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Contextual Effects in Value-Based Decision Making: A Resource-Rational Mechanistic Account

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Abstract

A wealth of experimental evidence shows that, contrary to normative models of choice, peoples preferences are markedly swayed by the context in which options are presented. Particularly, there exist a well-known triad of effects, dubbed the contextual effects, which consistently show that preferences change depending on the availability of other options: the attraction effect, the similarity effect, and the compromise effect. In this work, we present the first resource-rational, process-level account of these three contextual effects by extending Nobandegani et al.'s (2018) sample-based expected utility model to the realm of multi-attribute value-based decision-making. Importantly, our work is consisted with two empirically well-supported findings: (1) People tend to draw only a few samples in their probabilistic judgment and decision-making, and (2) People tend to overestimate the probability of extreme events in their judgment.