Article

Group Processes & Intergroup Relations 2021, Vol. 24(4) 624–637 © The Author(s) 2020

Group Processes &

Intergroup Relations



Article reuse guidelines: sagepub.com/journals-permissions DOI: 10.1177/1368430220965709 journals.sagepub.com/home/gpi

Jonathon McPhetres,^{1,2} David G. Rand² and Gordon Pennycook¹

Is it in supply or demand?

Character deprecation in fake news:

Abstract

A major focus of current research is understanding why people fall for and share fake news on social media. While much research focuses on understanding the role of personality-level traits for those who share the news, such as partisanship and analytic thinking, characteristics of the articles themselves have not been studied. Across two pre-registered studies, we examined whether character-deprecation headlines – headlines designed to deprecate someone's character, but which have no impact on policy or legislation - increased the likelihood of self-reported sharing on social media. In Study 1 we harvested fake news items from online sources and compared sharing intentions between Republicans and Democrats. Results showed that, compared to Democrats, Republicans had greater intention to share character-deprecation headlines compared to news with policy implications. We then applied these findings experimentally. In Study 2 we developed a set of fake news items that was matched for content across pro-Democratic and pro-Republican headlines and across news focusing on a specific person (e.g., Trump) versus a generic person (e.g., a Republican). We found that, contrary to Study 1, Republicans were no more inclined toward character deprecation than Democrats. However, these findings suggest that while character assassination may be a feature of pro-Republican news, it is not more attractive to Republicans versus Democrats. News with policy implications, whether fake or real, seems consistently more attractive to members of both parties regardless of whether it attempts to deprecate an opponent's character. Thus, character deprecation in fake news may in be in supply, but not in demand.

Keywords

fake news, media, misinformation, political orientation, political science

Paper received 24 April 2020; revised version accepted 10 September 2020.

A major task for social scientists is to identify ways to combat the spread of fake news and misinformation online (Lazer et al., 2018). Fake news – news that is designed to look accurate but is actually misleading or false – represents a major problem for politics, public health, and private life

¹University of Regina, Canada ²Massachusetts Institute of Technology, USA

Corresponding author:

Jonathon McPhetres, Psychology Department, Durham University, Upper Mountjoy, South rd., Durham, DH1 3LE UK. Email: jon.mcphetres@gmail.com (Grinberg et al., 2019; Vosoughi et al., 2018). Despite the fact that online news consumption comprises a relatively small amount of the total information consumed by Americans (Allen et al., 2019), the concern is that fake news and misinformation campaigns may influence people's decisions about politics and policies (Aral & Eckles, 2019; Grinberg et al., 2019), or other important aspects of private life, such as medical decisions (Pennycook, Mcphetres, Bago, & Rand, 2020; Pennycook, Mcphetres, Zhang, & Rand, 2020).

Political misinformation also represents an interesting test-case for broader psychological processes relating to political out-group hostility. Political polarization and hostility has increased in the United States over time (Dimock & Carroll, 2014), and one factor that contributes to this may be misinformation. Thus, it is important to understand how political identity influences one's perceptions of news content and, in particular, how Democrats and Republicans are similar or different when evaluating information.

Finally, reducing the spread of fake news requires that researchers understand who believes and shares fake news and why, so that effective routes for intervention can be identified. In answering these questions, researchers have most often focused on person-level characteristics – such as political orientation or cognitive ability – and have ignored article-level characteristics. The goal of the present research was to investigate a possible characteristic of headlines that relates to out-group hostility and therefore that may make them seem more attractive in a politically polarized context: namely, character deprecation.

Who falls for fake news?

Much past research has focused on identifying *who* is likely to share fake news. Often, these explanations pit political groups against each other – for example, Republicans and Democrats comprise the major political groups in the United States. Because news is often reported and perceived as favouring one party over the other, understanding how political identity influences the perception of news is an important goal for

social scientists. Thus, when identifying who is more likely to fall for fake news, research has often investigated political identity alongside other individual differences.

Political identity. Studies (Allcott & Gentzkow, 2017; Guess et al., 2018) report that fake news in favour of Donald Trump was more common (and was shared more) than fake news in favour of Hillary Clinton leading up to the 2016 election. Additionally, those over 65 years old and those identifying as conservative are more likely than liberals to share such fake news (Guess et al., 2019). Research has also identified that conservative Republicans are slightly worse than Democrats at distinguishing between fake and real news (Pennycook & Rand, 2018) and between trustworthy and untrustworthy sites (Pennycook & Rand, 2019a). However, one article reports mixed evidence for political asymmetry (Harper & Baguley, 2019), instead finding that people on both sides of the political spectrum are more likely to see politically incongruent news as less legitimate.

Individual differences. Other research focuses on psychological characteristics, showing that those who are less likely to think analytically, those who are delusion-prone, and those scoring highly on religiosity and dogmatism are more likely to believe fake over true news (Bronstein et al., 2019; Pennycook & Rand, 2018). Additionally, some research demonstrates that people higher in bullshit receptivity – that is, more likely to ascribe meaning to randomly generated statements (Pennycook et al., 2015) – and those who overclaim their knowledge level are more likely to fall for fake news (Pennycook & Rand, 2019b).

Why do people share fake news? One hypothesis is that people share news not because they are motivated to believe a certain thing, but because they are simply not thinking carefully about the news content. Specifically, people who score lower on analytic thinking are less able to discern between fake and real news (Pennycook & Rand, 2018). This finding is supplemented by experimental evidence. For example, in online studies, simply asking participants to consider whether the headline was true or false reduced self-reported intentions of sharing false (but not true) content (Fazio, 2020). Indeed, even asking people to rate the accuracy of a single headline increases the overall quality of the content they report being willing to share (Pennycook et al., 2019; Pennycook, Mcphetres, Zhang, & Rand, 2020). This effect seems to be driven by the act of deliberation. That is, while one's initial "intuitive" response may be to believe a news headline, giving people additional time to reconsider reduced belief in fake news (Bago et al., 2020) consistent with dual-process accounts of cognition (Evans & Stanovich, 2013).

It may also be that some people share fake news because they are poor at distinguishing between trustworthy and untrustworthy sources. While information about the publisher is not enough on its own to reduce the sharing of fake news (Dias et al., 2020), providing crowd-sourced ratings of the trustworthiness of news sites was effective in reducing the self-reported sharing of fake news (Pennycook & Rand, 2019a). Finally, while all of the studies examined self-reported sharing in an experimental context, some evidence suggests that self-reported sharing correlates positively with actual sharing on Twitter (Mosleh et al., 2020).

Another reason that people may share fake news is because of repetition and familiarity. Research illustrating the illusory truth effect (Alter & Oppenheimer, 2009; Fazio et al., 2015; Fazio et al., 2019; Hasher et al., 1977) - the hypothesis that repeated presentation is associated with an increased belief in truthfulness - has been amply illustrated in psychology. As such, people are more likely to believe a news story they have seen before (Effron & Raj, 2020; Pennycook et al., 2018). Such a strategy even appears to be effective on Twitter: in one study, participants who viewed repeated statements tweeted by Donald Trump were more likely to believe them compared to non-repeated tweets (Murray et al., 2020).

However, the above reasons for sharing fake news do not consider the variation in the fake news, itself. Indeed, there are many "types" of fake news (Tandoc et al., 2018), and fake news often has many overlapping characteristics (Acerbi, 2019). Thus, different types of news may be more or less attractive to different types of people. In the present study, we focus on one possible characteristic of fake news: character deprecation.

Character deprecation

Because fake news may be created to influence election outcomes or for other propaganda purposes (Grinberg et al., 2019; Jacobson et al., 2016; Lazer et al., 2018), the content of the actual headline could take many forms. One possibility is that fake news may be created to drum up support for one candidate by reducing support for another candidate. This type of headline could effectively deprecate a candidate's character by providing information that has no direct impact on legislation or policy. However, it would target their moral character, personality, cognitive abilities, or their ability to do their job in order to make them appear less attractive to constituents and possible voters.

To illustrate this type of news, consider the following two fake news headlines: "16-year old girl claims former president Bill Clinton is her father", and "Assange: Pardon in exchange for the name of Democrat who leaked emails". The former headline suggests that Bill Clinton had an affair - an issue that some voters may dislike, but is arguably unrelated to policy, legislation, or Bill Clinton's ability to govern. In contrast, the latter article is directly tied to policy or legislation because it suggests that someone may discover which Democrat leaked a set of emails. While a person (Julian Assange) is named in the headline, the purpose of the headline makes no reference to his personal character, moral integrity, or capability.

Most of the time, a headline will focus on a person's character with the goal of making the person look bad, either morally, cognitively, personally, or otherwise. While likely infrequent, it is conceivable that a headline could make a person look good (morally, personally, etc). For example, the fake headline "Donald Trump sent his own plane to transport 200 stranded Marines" implies that Donald Trump is selfless, caring, and philanthropic.

The present studies

In the present studies we simply sought to examine the extent to which a headline that focuses on a person's character was related to the likelihood of sharing this content on social media. We call these headlines "character-focused" headlines for simplicity because, although they are almost always negatively valanced it is possible that they could be positively valanced.

Across two studies, we examined whether partisans were more likely to self-report sharing a headline that was focused on a politician's character compared to headlines that were important for policy and legislation. In Study 1, we harvested fake news headlines which were already in existence on social media. In Study 2, we applied our findings experimentally and created our own balanced set of "fake" fake news headlines that were controlled for partisanship and content. Data, materials, and pre-registrations for both studies can be accessed at https://osf.io/75che/?view_ only=263bf780d5db4774b4c46af6ced9e54f.

Study 1

The purpose of Study 1 was to examine whether political partisans are more or less likely to share fake news that focuses on character-deprecation content. During Part 1, we harvested a large supply of existing fake news articles from the internet and then pre-tested them to obtain article-level ratings from an independent sample of participants. We then selected a subset of the articles to be used in Part 2 by matching them on several criteria. During Part 2, we asked a separate sample of participants if they were likely to share the articles on social media. Our pre-registration plan can be accessed at: https://osf.io/pazys/?view_only=c7b40dbd0719490793a0438fdeb04abd.

Participants and method

Participants. This study was conducted in two parts. For Part 1, our sample included 198 participants from Amazon's Mechanical Turk. For Part 2, our sample included 206 participants from Lucid. Lucid samples are convenience samples in that they are not randomly sampled, but people opt in based on quota-matching based on age, gender, ethnicity, and education. What this means is that it is not representative on ideology, although the demographics (including on ideology) do closely match that of the US (Coppock & McClellan, 2019).

We initially recruited 498 participants from Lucid, but excluded 282 based on pre-registered exclusion criteria (people who reported they would not share political content on Facebook). The reason for this criterion is because it does not make sense to ask people if they would share content on social media if we already know that they never share content on social media. We also excluded nine people who selected "other" gender, because this group made too small of a comparison in the regression analysis. However, results without these exclusions are nearly identical. Complete demographics are available in the online supplementary materials.

Sample size was determined a priori based on a sensitivity analysis showing that a sample size of 500 would allow for the detection of correlation effects as small as r = .05 with 90% power. Similarly, a sensitivity analysis shows that a sample size of 206 will yield correlation effects as small as r = .23 and power is significantly increased with multiple within-subject ratings.

Part 1. During Part 1, we pre-tested a larger set of 79 articles to obtain article-level ratings. The headlines had previously been used in a large pretest of fake news stimuli. These headlines were selected by browsing various fake news sites and other repositories, such as Snopes.com and politifact.org. The final set of headlines are available at: https://osf.io/75che/files/.

Prior to ratings, participants were given a detailed explanation and a few ". . . good examples of claims that focus on a person's character

because they only include information about the personal life of a politician rather than the policies that they put in place". We also gave participants an explanation and some examples of headlines that ". . . focus on a person's character because they actually convey information about a political decision or a potential political decision ("public policy")".

Participants viewed a subset of 15 articles in randomized order and rated (a) the extent to which each article was focused on a person's character, (b) whether it was important for policy, and whether it was more favourable for Democrats or Republicans. Ratings were made on three-point scales (1 = yes, 2 = somewhat, 3 = no). From this data we calculated two scores:

Partisanship strength – The extent to which the article is strongly pro-Democrat or pro-Republican. This is an absolute value, computed as the difference from scale midpoint.

Character versus policy focus – The extent to which the article focused on someone's character relative to policy, computed by subtracting the policy score from the character score.

Based on these survey ratings from Part 1, we selected 20 articles to use in Part 2: 10 were Pro-Democrat and 10 were Pro-Republican, half of each focused on a person's character (with low policy importance) and half were important for policy (with low character-focus scores).

Stimuli selection. The final set of articles was selected by matching sets of pro-Republican and pro-Democratic headlines so that the following scores were as similar as possible: (a) character focus, (b) policy importance, (c) absolute partisanship ratings. Ratings for the full set of 79 articles are available on the OSF page at: https://osf.io/gbn3f/.

Part 2. During Part 2, all participants were shown 20 headlines in randomized order and were asked how likely they would be to share the articles on social media. Past research shows that self-reported sharing is related to actual sharing on social media (Mosleh et al., 2020). After rating all

headlines, participants completed the cognitive reflection test (CRT) (6 items) and demographics information.

Results

Confirmatory analysis. Following our pre-registered analysis plans (https://osf.io/pazys/?view_only= c7b40dbd0719490793a0438fdeb04abd), we examined whether Democrats would share pro-Democratic articles and whether Republicans would share pro-Republican articles. That is, we ignored the headlines that did not "match" a person's political preferences (because we were not interested in whether they would or would not share this information).

We computed a mixed model using the article characteristics (e.g., character focus vs. policy importance, partisanship strength) and the individual's political orientation to predict whether a participant would be likely to share the article on Facebook. We included random intercepts for participant, and we also included age and gender as control variables.

As seen in Table 1, only partisanship strength was unrelated to likelihood of sharing (recall that all headlines were politically congenial, albeit not to the same degree). Republicans were more likely to share fake news, and headlines that were character-focused (as opposed to important for policy) were more likely to be shared overall.

Importantly, political orientation interacted with the article-level ratings of character focus and partisanship strength. As seen in Figure 1, Republicans were more likely to share characterfocused headlines compared to policy-important headlines (B = 0.38, p = .01), whereas Democrats were (nominally) more likely to share the headlines that focused on policy, though this slope was much shallower and non-significant (B = -0.20, p = .07).

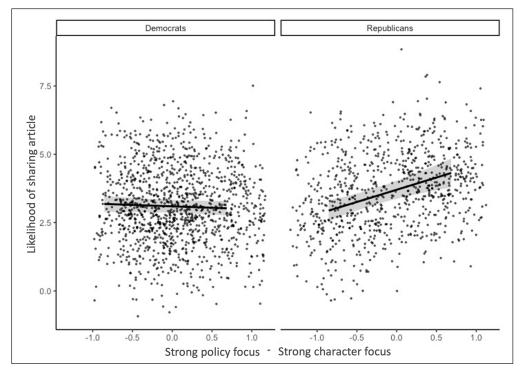
Exploratory analyses. Our main predictor was the difference score between the article-level ratings of character focus vs. policy importance. During the ratings collected in Part 1, these categories were defined and measured as unique constructs

Term	Estimate	SE	LLCI	ULCI	t	Þ
(Intercept)	3.688	0.456	2.815	4.555	8.079	< .001
Age	-0.015	0.006	-0.027	-0.004	-2.450	.015
Female	-0.557	0.186	-0.929	-0.174	-2.996	.003
Political orientation	0.455	0.102	0.261	0.640	4.483	<.001
Character focus vs. policy importance	1.409	0.280	0.860	1.989	5.026	<.001
Partisanship strength	1.028	0.312	0.460	1.645	3.291	.001
Political orientation x char vs. policy	0.169	0.053	0.071	0.281	3.214	.001
Political orientation x partisanship strength	-0.544	0.126	-0.800	-0.298	-4.329	<.001
Character vs. policy x partisanship strength	-3.173	0.372	-3.978	-2.461	-8.530	<.001

Table 1. Coefficients for mixed model predicting likelihood of sharing with partisanship strength and character focus versus policy importance. Estimates are unstandardized B coefficients; for political orientation, a higher score indicates conservative and a lower score indicates liberal.

Note. LLCI = lower level confidence interval; ULCI = upper level confidence interval.

Figure 1. Depiction of the interaction between political orientation and character focus vs. policy importance predicting likelihood of sharing an article on social media.



Note. Plot depicts partial residuals; shaded band indicates 95% CI; a low score on the X-axis indicates a strong character focus and a high score indicates importance for policy.

because we selected articles that were relatively high in one category and low in the other. For example, a character-focused headline is necessarily high in character focus and low in policy importance. However, it may still be that these categories explain unique variance when considered on their own as opposed to only including the difference summary score. To explore this possibility, we conducted an exploratory analysis where we entered these predictors separately. We again calculated a mixed model and included random intercepts for participant.

This analysis showed that the extent to which an article was character-focused explains unique variance from the extent to which an article is important for policy. Indeed, participant political orientation interacted with both policy impact (B = -1.99, p = .003) and character focus (B = -1.17, p = .015) and the three-way interaction was significant (B = 0.84, p = .008). The full set of coefficients is presented in Table S2 in the online supplemental material.

We broke down the three-way interaction by examining Republicans and Democrats separately. As can be seen in Figure 2, when character-focus and policy importance ratings are considered separately, we can glean a little more information.

For Democrats (shown in the left half of Figure 2), none of the terms strongly predicted sharing; the interaction term was not significant (B = -1.26, p = .117). In other words, Democrats were equally likely to share news that focused on a person's character and news that was important for policy. Full model results are reported in Table S3 and simple slopes are presented in Table S4 (see online supplemental material).

For Republicans (shown in the right half of Figure 2), the pattern was the opposite. The interaction between character focus and policy importance was strong (B = 4.45, p < .001). Republicans were more likely to share news when it was focused on a person's character; this was even more likely when the news was important for policy (B = 1.56, p < .001). In other words, character-deprecation headlines that are also important for policy were more likely to be shared than news that was only important for policy. Full model results are reported in Table S3 and simple slopes are presented in Table S4.

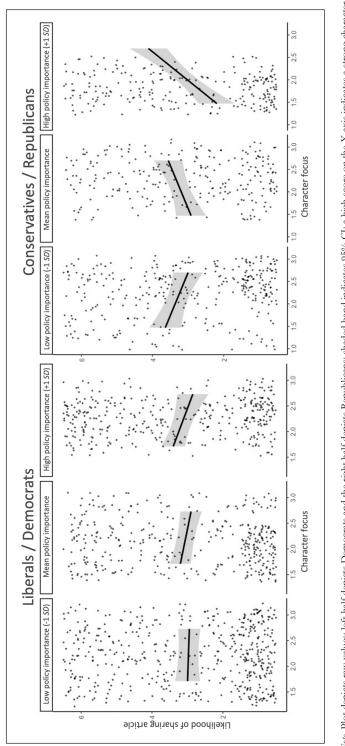
As an additional analysis, we also explored whether performance on the CRT was related to a preference for character-focused fake news. The reasoning behind this was that character deprecation might be intuitively appealing, whereas more-reflective people may be more discerning (Bronstein et al., 2019; Pennycook & Rand, 2018) and prefer news that is actually impactful for policy. We conducted the same mixed model as in our pre-registered analysis, above, except we added in the CRT as a predictor and included the relevant two-way interactions. The CRT predicted less sharing overall (B = -0.32, p = .008). However, it did not interact with any of the article-level characteristics or with political orientation suggesting that it is not an important variable to consider (see Table S5 for full model details).

Discussion

In Study 1, we found that Republicans are more likely to share fake news when it focuses on a person's character compared to news that is specifically important for policy, and compared to Democrats. However, this first study has some major limitations that need to be considered. Although we attempted to match the articles as closely as possible on all of the relevant dimensions, an exact match is not possible because the literal content of the headlines differs based on party and policy. That is, the people and the claims in the pro-Democratic headlines are necessarily different than those described in the pro-Republican headlines. As a result, any effects observed here may result from the type of fake news content that is created to appeal to Republicans versus Democrats.

Study 2

In Study 2, we sought to apply our findings experimentally by creating our own set of fake news headlines. We developed a set of 10 fake news articles that all focused on a person's character (i.e., they did not focus on information which would impact policy). We then modified each headline so that there were four versions of each article by manipulating whether the headline (a) was pro-Democrat or pro-Republican and (b) focused on a specific, named person (e.g., "Nancy Pelosi") or a generic person (e.g., "a Democrat"). For example, the following four headlines are based on the same content: "Republican Representative seen being escorted Figure 2. Simple slopes for character-focus score predicting likelihood of sharing an article on social media at different levels of policy importance.



Now. Plot depicts raw values; left half depicts Democrats and the right half depicts Republicans; shaded band indicates 95% CI; a high score on the X-axis indicates a strong character focus and a high score indicates a weak character focus; each facet depicts different levels of a focus on policy impact. from local gentleman's club" (generic, pro-Democrat), "Democratic Representative seen being escorted from local gentleman's club" (generic, pro-Republican), "Republican Representative Steve Scalise seen being escorted from local gentleman's (specific, pro-Democrat), "Democratic club" Representative Jerry McNerney seen being escorted from local gentleman's club" (specific, pro-Republican). We also used 10 neutral, non-political headlines for comparison. This allows us to control for (a) content, (b) strength of directional partisanship, and (c) the specific policy issues. We again pre-registered our plans prior to data analysis: https://osf.io/ acnxs/?view_only=19ebe346626d41fa84a3561c7a 3719c9.

Participants and method

Participants. This study was again conducted in two parts. For Part 1, our sample included 404 participants from Lucid. For Part 2, our sample included 306 participants from Lucid (after excluding 323 participants who said they would not share political content on social media and six who indicated "other" gender). Again, the results without these exclusions are nearly identical. Full demographics are available in the online supplementary materials.

Part 1. During Part 1, participants saw a subset of 15 out of 50 headlines; we counterbalanced the sets of headlines and randomized the display order. As in Study 1, participants rated each headline on (a) whether it focused on a person's character, (b) whether it was important for policy, and whether it was more favourable for Democrats or Republicans. Following our preregistered plans (and based on the exploratory analysis from Study 2 because it provided more detailed information) we calculated two scores from these data:

Character focus – The extent to which the article focused on someone's character.

Policy importance – The extent to which the article is important for legislation or policy.

Because the headlines were matched exactly across political groups, we did not use partisanship strength.

Part 2. During Part 2, subjects viewed 15 headlines in randomized order and rated whether they would be likely to share each one on social media. Because there were 10 articles, each with four versions (pro-Democrat, pro-Republican, generic target, and specific target), subjects saw a counterbalanced set of articles which included one version of each of the 10 political headlines, along with 5 neutral headlines. This was to ensure they would not see two different versions of the same headline. As with Study 1, we removed the headlines which did not "match" a person's political orientation; thus, we analysed 10 ratings from each participant: five political and five neutral. After viewing the articles, participants then completed the CRT and demographics.

Results

Republicans and Democrats did not differ in their likelihood of sharing neutral (p = .674), generic (p = .385), or specific/named (p = .061) articles so we carried out our analyses as planned (means for each type are displayed in Table S6). We computed a mixed model using the article characteristics (e.g., character focus vs. policy importance) and the individual's political orientation to predict whether they would be likely to share the article on Facebook; we included random intercepts for participant. As with Study 1, we also included age and gender as control variables (though a model without these controls yielded nearly identical estimates).

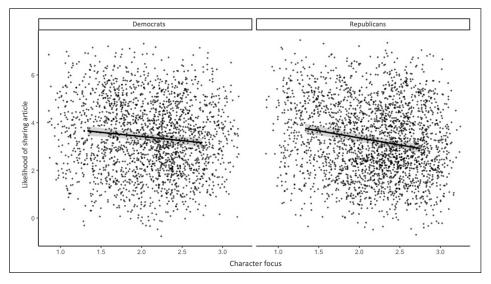
The three-way interaction between political orientation, character focus, and policy importance was not significant (B = -0.34, p = .072; see Table S7) so we examined only the two-way interactions. Though this was not the analysis we pre-registered, we do so here for illustrative purposes. The full model results are presented in Table 2. As can be seen in Figure 3, a strong character-focus score was associated with a lower likelihood of sharing headlines for both Democrats (B = -0.33, p <.001) and Republicans (B = -0.63, p < .001).

Term	Estimate	SE	LLCI	ULCI	T	Þ
(Intercept)	1.557	1.100	-0.730	3.743	1.415	.157
Age	-0.013	0.004	-0.021	-0.006	-3.540	<.001
Female	-0.213	0.097	-0.416	-0.028	-2.194	.029
Political orientation	0.234	0.150	-0.075	0.538	1.562	.118
Character focus	0.333	0.559	-0.811	1.502	0.595	.552
Policy importance	1.842	0.596	0.639	3.111	3.089	.002
Political orientation x Character focus	-0.087	0.032	-0.161	-0.024	-2.741	.006
Political orientation x Policy importance	-0.050	0.072	-0.192	0.088	-0.691	.489
Character focus x Policy importance	-0.293	0.318	-0.948	0.318	-0.923	.356

Table 2. Coefficients for mixed model predicting likelihood of sharing with political orientation, characterfocus, and policy importance in Study 2. Estimates are unstandardized B coefficients; for political orientation, a higher score indicates conservative and a lower score indicates liberal.

Note. LLCI = lower level confidence interval; ULCI = upper level confidence interval.

Figure 3. Depiction of the interaction between political orientation and article character focus predicting likelihood of sharing an article on social media in Study 2.



Note. Plot depicts partial residuals; shaded band indicated 95% CI; a low score on the X-axis indicates a weak character focus and a high score indicates strong character focus.

Thus, both Democrats and Republicans were *less* likely to share headlines focusing on someone's character and *more* likely to share articles that were directly important for policy.

General discussion

In this research we focused on fake news employing character deprecation – that is, news which attempts to deprecate someone's character rather than focus on issues with direct importance for policy and legislation. However, while this may be a feature more common to pro-Republican fake news, it is not directly responsible for increasing the sharing of fake news. In Study 1, we found that Republicans were more likely to share news with a negative character focus. But when we experimentally manipulated this feature using a novel and balanced set of fake news headlines, it did not increase sharing for either Republicans or Democrats. Further, CRT performance was unrelated to the sharing of character-focused news, suggesting that it is not more attractive to lessreflective participants. Thus, character deprecation may be a feature of some news, but it does not appear to consistently make news more likely to be shared, nor does it seem to appeal to a particular political ideology.

This research sheds some light on some of the characteristics of fake news headlines and the characteristics of those sharing the news. First, these data show that conservatism was positively correlated with the likelihood of sharing fake news – this result was stronger in Study 1 (B =0.46, p < .001) and non-significant in Study 2, though the coefficient is still positive (B = 0.23, p = .118), but is consistent with past work suggesting that conservatives are more likely to share fake news (Allcott & Gentzkow, 2017; Guess et al., 2018; Pennycook & Rand, 2019a). Furthermore, although people who are more reflective (based on CRT performance) shared less fake news overall, consistent with past research (e.g., Bronstein et al., 2019; Pennycook & Rand, 2018), there is no association between CRT and whether people share news with a characterdeprecation versus policy focus per se. Evidently, there are other aspects of fake news - e.g., overall plausibility (Pennycook & Rand, 2019c) - that connect analytic thinking to fake news identification.

The present studies investigated only one possible aspect of fake news headlines. However, there are many other types of fake news (Tandoc et al., 2018) and it could be informative to examine personality or cognitive differences in sharing. For example, fake news that spreads misinformation specifically about the effectiveness of a policy or a new law may be attractive to some people, whereas fake news that spoofs quotations by celebrities may be attractive to a different demographic. Likewise, some fake news has a shelf-life and may only be believable for a certain period of time. Past research has noted that the novelty of fake news may be one thing responsible for promoting the sharing of fake news (Vosoughi et al., 2018). In contrast, repeated information is more believable because of the illusory truth effect (Effron & Raj, 2020; Fazio et al., 2015, 2019; Murray et al., 2020; Pennycook et al., 2018), so these two competing characteristics may work in different directions for different types of people. Finally, future research could examine what portion of fake news focuses on character deprecation. While this was not a focus of the current investigation, understanding the characteristics of the fake news that does exist has been an important aspect of past work (Acerbi, 2019; Allen et al., 2019; Guess et al., 2019) and may lead to more insights as to what makes it attractive.

Past research has focused on ways to combat fake news. For example, displaying a crowdsourced rating of the trustworthiness of a news source (Pennycook & Rand, 2019a) and simply getting people to think about whether the article might be accurate (Fazio, 2020; Pennycook et al., 2019; Pennycook, Mcphetres, Zhang, & Rand, 2020) or prompting people to take more time to consider the headline (Bago et al., 2020) both reduce the sharing of misinformation. Additionally, getting people to think about the qualities of fake news by having them create their own fake news has been shown to be effective in reducing belief in fake news (Roozenbeek & van der Linden, 2019b). Large-scale implementation of a browser-based game in which players take the role of a fake news creator has been effective "inoculating" people against fake news (Basol et al., 2020; Roozenbeek & van der Linden, 2019a; Roozenbeek et al., 2020). Research that continues to identify the qualities of fake news that make it attractive and believable to others is an important area for future research to continue exploring.

The present research has some strengths and limitations. Namely, in Study 1 we used fake news that already existed in the real world. Such news has features that are dependent on social and political circumstances and may reflect specific features of politicians, political landscapes, or the idiosyncratic content they discuss. In Study 2, we developed our own set of fake news by modifying headlines so that the same headline was matched exactly across the partisan divide. Such an action both addresses a limitation of Study 1 while simultaneously reducing and limiting ecological validity. Additionally, we recruited participants from an online sampling source which may be less reflective of the actual population of social media users. While we took some measures to address this – for example, we pre-screened and included only social media users and results were similar when excluding or including people who share political content – this limitation should be considered when generalizing these results.

An additional limitation is that these results are designed to investigate and be applied to the US political context. These results do not speak to the general characteristics of non-political fake news, nor can they be generalized outside of the US context. To understand whether the present results are generalizable, future research will need to be designed with different political and social landscapes in mind. For example, political or social news relevant to a specific country would need to be selected and pre-tested in order to determine what characteristics are most relevant. Similarly, the idea of character deprecation may not be applicable in non-political contexts and other characteristics of news headlines may be more appropriate.

Finally, when looking at observational data for example, that Republicans share more fake news (Allcott & Gentzkow, 2017; Guess et al., 2019, 2018) - one should be cautious about coming to conclusions about the underlying psychology. We show in the present studies how headlines derived from the world in an ecological and careful way produced a result that did not hold under controlled conditions. That is, we were careful to pre-test our stimuli with an independent sample and match them on relevant criteria (e.g., partisanship strength). Yet, when we applied our findings in an even more carefully controlled experimental setting (Study 2), we did not find the same effect. Thus, it is important to consider that the pattern of results depends a lot on how fake news is defined and the news stimuli used in a study.

In summary, these findings suggest that while character deprecation may be a feature of pro-Republican news, it is not more attractive to Republicans versus Democrats, nor to those scoring high on cognitive reflection. News with policy implications, whether fake or real, seems consistently more attractive to members of both parties. Thus, character deprecation may in be in supply, but not in demand.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The authors gratefully acknowledge funding from the Ethics and Governance of Artificial Intelligence Initiative of the Miami Foundation, the William and Flora Hewlett Foundation, the Omidyar Network, the John Templeton Foundation, the Canadian Institutes of Health Research, and the Social Sciences and Humanities Research Council of Canada.

ORCID iD

Jonathon McPhetres D https://orcid.org/0000-0002 -6370-7789

Supplemental material

Supplemental material for this article is available online.

References

- Acerbi, A. (2019). Cognitive attraction and online misinformation. *Palgrave Communications*, 5(1), 1–7. https://doi.org/10.1057/s41599-019-0224-y
- Allcott, H., & Gentzkow, M. (2017). Social media and fake news in the 2016 election. *Journal of Economic Perspectives*, 31(2), 211–236. https://doi. org/10.1257/jep.31.2.211
- Allen, J., Howland, B., Mobius, M. M., Rothschild, D. M., & Watts, D. (2019). Evaluating the fake news problem at the scale of the information ecosystem. SSRN Electronic Journal, April, 1–7. https:// doi.org/10.2139/ssrn.3502581
- Alter, A. L., & Oppenheimer, D. M. (2009). Suppressing secrecy through metacognitive ease: Cognitive fluency encourages self-disclosure. *Psychological Science*, 20(11), 1414–1420. https://doi. org/10.1111/j.1467-9280.2009.02461.x
- Aral, S., & Eckles, D. (2019). Protecting elections from social media manipulation. *Science*, 365(6456), 858– 861. https://doi.org/10.1126/science.aaw8243
- Bago, B., Rand, D. G., & Pennycook, G. (2020). Fake news, fast and slow: Deliberation reduces belief in false (but not true) news headlines. *Journal of*

Experimental Psychology: General, 1–18. https://doi. org/10.1037/xge0000729

- Basol, M., Roozenbeek, J., & Van der Linden, S. (2020). Good news about bad news: Gamified inoculation boosts confidence and cognitive immunity against fake news. *Journal of Cognition*, 3(1), 2. https://doi.org/10.5334/joc.91
- Bronstein, M. V., Pennycook, G., Bear, A., Rand, D. G., & Cannon, T. D. (2019). Belief in fake news is associated with delusionality, dogmatism, religious fundamentalism, and reduced analytic thinking. *Journal of Applied Research in Memory and Cognition*, 8(1), 108–117. https://doi.org/10.1016/j.jarmac.2018.09.005
- Coppock, A., & McClellan, O. A. (2019). Validating the demographic, political, psychological, and experimental results obtained from a new source of online survey respondents. *Research and Politics*, 6(1). https://doi.org/10.1177/2053168018822174
- Dias, N., Pennycook, G., & Rand, D. G. (2020). Emphasizing publishers does not effectively reduce susceptibility to misinformation on social media. *Harvard Kennedy School Misinformation Review*, 1(1), 1–12. https://doi.org/10.37016/mr-2020-001
- Dimock, M., & Carroll, D. (2014). Political polarization in the American public. Pew Research Center. https:// www.pewresearch.org/politics/2014/06/12/ political-polarization-in-the-american-public/
- Effron, D. A., & Raj, M. (2020). Misinformation and morality: Encountering fake-news headlines makes them seem less unethical to publish and share. *Psychological Science*, 31(1), 75–87. https:// doi.org/10.1177/0956797619887896
- Evans, J. S. B. T., & Stanovich, K. E. (2013). Dualprocess theories of higher cognition: Advancing the debate. *Perspectives on Psychological Science*, 8(3), 223–241. https://doi.org/10.1177/174569 1612460685
- Fazio, L. K. (2020). Pausing to consider why a headline is true or false can help reduce the sharing of false news Research questions. *Harvard Kennedy School Misinformation Review*, 1(2), 1–8.
- Fazio, L. K., Brashier, N. M., Payne, B. K., & Marsh, E. J. (2015). Knowledge does not protect against illusory truth. *Harvard Kennedy School Misinformation Review*, 144(5), 993–1002.
- Fazio, L. K., Rand, D. G., & Pennycook, G. (2019). Repetition increases perceived truth equally for plausible and implausible statements. *Psychonomic Bulletin and Review*, 26(5), 1705–1710. https://doi. org/10.3758/s13423-019-01651-4

- Grinberg, N., Joseph, K., Friedland, L., Swire-Thompson, B., & Lazer, D. (2019). Political science: Fake news on Twitter during the 2016 US presidential election. *Science*, 363(6425), 374–378. https://doi.org/10.1126/science.aau2706
- Guess, A., Nagler, J., & Tucker, J. (2019). Less than you think: Prevalence and predictors of fake news dissemination on Facebook. *Asian-Australasian Journal of Animal Sciences*, 32(2), 1–9. https://doi. org/10.1126/sciadv.aau4586
- Guess, A., Nyhan, B., & Reifler, J. (2018). Selective exposure to misinformation: Evidence from the consumption of fake news during the 2016 US presidential campaign. European Research Council. http:// www.ask-force.org/web/Fundamentalists/ Guess-Selective-Exposure-to-Misinformation-Evidence-Presidential-Campaign-2018.pdf
- Harper, C. A., & Baguley, T. (2019). "You are fake news": Ideological (A) symmetries in perceptions of media legitimacy. *PsyArXiv Preprint*. https:// psyarxiv.com/ym6t5/
- Hasher, L., Goldstein, D., & Toppino, T. (1977). Frequency and the conference of referential validity. *Journal of Verbal Learning and Verbal Behavior*, 16(1), 107–112. https://doi.org/10.1016/S0022-5371(77)80012-1
- Jacobson, S., Myung, E., & Johnson, S. L. (2016). Open media or echo chamber: The use of links in audience discussions on the Facebook pages of partisan news organizations. *Information Communication and Society*, 19(7), 875–891. https://doi.org/ 10.1080/1369118X.2015.1064461
- Lazer, D. M. J., Baum, M. A., Benkler, Y., Berinsky, A. J., Greenhill, K. M., Menczer, F., Metzger, M. J., Nyhan, B., Pennycook, G., Rothschild, D., Schudson, M., Sloman, S. A., Sunstein, C. R., Thorson, E. A., Watts, D. J., & Zittrain, J. L. (2018). The science of fake news. *Sci*ence, 359(6380), 1094–1096. https://doi. org/10.1126/science.aao2998
- Mosleh, M., Pennycook, G., & Rand, D. G. (2020). Self-reported willingness to share political news articles in online surveys correlates with actual sharing on Twitter. *PLoS ONE*, 15(2), 1–9. https://doi.org/10.1371/journal.pone.0228882
- Murray, S., Stanley, M., McPhetres, J., Pennycook, G., & Seli, P. (2020). "Tve said it before and I will say it again. . .": Repeating statements made by Donald Trump increases perceived truthfulness for individuals across the political spectrum. *PsyArxiv Preprint*.

- Pennycook, G., Cannon, T. D., & Rand, D. G. (2018). Prior exposure increases perceived accuracy of fake news. *Journal of Experimental Psychology: General*, 147(12), 1865–1880. https://doi.org/10.1037/ xge0000465
- Pennycook, G., Cheyne, J. A., Barr, N., Koehler, D. J., & Fugelsang, J. A. (2015). On the reception and detection of pseudo-profound bullshit. *Judgment* and Decision Making, 10(6), 549–563.
- Pennycook, G., Epstein, Z., Mosleh, M., Arechar, A. A., Eckles, D., & Rand, D. G. (2019). Understanding and reducing the spread of misinformation online. *PsyArxiv Preprint*. https://doi.org/ https://doi.org/10.31234/osf.io/3n9u8
- Pennycook, G., Mcphetres, J., Bago, B., & Rand, D. G. (2020). Predictors of attitudes and misperceptions about COVID-19 in Canada, the UK, and the USA. *PsyArxiv Preprint*. https://doi.org/https:// doi.org/10.31234/osf.io/zhjkp
- Pennycook, G., Mcphetres, J., Zhang, Y., & Rand, D. G. (2020). Fighting COVID-19 misinformation on social media: Experimental evidence for a scalable accuracy nudge intervention. *PsyArxiv Preprint.*
- Pennycook, G., & Rand, D. G. (2018). Lazy, not biased: Susceptibility to partisan fake news is better explained by lack of reasoning than by motivated reasoning. *Cognition*. Advance online publication. https://doi.org/10.1016/j.cognition.2018.06.011
- Pennycook, G., & Rand, D. G. (2019a). Fighting misinformation on social media using crowdsourced judgments of news source quality. *Proceedings of* the National Academy of Sciences of the United States

of America, 116(7), 2521–2526. https://doi.org/ 10.1073/pnas.1806781116

- Pennycook, G., & Rand, D. G. (2019b). Who falls for fake news? The roles of bullshit receptivity, overclaiming, familiarity, and analytic thinking. *Journal* of *Personality*. Advance online publication. https:// doi.org/10.1111/jopy.12476
- Pennycook, G., & Rand, D. G. (2019c). Lazy, not biased: Susceptibility to partisan fake news is better explained by lack of reasoning than by motivated reasoning. *Cognition*, 188, 39–50. https:// doi.org/10.1016/j.cognition.2018.06.011
- Roozenbeek, J., & van der Linden, S. (2019a). Fake news game confers psychological resistance against online misinformation. *Palgrave Communications*, 5(1), 1–10. https://doi.org/10.1057/ s41599-019-0279-9
- Roozenbeek, J., & van der Linden, S. (2019b). The fake news game: Actively inoculating against the risk of misinformation. *Journal of Risk Research*, 22(5), 570–580. https://doi.org/10.1080/13669877.20 18.1443491
- Roozenbeek, J., van der Linden, S., & Nygren, T. (2020). Prebunking interventions based on the psychological theory of "inoculation" can reduce susceptibility to misinformation across cultures. *Harvard Kennedy School Misinformation Review*, 1(2), 1–23. https://doi.org/10.37016//mr-2020-008
- Tandoc, E. C., Lim, Z. W., & Ling, R. (2018). Defining "fake news": A typology of scholarly definitions. *Digital Journalism*, 6(2), 137–153. https://doi.org/ 10.1080/21670811.2017.1360143
- Vosoughi, S., Roy, D., & Aral, S. (2018). News on-line. Science, 1151(March), 1146–1151.