

Informative Transitions: A Heuristic for Conditionalized Causal Strength Learning

Cory Derringer

University of Pittsburgh, Pittsburgh, PA, United States

Benjamin Rottman

University of Pittsburgh, Pittsburgh, Pennsylvania, USA

Abstract: Controlling for alternative causes is essential for learning the strength of any one cause on an effect. Several processes have been proposed for how people control for alternative causes, including probabilistic contrasts within focal sets and associative processes. We investigated another mechanism called the informative transitions heuristic; people selectively attend to temporally adjacent observations (informative transitions; IT) in which the state of the target cause changes but the alternative causes remain the same. Within ITs, whether the effect also changes in the same direction, does not change, or changes in the opposite direction implies that the target cause has a positive, neutral, or negative influence on the effect. Participants judged the strength of the relationship between two drugs and a side effect in a trial-by-trial learning task. Causes with more positive as opposed to neutral ITs were judged to have stronger causal relations, consistent with the IT heuristic.