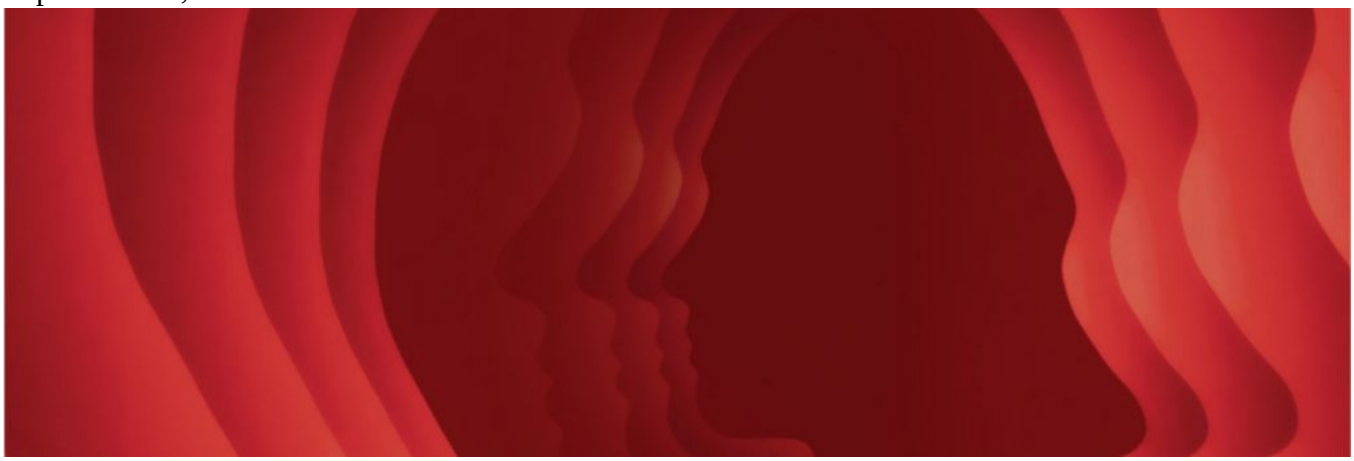
New Research From Psychological Science

September 08, 2017



Read about the latest research published in *Psychological Science*:

Cost-Benefit Arbitration Between Multiple Reinforcement-Learning Systems

Wouter Kool, Samuel J. Gershman, and Fiery A. Cushman

Human behavior is thought to be determined by an automatic low-cost system that relies on habit (model-free system) and a controlled higher-cost system that relies on planning (model-based system). In a reinforcement-learning setting, a model-free system leads people to choose actions that have previously led to rewards, whereas a model-based system has more flexibility by planning in a causal model of the environment. The researchers investigated how people allocate resources between these systems by examining how decision outcomes influenced subsequent decisions in low- and high-stakes two-step tasks. The researchers found that participants relied on model-based systems in high-stakes situations, but only when it yielded more accurate performance. This suggests that choice of system is balanced through an on-line cost-benefit analysis.

Unexpected Gains: Being Overweight Buffers Asian Americans From Prejudice Against Foreigners

Caitlin Handron, Teri A. Kirby, Jennifer Wang, Helena E. Matskewich, and Sapna Cheryan

Can being overweight protect people from other types of race-based assumptions? In a series of 10 studies, participants saw photographs of Asian individuals (Studies 1, 2, and 3), Asian and White individuals (Studies 4, 5, and 6), Asian, White, and Black individuals (Studies 7 and 8), and Asian, White, and Latino individuals (Studies 9 and 10). The photographs were digitally altered to make the pictured individual look to be a normal weight or overweight. Participants answered a variety of questions probing (a) how “American” the pictured individual seemed and (b) their likelihood of being an undocumented immigrant. The researchers also conducted two meta-analyses of the studies. Asian individuals — but not individuals of other races — pictured as being overweight were perceived to be

more “American” than when they were pictured at a normal weight. Results indicated that participants’ perceptions were influenced by weight-based stereotypes about individuals’ presumed country of origin.

Single-Dose Testosterone Administration Impairs Cognitive Reflection in Men

Gideon Nave, Amos Nadler, David Zava, and Colin Camerer

Testosterone, a hormone produced by the adrenal glands, influences human physiology, brain development, and behavior. Despite the influence of testosterone on behavior and development, its effect on human cognition and decision making are not well known. To investigate this, the researchers instructed male participants to apply clear gel to their upper body and informed them that it was equally likely to contain testosterone or a placebo. Participants returned 4.5 hours later and took part in a cognitive-reflection task and a math task (to control for math skills, engagement levels, attention, and motivation). To measure testosterone levels, participants provided saliva samples before, during, and after the behavioral tasks. They completed a mood questionnaire and an exit survey in which they indicated the treatment they thought they had received. The authors found that testosterone decreased the chances of slow and deliberate cognitive processing even when controlling for mood, approximate prenatal testosterone exposure, arithmetic engagement, and participants’ beliefs about the treatment received.