

Supplementary Materials:

A Signal Detection Analysis of Source Effects on Misinformation Susceptibility

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Pilot Test for News Sources

To identify suitable news sources that could be used for the experiments, we pilot-tested 45 sources that ranged from mainstream news sources (e.g., Forbes, AP News) to tabloids and fringe sources (e.g., National Enquirer, Real News Network). The sources were largely United-States-centric, except for some major international outlets (see Table S1 for the complete list of sources). For Experiments 1 to 4, we had aimed to identify (1) one news source that both Democrats and Republicans are familiar with, that both groups perceive as non-partisan, and that both groups perceive to be reliable in conveying accurate information, and (2) another news source that both Democrats and Republicans are familiar with, that both groups perceive as non-partisan, and that both groups perceive to be unreliable in conveying accurate information. For Experiments 5 and 6, we had aimed to identify (1) one news source that both Democrats and Republicans are familiar with and perceive to be pro-Democrat, and (2) another news source that both Democrats and Republicans are familiar with and perceive to be pro-Republican.

Method

The sources were presented in a randomized order for each participant. For each of the 45 news sources, participants answered a question assessing (1) familiarity (*How familiar are you with this outlet?*) on a scale ranging from 1 (*not at all familiar*) to 7 (*very familiar*), (2) reliability (*Based on what you know, how often does this outlet report something that is not true?*) on a scale ranging from 1 (*never*) to 7 (*very often*), and (3) political leaning (*How would you rate the political leaning of this outlet?*) on a scale ranging from 1 (*very pro-Democrat*) to 7 (*very pro-Republican*) with the scale mid-point of 4 labeled *neutral*. Responses to the items on reliability were reverse coded for analyses so that higher scores indicate greater perceived reliability.

We aimed to recruit 200 self-identified Democrats and 200 self-identified Republicans on Prolific Academic. Of the 424 Prolific workers who started the study, 400 had complete submissions and were thus compensated. Of these, eight failed a reading-intensive attention check that required them to not select any responses (Oppenheimer et al., 2009) and another two showed inconsistent self-reported political affiliations in Prolific's prescreening survey and the corresponding measure in our pilot study. Data from these participants were excluded from analyses. The final pilot sample is thus 390. Information on the sample demographics is provided in Table 3 of the main article. The pilot test's data, codes, and output are available at <https://osf.io/2mnrc/>.

Results

Table S1 presents each source's mean perceived familiarity, reliability, and partisanship scores, and modal partisanship scores for (1) the Democrat sample, (2) the Republican sample, and (3) the combined sample.

Non-Partisan Sources of Varying Reliability. To identify potential news sources that we could use for Experiments 1 to 4, we first identified which news sources had a modal partisanship rating of four (i.e., neutral) for both the Democrat and Republican pilot samples. We then eliminated news sources that had mean partisanship scores lower than three and higher than five. Next, we eliminated news sources with mean reliability scores lower than four to identify potential reliable sources and eliminated news source with mean reliability scores higher than four to identify potential unreliable sources. At this stage of the selection process, the only unreliable news source we identified was National Enquirer. To narrow down the list of eligible reliable news sources further, we prioritized United States-centric news sources (i.e., eliminating the BBC), news sources of similar familiarity to both Democrat and Republican samples, and

news sources with partisanship scores that are closer to 4. The latter resulted in the elimination of news sources with similar levels of reliability such as Bloomberg ($M_{\text{Democrat}} = 5.15$; $M_{\text{Republican}} = 4.71$) in favor of Forbes ($M_{\text{Democrat}} = 5.24$; $M_{\text{Republican}} = 4.97$). We thus selected Forbes as the reliable non-partisan news source and National Enquirer as the unreliable non-partisan news source to be included in Experiments 1 to 4. Forbes is an American media source focused primarily on business topics, whereas National Enquirer is an American tabloid source.

Both Democrat and Republican participants viewed Forbes and National Enquirer as largely non-partisan and most similar in terms of familiarity and political leaning (see Table S1). Paired samples *t*-tests with the full sample indicated that (1) Forbes was seen as significantly more reliable than National Enquirer, $t(389) = 20.34, p < .001, d = 1.03$, (2) the two sources were viewed as similarly non-partisan, $t(389) = .33, p = .738, d = 0.02$, and (3) the two sources were rated similarly in terms of familiarity, $t(389) = 1.87, p = .062, d = 0.09$.

At the subsample level, both Democrats, $t(195) = 15.37, p < .001, d = 1.10$, and Republicans, $t(193) = 13.47, p < .001, d = 0.97$, viewed Forbes as significantly more reliable than National Enquirer. While the Democrat sample was slightly more familiar with Forbes than National Enquirer, $t(195) = 3.41, p < .001, d = 0.24$, the Republican sample was equally familiar with both sources, $t(193) = -.60, p = .550, d = 0.04$. Both Democrats and Republicans perceived the two sources to differ in terms of their partisanship. Democrat participants tended to see both sources as slightly pro-Republican, with the National Enquirer being perceived as more pro-Republican than Forbes, $t(195) = -3.86, p < .001, d = 0.28$. The reverse was found for the Republican sample, wherein Republican participants tended to see both sources as slightly pro-Democrat, with the National Enquirer being perceived as more pro-Democrat than Forbes, $t(193) = 3.54, p < .001, d = 0.25$ (see Table S1). In other words, both participant groups tended to see

both sources as being slightly more supportive of the political outgroup than the ingroup, consistent with prior work on the hostile media bias (Vallone et al., 1985).

Despite discrepancies in the two subsamples' perceptions of Forbes and National Enquirer's partisanship, the modal rating for political leaning was neutral (i.e., 4) for both participant groups, with 80.6% of Democrat participants and 76.8% of Republican participants rating Forbes' political leaning from 3 to 5, and 73.5% of Democrat participants and 78.4% of Republican participants doing the same for National Enquirer. Democrat participants perceived Forbes to be slightly more reliable than their Republican counterparts did, $t(388) = 1.97$, $p = .049$, $d = 0.20$, but both samples viewed National Enquirer's reliability similarly, $t(388) = 1.24$, $p = .215$, $d = 0.13$. Although there were some between-group differences in Democrats' and Republicans' perceptions of Forbes and National Enquirer, Democrats' and Republicans' perceptions of Forbes and National Enquirer were the most aligned out of the 45 sources (see Table S1).

Partisan Sources. To identify potential news sources that we could use for Experiments 5 and 6, we aimed to identify (1) a news source that both Republican and Democrat participants perceived to be pro-Republican (i.e., mean and modal partisanship ≥ 5) and (2) a news source that both Republican and Democrat participants perceived to be pro-Democrat (i.e., mean and modal partisanship ≤ 3). Fox News was the only outlet that met the criteria for inclusion as the pro-Republican source ($M_{\text{Democrat}} = 4.27$; $M_{\text{Republican}} = 3.22$). CNN, New York Times, and MSNBC met the inclusion criteria for the pro-Democrat source. Of the three Democrat-leaning sources, Democrat and Republican participants were the most familiar with CNN ($M_{\text{Democrat}} = 5.57$; $M_{\text{Republican}} = 5.96$). We thus selected CNN as the pro-Democrat source and

Fox News as the pro-Republican source to be included in Experiments 5 and 6. Both CNN and Fox News are cable news networks with major followings in the United States.

Paired samples *t*-test with the full sample indicated that participants were equally familiar with CNN and Fox News, $t(389) = 0.39, p = .697, d = 0.020$ (see Table S1). Nevertheless, Democrat participants were slightly more familiar with CNN than Fox News, $t(195) = 2.64, p = .009, d = 0.19$, and vice versa for Republican participants, $t(193) = -2.38, p = .018, d = 0.17$. Paired samples *t*-test with the full sample indicated that CNN was seen as significantly more pro-Democrat (and by extension, less pro-Republican) than Fox News, $t(389) = -36.76, p < .001, d = 1.86$. Both Democrat, $t(195) = -26.76, p < .001, d = 1.91$, and Republican participants, $t(193) = -25.63, p < .001, d = 1.84$, perceive significant differences in the political leanings of CNN and Fox News. Both Democrat and Republican participants perceived CNN to be Democrat-leaning ($M_{\text{partisanship}} < 4$), but Republican participants perceived CNN to be more pro-Democrat than Democrat participants, $t(382.48) = 7.83, p < .001, d = 0.79$. Similarly, both Republican and Democrat participants perceived Fox News to be Republican leaning ($M_{\text{partisanship}} > 4$), but Democrat participants perceived Fox News to be more pro-Republican than Republican participants, $t(333.61) = 6.04, p < .001, d = 0.61$. Paired samples *t*-tests with the full sample also suggest CNN was seen as significantly more reliable than Fox News, $t(389) = 24.88, p < .001, d = 0.25$, but both CNN and Fox News were seen as reliable sources among their respective partisan audiences, such that Democrat participants perceived CNN to be significantly more reliable than Fox News, $t(195) = -24.52, p < .001, d = 1.75$, whereas Republican participants perceived Fox News to be significantly more reliable than CNN, $t(193) = 9.43, p < .001, d = 0.68$.

Pilot Test for Headlines

Experiments 1, 2a, and 2b

The headlines included in Experiments 1, 2a, and 2b were pre-tested headlines from Gawronski et al. (2023). Details of the headline selection procedures can be found in the Appendix of their article, but we also detail the steps the Gawronski et al. (2023) had taken here.

A team of research assistants first conducted a thorough search of mainstream and fact-checking websites such as AP News, FactCheck.org, Politico, and PolitiFact for potential political headlines that could be used as stimuli. The search for political headlines was guided by the following rules: (1) the headlines should be partisan in that it is clearly identifiable to Democrats and Republicans that the headline has either a pro-Democrat or pro-Republican slant; (2) the focal issue should not merely touch on political issues (e.g., abortion rights, Black Lives Matter) but should be clearly linked to one of the two political parties; (3) the political leaning and evaluative connotation of the headlines should be evident from the headline itself instead of relying on background assumptions made by participants; (4) the headlines contain claims that are verifiably true or false (i.e., not opinions); (5) the headlines contain claims that are unambiguously true or false rather than simply being misleading or having conflicting evidence regarding their veracity, and (6) the headlines do not include source attributions (e.g., “Person A made the claim that XYZ”).

Headlines that did not clearly meet the above six criteria were excluded, along with headlines containing information that is potentially too widely known, outdated, dependent on the context of the time of publication, prone to change in terms of veracity with ongoing political developments, had confusing wording, and/or that was not clearly partisan. Gawronski et al. (2023) then pilot-tested the headlines that were included following the initial screening ($N = 120$

for the first batch of headlines collected between 2020 and 2021; $N = 105$ for the second batch of headlines collected between 2021 and 2022). They recruited 120 self-identified Democrats and 120 self-identified Republicans via CloudResearch for the first pilot-test and 120 self-identified Democrats and 120 self-identified Republicans via Prolific Academic for the second pilot-test. For each pilot-tested headline, participants rated (1) the political slant of the statement (*How would rate the political slant of this statement?*) on a scale ranging from 1 (*very pro-Democrat*) to 7 (*very pro-Republican*) with the scale mid-point of 4 labeled *neutral* and (2) their familiarity with the claim in the statement (*Have you heard about the claim in this statement before?*) on a scale ranging from 1 (*very confident I did not hear about this before*) to 7 (*very confident I did hear about this before*).

The stimulus materials for Experiments 1, 2a, and 2b contained a mix of headlines from Gawronski et al.'s (2023) first two pilot-tests. Fifty-five headlines included in the current research were taken from their second pilot test and five were taken from their first pilot test.

Experiments 3 and 4

The pilot test to identify suitable headlines for inclusion in Experiments 3 and 4 was conducted in June 2023. This pilot test was conducted to identify new political headlines that could be used in place of headlines from Gawronski et al. (2023) that had become outdated by the time we conducted Experiments 3 and 4. In addition, we conducted this pilot-test to identify politically neutral headlines. To identify new political headlines that could be used as stimulus materials in Experiments 3 and 4, we followed the steps outlined above.

Different from rules (1) to (3), and in addition to rules (4) to (6), the search for politically neutral headlines was guided by the rule that the headlines should not be related to political issues in any way, including events (e.g., Black Lives Matter protests) and individuals (e.g.,

celebrities known for their political stance) that may be politicized or distally related to politics. The politically neutral headlines covered a spectrum of topics, such as celebrity news, health, science, history, and crime. All headlines selected for the pilot test were fact-checked prior to inclusion.

We recruited 120 Republicans and 120 Democrats on Prolific Academic to pilot-test the headlines. A total of 121 responses was collected for each sample, but only 117 and 119 were complete and non-duplicate submissions in the Democrat and Republican samples, respectively. 115 Democrat participants and 117 Republican participants passed the reading-intensive attention check that was also used for the main experiments. The final sample for the pilot-test was thus 232.

We pilot-tested (1) 32 headlines with a pro-Democrat slant that contain a true claim, (2) 34 headlines with a pro-Republican slant that contain a true claim, (3) 26 headlines with a pro-Democrat slant that contain a false claim, (4) 31 headlines with a pro-Republican slant that contain a false claim, (5) 28 apolitical headlines that contain a true claim, and (6) 28 apolitical headlines that contain a false claim. For each pilot-tested headline, participants rated (1) the political slant of the statement (*How would rate the political slant of this statement?*) on a scale ranging from 1 (*very pro-Democrat*) to 7 (*very pro-Republican*) with the scale mid-point of 4 labeled *neutral* and (2) their familiarity with the claim in the statement (*Have you heard about the claim in this statement before?*) on a scale ranging from 1 (*very confident I did not hear about this before*) to 7 (*very confident I did hear about this before*).

The following selection criteria were applied to select the political headlines: (1) the modal partisanship should not be 4 (i.e., politically neutral), (2) the mean partisanship should be less than 3 for pro-Democrat headlines and more than 5 for pro-Republican headlines, (3) the

modal familiarity between the Democrat and Republican samples should be the same, (4) the discrepancy in Democrats' and Republicans' mean partisanship score for each headline should be minimized, and (5) the discrepancy in Democrats' and Republicans' mean familiarity score for each headline should be minimized. The following selection criteria were applied to select the politically neutral headlines: (1) the modal partisanship should be 4 (i.e., politically neutral), (2) the mean partisanship should not be less than 3 or greater than 5, (3) the modal familiarity between the Democrat and Republican samples should be the same, (4) the discrepancy in Democrats' and Republicans' mean partisanship score for each headline should be minimized, and (5) the discrepancy in Democrats' and Republicans' mean familiarity score for each headline should be minimized. In cases where there were more than 10 headlines per category that met our selection criteria, we selected headlines that differed in content. The full set of pilot-tested headlines is available at <https://osf.io/2mnrc/>.

References

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Table S1

Results of the pilot-test assessing 45 sources' familiarity, reliability, and partisanship

Source	Democrat Sample (<i>N</i> = 196)				Republican Sample (<i>N</i> = 194)				Both Samples (<i>N</i> = 390)			
	Mean Familiarity	Mean Reliability	Mean Partisanship	Modal Partisanship	Mean Familiarity	Mean Reliability	Mean Partisanship	Modal Partisanship	Mean Familiarity	Mean Reliability	Mean Partisanship	Modal Partisanship
CNN	5.57	5.23	2.91	2, 3	5.96	3.27	1.76	1	5.76	4.26	2.34	1
Fox News	5.34	2.27	6.66	7	6.15	4.78	5.93	7	5.74	3.52	6.29	7
Washington Post	4.68	5.27	3.43	4	4.46	4.05	2.53	1	4.57	4.66	2.98	4
New York Times	5.22	5.47	3.15	3	4.91	3.93	2.30	1	5.06	4.71	2.73	1
Wall Street Journal	4.46	5.33	4.52	4	5.01	4.93	3.48	4	4.73	5.13	4.00	4
New York Post	4.05	4.18	4.5	4	4.47	4.21	3.63	4	4.26	4.19	4.07	4
MSNBC	4.60	5.40	2.79	3	5.18	3.70	2.07	1	4.89	4.55	2.43	1
BBC	4.57	5.66	3.69	4	4.51	4.84	3.40	4	4.54	5.25	3.55	4
Yahoo News	4.05	4.57	3.92	4	4.70	4.13	2.83	4	4.37	4.35	3.38	4
AP News	3.88	5.58	3.84	4	3.29	4.77	3.26	4	3.58	5.18	3.55	4
Politico	3.56	5.34	3.73	4	3.26	4.48	3.11	4	3.41	4.91	3.43	4
Huffington Post	4.41	5.04	2.9	4	4.21	3.93	2.54	1	4.31	4.49	2.72	1
Vice	3.50	4.87	3.13	4	2.84	4.52	2.96	4	3.17	4.69	3.05	4
Forbes	4.17	5.24	4.40	4	4.27	4.97	3.89	4	4.22	5.11	4.14	4
NPR	4.67	5.81	3.22	4	3.89	4.59	2.81	4	4.28	5.2	3.02	4
Bloomberg	3.65	5.15	4.27	4	4.08	4.71	3.22	4	3.87	4.93	3.75	4
Reuters	3.89	5.51	3.95	4	3.87	4.81	3.63	4	3.88	5.16	3.79	4
ABC	4.74	5.41	3.74	4	5.5	4.30	2.52	1	5.12	4.86	3.13	4
NBC	4.90	5.43	3.48	4	5.51	4.06	2.45	1	5.2	4.75	2.97	4
USA Today	4.12	5.00	3.96	4	4.87	4.38	2.93	4	4.49	4.69	3.45	4
Now 8 News	1.19	4.67	4.11	4	1.29	4.93	3.68	4	1.24	4.80	3.90	4
National Enquirer	3.66	2.62	4.76	4	4.37	2.87	3.47	4	4.01	2.74	4.12	4
Daily Mail US	2.89	4.05	4.50	4	2.76	4.59	3.75	4	2.83	4.32	4.13	4
NewsNation	1.49	4.61	4.29	4	1.75	4.88	3.85	4	1.62	4.74	4.07	4
CBS	4.68	5.31	3.71	4	5.49	4.16	2.74	3	5.08	4.74	3.23	4
CNBC	4.00	5.38	3.64	4	4.87	4.15	2.62	1	4.43	4.77	3.14	4
The Real News Network	1.37	4.44	4.43	4	1.55	4.89	3.78	4	1.46	4.66	4.11	4
Vox	2.77	5.03	3.27	4	2.36	4.58	3.1	4	2.57	4.81	3.19	4
PBS	5.15	6.04	3.41	4	5.26	4.94	2.92	4	5.21	5.49	3.17	4

The Guardian (US)	3.38	5.19	3.67	4	2.95	4.70	3.59	4	3.16	4.94	3.63	4
Daily Beast	2.54	4.58	3.87	4	2.49	4.45	3.44	4	2.51	4.52	3.65	4
Chicago Tribune	2.76	5.27	3.82	4	2.82	4.65	3.08	4	2.79	4.96	3.45	4
LA Times	3.14	5.27	3.18	4	3.13	4.30	2.48	1	3.14	4.79	2.83	4
Washington Times	3.08	4.80	4.23	4	3.89	4.35	3.38	4	3.48	4.58	3.81	4
Daily Wire	2.23	4.36	4.64	4	3.15	4.92	4.44	4	2.69	4.64	4.54	4
Newsweek	3.57	5.06	4.14	4	4.11	4.57	3.23	4	3.84	4.82	3.68	4
Washington Monthly	1.31	4.89	4.05	4	1.53	4.88	3.48	4	1.42	4.88	3.76	4
Seattle Times	1.88	5.28	3.53	4	1.93	4.84	2.84	4	1.9	5.06	3.18	4
Al Jazeera	2.98	4.98	3.91	4	2.96	4.35	3.43	4	2.97	4.67	3.67	4
Newsday	2.03	4.95	4.02	4	2.44	4.74	3.47	4	2.23	4.85	3.75	4
Star Tribune	1.75	4.65	4.16	4	1.97	4.55	3.46	4	1.86	4.60	3.81	4
The Hill	2.33	5.02	4.07	4	2.41	4.86	3.57	4	2.37	4.94	3.82	4
Axios	2.12	5.11	3.88	4	1.86	4.75	3.49	4	1.99	4.93	3.69	4
Raw Story	1.38	4.70	4.01	4	1.23	4.77	3.67	4	1.31	4.74	3.84	4
The Week	1.36	4.88	4.01	4	1.42	4.84	3.62	4	1.39	4.86	3.82	4