Impulsivity, risk-taking, and loss aversion in a continuous response task

Anderson Fitch
University of Florida, Gainesville, Florida, United States

Seung-Wook Cho
University of Florida, Gainesville, Florida, United States

Peter Kvam
University of Florida, Gainesville, Florida, United States

Abstract

The subjective value of a choice option is modified by its potential outcomes, when those outcomes will be realized, how likely the outcomes are, and the valence associated with these outcomes (gains, losses). People's preferences in risky or intertemporal choice are often described by models like hyperbolic discounting, expected utility theory, and prospect theory. This study tested these models by eliciting hypothetical monetary choices along a continuum of tradeoffs between amount versus delay, amount versus risk, and amount to be gained versus amount to be lost. Offering a continuum of options allowed us to test qualitative predictions of the model – for example, a hyperbolic discounting model predicts that participants should never respond in the middle of a continuous scale where payoff is a linear function of delay. The results qualitatively falsify several common models, suggesting that current theories of binary choice are insufficient to account for valuation along a continuum.

In J. Culbertson, A. Perfors, H. Rabagliati & V. Ramenzoni (Eds.), *Proceedings of the 44th Annual Conference of the Cognitive Science Society.*