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Competing causal debates and the influence of source credibility on belief revision

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Abstract

This research explores the effects of the zero-sum fallacy and the interaction of source credibility in three experimental parts (Pilditch, Fenton & Lagnado, 2019). The zero-sum fallacy is a reasoning error wherein individuals presented with two equally plausible competing causal debates erroneously assume that neither can be true. Experiment 1 (N=16) was an unsuccessful replication of Pilditch and colleagues (2019) experiment 1 which previously significantly demonstrated the effects of the zero-sum fallacy. Experiment 2 (N=53), found significant results favouring the existence and robustness of the zero-sum fallacy using logically identical but contextually different experimental stimuli. Experiment 3 (N=101), found the zero-sum fallacy persisted when source credibility statements were incorporated, but that source credibility had a significant impact on participants' reasoning. As part of explanatory analysis, data from all 3 experiments was subjected to Bayesian analysis.