

New Research in *Psychological Science*

October 29, 2021



[Psychological Drivers of Individual Differences in Risk Perception: A Systematic Case Study Focusing on 5G](#)

Renato Frey



What drives people to perceive risks in novel concepts such as 5G, the latest generation of cellular network technology? Frey tested a representative population sample during the initial deployment of 5G in Switzerland, when public debates about it were intense. The researcher analyzed participants' perceived risk, perceived benefit, and policy-related attitudes. He found that differences between individuals' risk perceptions were associated with hazard-related drivers (e.g., trust in institutions regulating 5G) and person-specific drivers (e.g., electromagnetic hypersensitivity), which predicted their policy-related attitudes (e.g., voting intentions). In a longitudinal field experiment, Frey found that individual changes in psychological drivers were linked to changes in perceived risk.

[Idiosyncratic Tower of Babel: Individual Differences in Word-Meaning Representation Increase as Word Abstractness Increases](#)

Xiaosha Wang and Yanchao Bi



Wang and Bi examined people's agreements on word-meaning representations, assessed using behavioral measures (semantic relationships based on participants' word ratings) and neuroimaging measures (word-evoked brain-activity patterns identified via functional MRI). They found that agreement varied systematically across different types of words: There was greater agreement on the meaning of words that refer to concrete objects (e.g., cat, refrigerator) than on the meaning of more abstract words (e.g., identity, violence). These findings might boost understanding of why communication may be difficult in domains such as politics, law, and sociology, which rely on abstract words.

[A Contextual Approach to the Psychological Study of Identity Concealment: Examining Direct, Interactive, and Indirect Effects of Structural Stigma on Concealment Motivation Across Proximal and Distal Geographic Levels](#)

Micah R. Lattanner et al.



Lattanner and colleagues measured forms of structural stigma related to sexual orientation (e.g., social policies) at different geographic levels (e.g., city, state). The researchers then linked these measures to data on identity-concealment motivation provided by gay and bisexual men residing in the United States. Results indicated that the association between structural stigma and concealment motivation existed across city, county, and state levels. This motivation was lower when participants resided in cities and states low in structural stigma. However, subjective perceptions of greater stigma increased the association between stigma and identity concealment.

[Absolute Versus Relative Success: Why Overconfidence Creates an Inefficient Equilibrium](#)

Alice Soldà, Changxia Ke, William von Hippel, and Lionel Page



In negotiation, overconfidence might provide relative benefits to more confident individuals despite its absolute costs to partnerships, this research suggests. Pairs of participants completed a general-knowledge quiz. After manipulating participants' confidence in their quiz performance, Soldà and colleagues had participants bargain over the unequal allocation of the prize they had earned for completing the quiz. Results indicated that high levels of confidence had the relative benefit of leading people to earn more than their partners but also the absolute cost of lowering earnings for both partners.

[Psychometric Curves Reveal Three Mechanisms of Vigilance Decrement](#)

Jason S. McCarley and Yusuke Yamani



Vigilance decrement consists of a decrease in signal detection rate throughout a task that requires sustained attention. McCarley and Yamani examined three possible mechanisms for vigilance decrement: conservative shifts of response bias (i.e., while performing a task, a person needs more evidence to identify a target), losses of perceptual sensitivity, or more frequent attentional lapses. By comparing the psychometric curves for the beginning and end of a visual vigilance task, the researchers found evidence for each of the three proposed mechanisms. Thus, sensitivity losses and changes in response criterion, but also mental lapses, might cause missing signals in sustained-attention tasks.

[Generating Options and Choosing Between Them Depend on Distinct Forms of Value Representation](#)

Adam Morris, Jonathan Phillips, Karen Huang, and Fiery Cushman



Across nine experiments, Morris and colleagues studied how people select a few options from a larger set of possibilities. Results indicated that (a) when selecting good candidates to choose from, participants estimated values by generalizing from past experience, and (b) to select among these candidates, participants estimated values by using context-specific information available at the time of the decision. This hybrid decision architecture indicates that people might use a less effortful process to

select a subset of good candidates followed by a more deliberate process to compute more accurate values and select from the subset.

[Inhibitory Cognitive Control Allows Automated Advice to Improve Accuracy While Minimizing Misuse](#)

Luke Strickland et al.



How do humans integrate automated advice into their decisions? Strickland and colleagues present a model of cognitive processes by which participants used automated decision aids to maintain aircraft separation in an air traffic control simulation. The evidence-accumulation model fit data showing higher accuracy when participants received correct advice and lower accuracy and increased response time when they received incorrect advice. Given the data and according to the model, automated advice tends to inhibit the accumulation of evidence that is incongruent with that advice. This suggests that rather than making decisions solely on automated advice, people also sample information from the environment.

[Dimensions of Perception: 3D Real-Life Objects Are More Readily Detected Than Their 2D Images](#)

Uri Korisky and Liad Mudrik



Korisky and Mudrik used augmented reality to test whether people prioritize the detection of the 3D objects over 2D objects. Prior experiments, using only on-screen stimuli, showed that 3D objects are better remembered than 2D objects but did not clarify whether 3D objects are also more readily detected. By using a visual paradigm with augmented reality goggles, Korisky and Mudrik found that participants perceived real objects more readily than by simply looking at their photographs. This effect only occurred for real and intact objects. These findings suggest that prior motor knowledge about how to interact with objects might influence people's perceptual priority of 3D objects over 2D objects.

[Sex, Drugs, and Genes: Illuminating the Moral Condemnation of Recreational Drugs](#)

Annika K. Karinen, Laura W. Wesseldijk, Patrick Jern, and Joshua M. Tybur



Degree of sexual openness appears to underlie the variability and heritability of some moral sentiments, this research suggests. Karinen and colleagues analyzed the sexual strategy (i.e., being more vs. less open to sex outside of a committed relationship) and the moral condemnation of recreational drug use in a sample of Finnish twins and siblings. Results indicated that genetic factors accounted for about 75% of the covariance between drug condemnation and sexual strategy and that the same genes influenced both drug condemnation and sexual strategy. Thus, some moral sentiments might be calibrated to promote certain sexual strategies, influenced by genetic factors.