On the Detection of "Alternative Facts" in Environmental Messages: The Effects of a Sequential versus a Simultaneous Presentation Format

Mona Guath
Uppsala University, Uppsala, Sweden

Peter Juslin
Uppsala University, Uppsala, Sweden

Abstract: Reasonable rational information processing is important in people's in everyday decision-making. A number of features affect how environmental messages are processed, including the presentation format and the reliability of the information source. One way to measure the importance assigned to the source reliability is to frame the question in terms of Bayes' theorem (Hahn & Harris, 2009). In two online experiments, we investigated how people process environmental messages in a Bayesian integration task where the participants rate the probability of an energy crisis. The information about the prior, likelihood ratio, and source reliability were presented either sequentially or simultaneously. The results showed that, as prescribed by Bayes' theorem, participants integrated the sentences multiplicatively. However, with sequential presentation they assigned more weight to source reliability, and this effect remained when the source reliability was presented next to last, suggesting that participants assigned more weight to the source regardless of its position.