

Review of: "An Audience-Centered Analysis of Cues to Which Group of Disputing Scientists is More Credible"

Simine Vazire

Potential competing interests: No potential competing interests to declare.

The introduction was thorough and clear, and situated the present study in the literature. The aims and scope of the present study are clearly articulated.

The methods are relatively clear, though it would be good to know if there is a pre-registered data collection plan indicating that the decisions regarding how many participants to recruit, and how to decide which participants' responses to exclude, were made a priori and documented.

The results were really difficult to follow. To be honest, I gave up after a while because it was so hard to keep track of the many different groups, and the meaning of the various comparisons. It was not clear to me why the author retained, for most of the key analyses, only participants with minimal within-cue straightlining (i.e., "Minimals"). It seems somewhat arbitrary to me to make that the critical inclusion criterion, and it was especially unclear to me why respondents who did not straightline at all (i.e., "Zeroes") were not also included, together with the Minimals, in the main analyses.

I also did not understand the motivation for splitting the sample into high, middle, and low DIs. First, this is another variable and label that readers have to keep in mind. Second, it is not clear that this is the most important subgroup variable in the dataset. For example, readers might be curious about how scientific reasoning scores moderated results, etc. To my mind, it would have been easier to only focus on the results for the full sample, and then have a separate section highlighting any important and robust mediation effects by DI level (and possibly other moderators).

Overall, I found that the results reporting was thorough, but overwhelming, and it was hard to identify the key analyses and key results.

I also found the three disputes presented to participants somewhat unnecessary and distracting - if the idea was to have participants report about scientific disputes in general, why draw their attention to a specific dispute. Moreover, some of the specific disputes seemed really esoteric - for example, the dispute about the nature of dark matter is likely incomprehensible to the vast majority of people (moreover, the description of the dispute did not use or explain the acronym WIMPs, which is used in the question asking participants which side they think is correct). The dispute regarding salt intake seems to be over a very minor difference (whether to recommend different amounts of reduction in salt intake for some subgroups or the same amount for everyone), which does not seem to be the type of thing most people would think of as a major scientific dispute.

Finally, I wondered about the wisdom of having participants rate each cue on all 5 dimensions at a time, rather than rating all 22 cues on one dimension before moving on to the next dimension. This is an empirical question, but to my mind, it seems easier to compare cues on a single dimension (and more likely to make ratings consistent with rankings), than to mentally switch the dimension being rated over and over again.

Overall, the design of the study seems mostly strong, and the author seem to have taken great care to analyze the data thoroughly and report many results, but the writeup of the results is not as clear as it could be and is at times overwhelming. I did not make it to the end of the results, and did not read the discussion (as I felt I could not evaluate it without understanding the results).