

Letter

Partisan bias in the identification of fake news

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In their recent article in *Trends in Cognitive Science* [1], Pennycook and Rand argue that lack of cognitive reflection is a major cause of fake-news susceptibility and that recent evidence contradicts the idea that people fall for fake news because of partisan bias. Although the proposed role of cognitive reflection is consistent with the evidence reviewed by the authors, their dismissal of partisan bias is: (i) based on a problematic conceptualization of partisan bias; and (ii) inconsistent with the evidence reviewed in their own article. A conceptualization of partisan bias that is closer to the phenomenon of interest reveals that it does play a major role in the identification of fake news.

In the context of responses to real and fake news, partisan bias can be understood as the tendency to accept ideology-congruent news and dismiss ideology-incongruent news regardless of veracity [2]. Using terminology by Pennycook and Rand, these tendencies are reflected in greater overall belief in concordant compared with discordant news regardless of veracity. Figure 1 in Pennycook and Rand's article [1] shows that this effect is by far the largest of the four effects depicted in the figure, with a z-score of ~0.70 in the pooled data from 14 studies with 15 442 participants (far-left diamond in Figure 1B in [1]). It is even larger than the effect of cognitive reflection on truth discernment (i.e., accuracy in discriminating between real news and fake news), which shows a z-score of ~0.45 in the same pooled data set (far-left circle in Figure 1A in [1]). Despite this pattern of

results, Pennycook and Rand conclude that lack of cognitive reflection is the primary cause of fake-news susceptibility and that there is no evidence for the idea that partisan bias makes people fall for fake news.

Why do Pennycook and Rand dismiss partisan bias as a major factor when the evidence seems so obvious? The main reason for their dismissal is that they rely on a problematic conceptualization of partisan bias in terms of truth discernment. According to Pennycook and Rand, partisan bias should lead to lower truth discernment for concordant compared with discordant news. Yet, the reviewed evidence suggests the opposite, in that truth discernment is higher, not lower, for concordant compared with discordant news. This finding led the authors to dismiss partisan bias as a major factor in the identification of fake news.

However, a closer analysis reveals that partisan bias should be understood in terms of the effect of ideology congruence on overall belief, not truth discernment. In fact, differential truth discernment for concordant and discordant news is entirely irrelevant for partisan bias, because partisan bias can be present without any effect of ideology congruence on truth discernment (i.e., accuracy in discriminating between real news and fake news). The reason for this is that partisan bias is associated with higher accuracy in judgments of one type of news (real versus fake) and lower accuracy in judgments of the respective other type, leading to an overall null effect on truth discernment (Table 1). For ideology-congruent news, partisan bias is associated with higher accuracy for real news and lower accuracy for fake news. Conversely, for ideology-incongruent news, partisan bias is associated with higher accuracy for fake news and lower accuracy for real news.

For example, Democrats and Republicans can be said to show partisan bias if

they tend to accept favorable news about their own party as true and dismiss unfavorable news about their party as false regardless of veracity. Thus, for favorable news about their own party, partisan bias increases accuracy in judgments of real news and decreases accuracy in judgments of fake news. Conversely, for unfavorable news about their own party, partisan bias increases accuracy in judgments of fake news and decreases accuracy in judgments of real news. The net result is a null effect on truth discernment for both favorable and unfavorable news, but this null effect should not be confused with absence of partisan bias. It simply reflects the conceptual independence of partisan bias and truth discernment [2]. Focusing specifically on judgments of fake news, partisan bias would be absent if the tendency to accept ideology-congruent fake news was not greater than the tendency to accept ideology-incongruent fake news; however, the data reviewed by Pennycook and Rand [1] contradict this hypothesis.

Although Pennycook and Rand's dismissal of partisan bias is based on a problematic conceptualization of the phenomenon, they correctly note that effects of ideology congruence on overall belief do not have to be the outcome of motivated reasoning, as commonly assumed in the literature [3]. Instead, such effects could also be driven by purely cognitive processes [4]. Research on the processes underlying partisan bias requires carefully designed manipulations that should influence partisan bias in different ways according to the theoretical accounts to be tested [5]. However, to be informative about the phenomenon of interest, such investigations require a conceptualization of partisan bias in terms of overall belief, not truth discernment. It is also worth noting that factors that promote truth discernment may not

Table 1. Prototypical patterns of judgments reflecting truth discernment and partisan bias in veracity judgments of real news and fake news as a function of ideology congruence

	Real news	Fake news
Truth discernment		
Ideology congruent	Judged as 'real'	Judged as 'fake'
Ideology incongruent	Judged as 'real'	Judged as 'fake'
Partisan bias		
Ideology congruent	Judged as 'real'	Judged as 'real'
Ideology incongruent	Judged as 'fake'	Judged as 'fake'

necessarily reduce partisan bias, and vice versa. For example, although greater cognitive reflection has been

found to be associated with greater truth discernment, cognitive reflection appears to be ineffective in reducing partisan bias [2]. A conceptualization of partisan bias in terms of truth discernment not only misses these important aspects of partisan bias, but also hinders scientific progress by leading to incorrect conclusions, including Pennycook and Rand's mistaken dismissal of partisan bias as a major factor in the identification of fake news.

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