

MISINFORMATION AND FAKE NEWS FROM ELITES ON TWITTER

By Mohsen Mosleh and David G. Rand

IN THIS BRIEF

- This research examines how exposure to misinformation from political elites—public figures and organizations—relates to the spread of misinformation on Twitter.
- We develop a tool for measuring the levels of Twitter users' exposure to misinformation. The measurement is based on both the political elites a user chooses to follow and fact-checks of those elites by PolitiFact, an independent fact-checking site.
- Our findings show that misinformation-exposure scores are negatively correlated with the quality of news users share. That is, the more users follow elites that tend to make false statements, the lower the quality of news those users share with others.
- We also correlate users' exposure to misinformation from elites on Twitter with the users' political ideologies. We find that ideologically extreme users follow more dishonest elites than those with more moderate ideologies. In addition, this association was much stronger among conservative than liberal users.
- To make our misinformation-exposure estimation tool openly available to others, we have developed an open-source library and a publicly available application programming interface (API): <https://misinfoexpose.com/>

Concern about how misinformation and fake news spreads via social media has often overlooked a critical dimension, namely, misinformation and false claims created and spread by so-called elites. This group includes public figures and organizations such as politicians, bureaucrats, famous personalities, advocacy groups, and media organizations.

The impact of this spread extends far beyond misinformation shared among a few relatives or friends. A group of U.S. politicians still claim that the 2020 presidential elections involved widespread fraud (false); the host of a well-known video podcast said that since 2021, COVID-19 vaccines have caused nearly 1,600 cardiac arrests among athletes (also false); and a gun-owners group has called two leading politicians in the U.S. state of Georgia “radical communists” (false again). (PolitiFact, 2023; PolitiFact, 2022.)

With this level of misinformation and fake news spreading on social media, an important set of questions is raised: Who follows elites that spread misinformation and fake news? What are the characteristics of these users as it relates to the quality of content they share, their political partisanship, and their use of toxic language?

RESEARCH METHODOLOGY

To explore these and related questions, we first retrieved ratings for 1,005 tweets from elites that had been fact-checked at least three times by PolitiFact, an independent fact-checking website. Each statement reviewed by PolitiFact is given one of six ratings:

- **True:** The statement is accurate and complete.

- **Mostly true:** The statement is accurate, but needs clarification or additional information.
- **Half true:** The statement is partially accurate, but either omits important details or takes things out of context.
- **Mostly false:** The statement contains an element of truth, but ignores critical facts that would result in a different impression.
- **False:** The statement is inaccurate.
- **Pants on fire:** The statement is inaccurate and makes a ridiculous claim.

For example, when Kevin Brady, a U.S. congressman representing Houston, called President Biden’s \$36 billion for a union pension fund “the largest private pension bailout in American history,” PolitiFact judged that statement True (PolitiFact, 2022a). But when former U.S. VP Mike Pence stated that the border wall between the United States and Mexico “reduced illegal immigration by 90%,” PolitiFact judged that False (PolitiFact, 2022b).

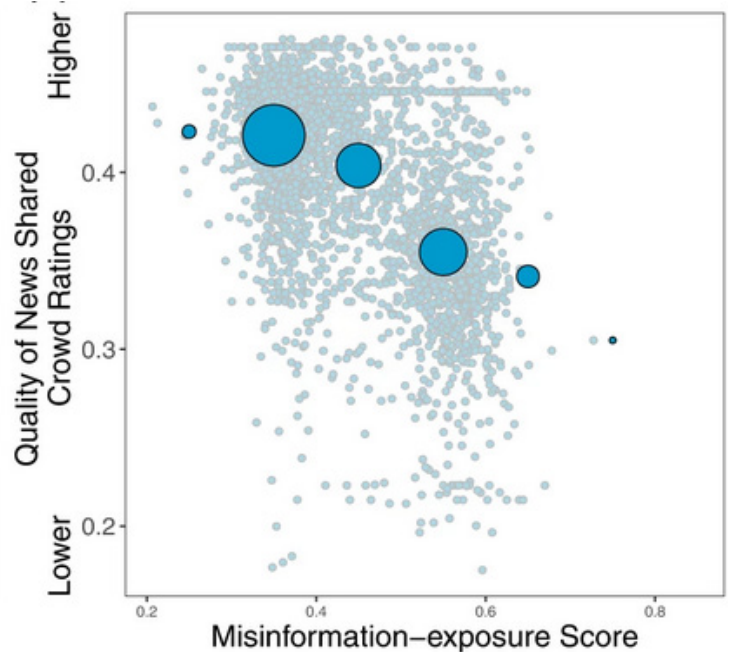
The next step was rating Twitter users’ exposure to misinformation from elites. To do this, we first identified 950 Twitter accounts associated with 816 of the 1,005 elites (we could not find Twitter accounts for the remaining 189 elites). Next, we identified all Twitter followers of these 950 accounts, resulting in a total of more than 122 million accounts. We then narrowed this list by limiting it to users who followed at least three elites, reducing the list to about 38 million accounts. To further limit the scale, we randomly sampled from this list 5,000 Twitter users.

Next, for each individual user in our sample, we calculated their misinformation-exposure score. We did this by averaging the falsity scores of all rated elite accounts a user followed, weighted by the average number of tweets the user received per two-month period over the past two years.

We then set out to estimate the political ideology of our Twitter users based on the accounts the users followed. Our assumption was that Twitter users are more likely to follow accounts that align with their own ideology. We calculated a continuous ideology score for each user, in which -2.5 represents a strong liberal ideology and +2.5 represents a strong conservative one. We set midpoint 0 as the dividing

line between liberal and conservative ideologies.

Fig. 1: Exposure to elite misinformation and the quality of the news outlets they shared content from.



Small dots in the background show individual observations; large dots show the average value.

Finally, we quantified the quality of the content shared by each user. To do this, we used a list of domains for which professional fact-checkers had provided trustworthiness ratings, similar to prior work (Mosleh M. et al., 2021; Pennycook, G. et al., 2021). We collected each user’s most recent 3,200 tweets as of July 23, 2021. After identifying the tweets that contained URLs, we then averaged the trustworthiness ratings of the linked news domains. For this, we relied on a list of 60 news websites, each rated for trustworthiness by a team of eight professional fact-checkers.

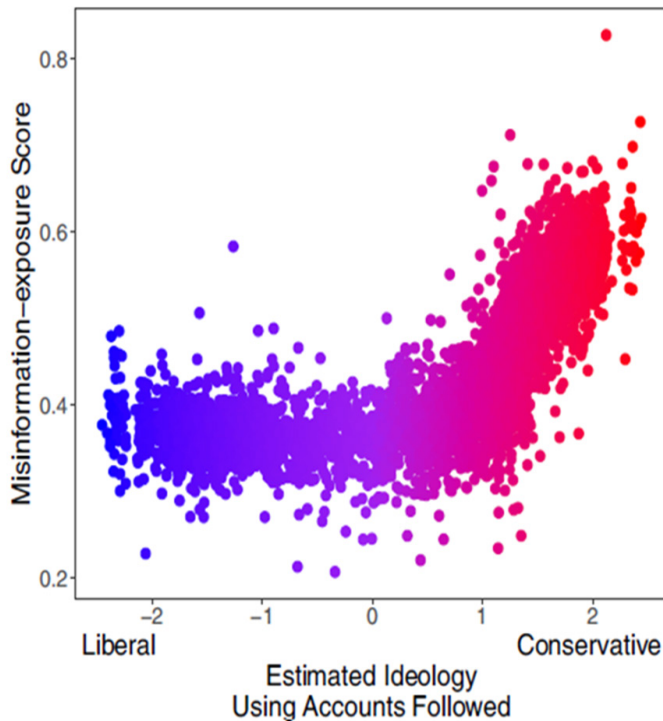
RESULTS

Because prior research has mostly overlooked what information people are exposed to, we wanted to treat this activity separately from sharing. Most people online share only a tiny fraction of the content they’re exposed to. And the choice of whom to follow online—and as a result, what content to view—is particularly important. The content a

person shares is determined by the users they follow. Also, earlier research shows that simply being exposed to content, even if the content is highly implausible, makes it seem truer (Pennycook, G. et al., 2018).

As expected, we find that users' misinformation-exposure scores are negatively correlated with the quality of content they shared. In other words, users who follow political elites that make more false claims are also more likely to share content from less trustworthy news websites, as judged by both fact-checkers and politically balanced crowds of laypeople (Figure 1). These same users employ more toxic language than others, and they were also more likely to express moral outrage.

Fig. 2: Users estimated to be conservatives are exposed to more misinformation from elites on Twitter than are liberals.



Note: The higher a user's misinformation-exposure score (vertical Y axis), the more misinformation they're exposed to from elites on Twitter. Color code: blue = liberal; red = conservative.

Akin to prior research (Guess, A.M. et al., 2020; Garrett, R.K. & Bond, R.M., 2021), we find that more politically conservative users share more misinformation (Grinberg,

N. et al., 2019; Guess, A.M. et al., 2019; Osmundsen, M. et al., 2021). We also find that more politically conservative users have higher misinformation-exposure scores. This suggests that conservatives may share more misinformation online in part because they are simply exposed to more misinformation from elites. Overall, we find that more ideologically extreme users, whether liberal or conservative, are exposed to more misinformation than are moderate users. But this association is much stronger among conservatives than liberals (Figure 2).

Importantly, being exposed to misinformation is not a passive process. Twitter users have substantial control over the kinds of information they see. Users in our study with high misinformation-exposure scores purposely chose to follow the accounts of elites that make false statements.

CONCLUSIONS

Among Twitter users, those who follow dishonest political elites also tend to themselves share news from low-quality outlets. Following dishonest elites is also associated with being conservative, using toxic language, and expressing moral outrage.

Our findings highlight the importance of carefully choosing the information one is exposed to. Those who follow elites that make many false or inaccurate statements also share news from lower-quality sources. Therefore, it may be the case that the rhetoric of dishonest political leaders drives their followers to share misinformation.

Finally, simply being exposed to claims makes them subsequently seem more truthful regardless of their veracity (Pennycook, G. et al., 2018). Following elites who make more false or inaccurate statements will cause citizens to hold more inaccurate beliefs. It is essential that future work study new ways to mitigate such effects.

CODE AVAILABILITY AND API

We have made the software code used to generate our results publicly available at: <https://osf.io/5283b>

We have also made publicly available an R package (R is a statistical programming language) and API

that calculates misinformation-exposure scores:

<https://github.com/mmosleh/minfo-exposure>

We have created a web app to see the misinformation exposure score for a given Twitter user:

<https://misinfoexpose.com/>

REPORT

Read the [full research paper](#).

ABOUT THE AUTHORS

[Mohsen Mosleh](#) is a senior lecturer (assistant professor) at the University of Exeter Business School; a research affiliate at the MIT Sloan School of Management; and a Fellow at the Alan Turing Institute for Data Science and Artificial Intelligence.

[David G. Rand](#) is the Erwin H. Schell Professor and professor of management science and brain and cognitive sciences at MIT; director of the Applied Cooperation Team; and an affiliate of both the MIT Institute of Data, Systems and Society, and the MIT Initiative on the Digital Economy (IDE).

COMPETING INTERESTS

The authors have received research funding from Google. David Rand has also received research funding from Meta.

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MIT Initiative on the Digital Economy
MIT Sloan School of Management
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617-452-3216
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