UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Modeling the Link between the Plausibility of Statements and the Illusory Truth Effect

Permalink

https://escholarship.org/uc/item/0jz7w27x

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 46(0)

Authors

Aktepe, Semih C.
Heck, Daniel W.

Publication Date

2024

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at https://creativecommons.org/licenses/by/4.0/

Peer reviewed

eScholarship.org Powered by the California Digital Library
University of California

Modeling the Link between the Plausibility of Statements and the Illusory Truth Effect

Semih C. Aktepe
University of Marburg, Marburg, Germany

Daniel Heck
University of Marburg, Marburg, Germany

Abstract

People judge repeated statements as more true than new ones. This illusory truth effect is a robust phenomenon when statements are ambiguous and plausible. However, previous studies provided conflicting evidence on whether repetition also affects truth judgments for highly implausible statements. Given the lack of a formal theory explaining the interaction between repetition and plausibility on the illusory truth effect, it is important to develop a formal model to explicitly represent the assumptions regarding this phenomenon. In this study, we develop a Bayesian cognitive model that builds on the simulation-based model by Fazio, Rand, and Pennycook (2019). Thereby, we formalize how repetition and plausibility jointly influence the illusory truth effect in light of nonlinear transformations of binary truth judgments. We test our model using experimental data from two previous studies by computing Bayes factors for four competing model variants. Our findings vary across studies but indicate that the observed interaction of repetition and plausibility may be explained by a constant, additive effect of repetition at a latent probit scale.

In L. K. Samuelson, S. L. Frank, M. Toneva, A. Mackey, & E. Hazeltine (Eds.), *Proceedings of the 46th Annual Conference of the Cognitive Science Society.* ©2024 The Author(s). This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY).