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The Influence of Mechanism Knowledge on Causal Interactions

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Abstract

People rely on mechanism knowledge when making causal inferences that involve multiple causal variables. In particular, mechanism knowledge can influence whether people use linear or alternative integration rules to predict how multiple causes will interact to produce an effect. We examine whether general beliefs about mechanism types whether two causes operate by the same or different mechanisms might mediate such inferences. Experiment 1 demonstrates that when a causal interaction yields non-linear positive effects, people are more likely to infer that the two causes work via different mechanisms. Experiment 2 investigates the converse of this inference, showing that people also predict non-linear positive interactions more often when they know that two causes have different mechanisms.