies to transient nostalgia and show how it can be generalized to chronic nostalgia and collective nostalgia.

Mnemicity: A Cognitive Gadget?

Johannes B. Mahr, Penny van Bergen, John Sutton, Daniel L. Schacter, and Cecilia Heyes

Perspectives on Psychological Science

Episodic memory representations can be entertained either as “remembered” or “imagined.” Mahr and colleagues argue that this results from humans’ metacognitive capacity to determine the mnemicity of mental event simulations. They propose that mnemicity attribution is a “cognitive gadget”—a distinctively human ability made possible by cultural learning (a type of social learning in which traits are inherited through social interaction). In the case of mnemicity, one culturally learns to discriminate metacognitive “feelings of remembering” from other feelings; to interpret feelings of remembering as indicators of memory rather than imagination; and to broadcast the interpreted feelings in culture- and context-specific ways, such as “I was there” or “I witnessed it myself.”

Coping or Thriving? Reviewing Intrapersonal, Interpersonal, and Societal Factors Associated With Well-Being in Singlehood From a Within-Group Perspective

Yuthika U. Girme, Yoobin Park, and Geoff MacDonald

Perspectives on Psychological Science

The experiences of single individuals (not in a romantic relationship) are diverse and heterogeneous. In this review, Girme and colleagues describe what is and is not known about factors associated with the well-being of individuals who are single. They examine three factors related to well-being in singlehood: (a) intrapersonal factors (characteristics of the individual), (b) interpersonal experiences (qualities of one’s social relationships and experiences), and (c) societal influences (features related to one’s broader social or cultural context). The authors highlight the importance of researchers considering diversity among singlehood experiences.

Music in the Middle: A Culture-Cognition-Mediator Model of Musical Functionality

Noah R. Fram

Perspectives on Psychological Science

Music is both universal and culture specific. Fram presents a culture-cognition-mediator model that situates music as a mediator in the cycle of cultures and selves representing the ways individuals both shape and are shaped by their cultural environments. This model draws on concepts of musical grammars and schema, on contemporary theories in developmental and cultural psychology that blur the distinction between nature and nurture, and on recent advances in cognitive neuroscience. Fram discusses the epistemological consequences of this model, specifically regarding transdisciplinarity, hybrid research methods, empirical applications and testable predictions, and the evolutionary origins of music itself.

Climate Change and Substance-Use Behaviors: A Risk-Pathways Framework

Francis Vergunst, Helen L. Berry, Kelton Minor, and Nicholas Chadi

Perspectives on Psychological Science

Vergunst and colleagues suggest that climate change could increase harmful substance use through five pathways: psychosocial stress arising from the destabilization of social, environmental, economic, and geopolitical support systems; increased rates of mental disorders; increased physical-health burden; incremental harmful changes to established behavior patterns; and worry about the dangers of unchecked climate change. Also, young people appear to face disproportionate risks because of their high vulnerability to mental-health problems and substance-use disorders and greater number of life years ahead in which to be exposed to current and worsening climate change.

[Comparing Analysis Blinding With Preregistration in the Many-Analysts Religion Project](#)

Alexandra Sarafoglou, Suzanne Hoogeveen, and Eric-Jan Wagenmakers



Advances in Methods and Practices in Psychological Science

Sarafoglou and colleagues compared preregistration with analysis blinding—a method in which researchers develop their analysis of a research question on an altered version of the data collected in the original research. In the Many-Analysts Religion Project, 120 teams answered the same research questions with the same data set, either preregistering their analysis or using analysis blinding. Results support the hypothesis that analysis blinding leads to fewer deviations from the analysis plan, and on fewer aspects. Also, both methods required approximately the same amount of time. Thus, analysis blinding does not mean less work, but it does allow researchers to plan more appropriate analyses with fewer deviations.

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