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Correcting Statistical Misinformation About Scientific Findings in the Media: Causation Versus Correlation

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Although retractions significantly reduce the number of references people make to misinformation, retracted information nevertheless persists in memory, continuing to influence reasoning. One hundred and twenty-nine lay participants completed an adaptation on the traditional continued influence paradigm, which set out to identify whether it is possible to debunk a piece of common statistical misinformation; inappropriate causal inference based on a correlation. We hypothesized that participants in the correction condition would make fewer causal inferences (misinformation) and more correlational inferences (correction) than those in the no-correction condition. Additional secondary hypotheses were that the number of references made to the misinformation and correction would be moderated by the elvel of trust in science and scientists, and the amount of television that participants which. Although the secondary hypotheses were not supported, the data strongly supported the primary hypotheses. This study provides evidence for the efficacy of corrections about misinformation where correlational evidence has been inappropriately reported as causal.

Public Significance Statement

A high exposure to statistical misinformation coupled with low levels of statistical literacy leaves the public vulnerable to misleading claims about scientific findings in the media. This study showed that it is possible to successfully debunk misinformation where correlational evidence has been inappropriately reported as causal using corrective messaging. These findings encourage the use of corrective messaging in the media to I limit the spread of scientific misinformation and its consequences.

Keywords: misinformation, causation/correlation, debunking, motivated reasoning, media

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The Heart Trumps the Head: Desirability Bias in Political Belief Revision

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Understanding how individuals revise their political beliefs has important implications for society, In a preregistered study (N=900), we experimentally separated the predictions of 2 leading theories of human belief revision—desirability bias and confirmation bias—in the context of the 2016 U.S. presidential election. Participants indicated who they desired to win, and who they believed would win, the election. Following confrontation with evidence that was either consistent or inconsistent with their desires or beliefs, they again indicated who they believed would win. We observed a robust desirability bias—individuals updated their beliefs more if the evidence was consistent (vs. inconsistent) with their desired outcome. This bias was independent of whether the evidence was consistent or inconsistent with their prior beliefs. In contrast, we found limited evidence of an independent confirmation bias in belief updating. These results have implications for the relevant psychological theories and for political belief revision in mercicie.

Keywords: confirmation bias, desirability bias, motivated cognition, belief updating, politics

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Can you believe it? An investigation into the impact of retraction source credibility on the continued influence effect

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The continued influence effect refers to the finding that people often continue to rely on misinformation in their reasoning even if the information has been retracted. The present study aimed to investigate the extent to which the effectiveness of a retraction is determined by its credibility. In particular, we aimed to scrutinize previous findings suggesting that perceived trustworthiness but not perceived expertise of the retraction source determines a retraction's effectiveness, and that continued influence arises only if a retraction is not believed. In two experiments, we found that source trustworthiness but not source expertise indeed influences retraction effectiveness, with retractions from low-trustworthiness sources entirely ineffective. We also found that retraction belief is indeed a predictor of continued reliance on misinformation, but that substantial continued influence effects can still occur with retractions designed to be and rated as highly credible.

Keywords Misinformation · Continued influence effect · Source credibility · Trustworthiness · Expertise · Persuasion

Research Article

Activity

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SSAGE

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Young adults received information regarding the platforms of two candidates for mayor of a troubled city. Half constructed a dialogue between advocates of the candidates, and the other half wrote an essay evaluating the candidates' merits. Both groups then wrote a script for a TV spot favoring their preferred candidates. Results supported our hypothesis that the dialogic task would lead to deeper, more comprehensive processing of the two positions, and hence a richer representation of them. The TV scripts of the dialogue group included more references to city problems, candidates' proposed actions, and links between them, as well as more criticisms of proposed actions and integrative judgments extending across multiple problems or proposed actions. Assessment of levels of epistemological understanding administered to the two groups after the writing tasks revealed that the dialogic group exhibited a lesser frequency of the absolutist position that knowledge consists of facts knowable with certainty. The potential of imagined interaction as a substitute for actual social exchange is considered.

Keywords

cognitive complexity, discourse analysis, reasoning, role taking, citizenship

Solitary Discourse Is a Productive



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Information Delivered by a Chatbot Has a Positive Impact on COVID-19 Vaccines Attitudes and Intentions

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The Coronavirus disease; COVID-19 vaccines will not end the pandemic if they stay in freezers, In many countries, such as France, COVID-19 vaccines hesitancy is high. It is crucial that governments make it as easy as possible for people who want to be vaccinated to do so, but also that they devise communication strategies to address the concerns of vaccine hesitant individuals. We introduce and test on 701 French participants a novel messaging strategy: A chatbot that answers people's questions about COVID-19 vaccines. We find that interacting with this chatbot for a few minutes significantly increases people's intentions to get vaccinated (6 = 0.12) and has a positive impact on their attitudes toward COVID-19 vaccines of 6 = 0.23). Our results suggest that a properly scripted and regularly updated chatbot could offer a powerful resource to help fight hesitancy toward COVID-

Public Significance Statement

Interacting a few minutes with a chatbot answering the most common questions about COVID-19 vaccines increased people's intention to get vaccinated and had a positive impact on their attitudes toward the vaccines. Chatbots could be a powerful resource to fight COVID-19 vaccines hesitancy.

Keywords: COVID-19, vaccination, chatbot, vaccine refusal, attitude change