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

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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.