

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Causal Structure and Probability Information Modulate the Preference for Simple Explanations

Permalink

<https://escholarship.org/uc/item/9sz4f6s1>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 41(0)

Authors

Liquin, Emily

Lombrozo, Tania

Publication Date

2019

Peer reviewed

Causal Structure and Probability Information Modulate the Preference for Simple Explanations

Emily Liquin

Princeton University, Princeton, New Jersey, United States

Tania Lombrozo

Princeton University, Princeton, New Jersey, United States

Abstract

Are simple explanations better? Research has shown that people favor simple explanations (defined as number of unexplained causes; Lombrozo, 2007; Pacer & Lombrozo, 2017), but new findings suggest that under some conditions, complexity is preferred (Johnson et al., in press; Zemla et al., 2017). We explore three features that could affect preferences: causal structure, baserates, and likelihoods. Adults (N=544) read one simple and one complex explanation following one of three causal structures. Simplicity preferences were strongest for one vs. two causes explaining two independent effects, modest for one vs. two jointly sufficient causes explaining one effect, and reversed (to favor complexity) for one vs. two independently sufficient causes explaining one effect. When baserates and likelihoods were specified and matched, simplicity preferences were attenuated, while complexity preferences were sometimes reversed. These findings suggest that simplicity preferences are moderated by several factors and point to a more unified account of explanatory reasoning.