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Authors

Holm, Linus

Schrater, Paul

Thiel, Felix

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Curiosity act as a rational learning opportunity signal: information source credibility predicts curiosity and trivia fact learning

Linus Holm

University of Umeå, Umeå, Sweden

Paul Schrater

University of Minnesota, Twin Cities, Minneapolis, Minnesota, United States

Felix Thiel

Department for Psychology, Umeå, Västerbotten, Sweden

Abstract

Curiosity has been suggested to reflect a drive for learning and to constitute a learning opportunity signal. If rational, curiosity should incorporate the reliability of the information source: more credible sources should instill more curiosity and learning. We tested these hypotheses in a lab experiment ($n = 23$) and online replication ($n = 64$), where we randomly assigned 100 zoology trivia questions and answers to one of three different sources claimed to be .99, .90 and .75 valid, respectively. Participants rated their curiosity for each source-indicated answer, read the answers, rated their credibility, and then took a retest on the questions. We found that indicated source credibility significantly affected curiosity ratings yielding an average of .56z, .22z and -.78z, respectively. Similarly, response update (learning) increased with 87% (exp 1) and 67% (exp 2) per z-score rated credibility (both $p < 10^{-18}$). Manipulated source credibility thus influenced both curiosity and learning.