New Content From *Current Directions in Psychological Science*

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[Cultural Dynamics for Sustainability: How Can Humanity Craft Cultures of Sustainability?](#)
Yoshihisa Kashima

Kashima suggests that humanity faces two types of adaptation problems related to achieving sustainable development: environmental challenges of climate change and humanitarian challenges of ensuring well-being for all. As a response, Kashima proposes the development of cultures of sustainability that encourage sustainable lifestyles. The critical ingredients of these cultures include conceptions of human-nature connectedness and human-artifact relations, conversations about sustainability norms, and visions of an achievable sustainable future. Individual citizens, along with the necessary institutional responses and multidisciplinary approaches, can participate in the changes necessary to craft cultures of sustainability.

[ABC Training: A New Theory-Based Form of Cognitive-Bias Modification to Foster Automatization of Alternative Choices in the Treatment of Addiction and Related Disorders](#)
Reinout W. Wiers, Pieter Van Dessel, and Catalina Köpetz

In ABC training, patients are trained in the context of personal antecedents (A) to make behavioral choices (B) according to the patients' goals and in light of their consequences (C). By providing a new theoretical view of automatic inferences, Wiers and colleagues suggest ABC training as an improvement to cognitive-bias modification (CBM), a commonly used intervention that targets distortions in thinking. The authors discuss evidence that ABC training might be useful to treat addictions and related disorders.

[Probabilistic Biases Meet the Bayesian Brain](#)
Nick Chater, Jian-Qiao Zhu, Jake Spicer, Joakim Sundh, Pablo León-Villagrá, and Adam Sanborn

Chater and colleagues propose that the brain does not calculate probabilities but rather approximates probabilistic calculations by drawing samples from memory or mental simulation. The sampling models suggested by Chater and colleagues can explain many classic judgment and decision-making findings,

including heuristics and biases, such as availability, representativeness, and anchoring and adjustment. The idea that humans have a probabilistic mind based on sampling may allow for a reconciliation between the rational models of Bayesian cognitive science (suggesting that the brain can represent and perform perfect probabilistic calculations) and the apparently nonrational findings of judgment and decision-making research.

Toward a Science of Effective Cognitive Training
Claire R. Smid, Julia Karbach, and Nikolaus Steinbeis

Cognitive training can lead to near transfer (i.e., increased performance of untrained tasks when trained cognitive skills are used), but whether it can increase performance on loosely related tasks (i.e., far transfer) is still an open question. Smid and colleagues argue for the need to take a more mechanistic approach to study the effectiveness of cognitive training. They propose the adoption of more rigorous theoretical frameworks, the consideration of individual differences in responsiveness to training, and the use of Bayesian models of development to solve controversial issues about cognitive training and to lead to more effective training.

The Development of Working Memory
John P. Spencer

What neural processes underlie working memory, and how do they change over a child's development? Spencer answers these questions with the aid of computer simulations of neural-network models. He reviews how information is actively maintained in working memory via self-sustaining neural activation and its implications for working memory capacity limits. Spencer then discusses how working memory capacity and self-sustaining activation change over development. He proposes the use of neurocomputational models to select the intervention tools that may foster the development of a child's robust working memory.

Behavioral and Physiological Evidence Challenges the Automatic Acquisition of Evaluations
Olivier Corneille and Gaëtan Mertens

Corneille and Martens show how recent research challenges the idea that evaluations (e.g., fears and attitudes) are automatically acquired and based on involuntary and uncontrollable processes not influenced by verbal information. The authors explain that explicit (e.g., good/bad judgments), implicit (e.g., automatic associations), and physiological measures (e.g., skin conductance) have challenged the notion of automatic learning of evaluations. Moreover, procedures that prevent the conscious encoding of these stimuli do not indicate evaluative learning, which is usually sensitive to individuals' processing goals. Thus, verbal instructions in social and clinical interventions might contribute to changing "deep-rooted" attitudes and fears.

Building the Bridge: Outlining Steps Toward an Applied Sleep-and-Memory Research Program
Gordon B. Feld and Susanne Diekelmann

Feld and Diekelmann propose a framework for an applied research program in sleep and memory. This framework would help to translate sleep's beneficial role for memory into applications for improving memory. The authors review different techniques to enhance memory during sleep (e.g., sleep hygiene

to increase sleep quality; targeted memory reactivation by presenting certain stimuli during sleep). They also identify the most promising targets for sleep-based memory-improvement applications in healthy and clinical populations (e.g., smoking cessation and phobias).