

Context effects in explanation evaluation

Nadya Vasilyeva

Brandeis University, Waltham, MA, USA

John Coley

Northeastern University, Boston, MA, USA

Abstract: Explanation is a critical component of higher cognitive functioning. We investigated whether some explanations are inherently appealing, or whether their appeal depends on context. To do so we presented statements (e.g., “Ducks have property X”) coupled with formal, causal, or teleological explanations (“because property X helps them float”), and asked participants to evaluate the explanations. To assess effects of context, we asked some participants to perform an inductive inference (e.g., “What else has property X?”) in addition to evaluating the explanations. Performing an inference influenced the appeal of the explanations. Specifically, participants found formal explanations more satisfying when generating a related inference than when merely evaluating the explanation. The effect was reversed for causal or teleological explanations. This suggests that the appeal of an explanation depends both on the type of explanation and the cognitive purpose for which the explanation is sought, and demonstrates an important linkage between explanation and induction.