

Appendix

I. Survey sample

Our survey sample of 1,045 adult Americans was recruited by Lucid. Lucid employs quota sampling to produce samples matched to the U.S. population on age, gender, ethnicity, and geographic region (Coppock & McClellan, 2019). The survey was fielded via Qualtrics from May 2–3, 2020. The demographic composition of our samples and comparisons to those of prominent social science surveys and U.S. Census American Community Survey statistics are provided in Table A1.

Table A1. Comparative sample demographics.

	Lucid Survey	2020 ANES	2021 GSS	U.S. Census
<i>Demographics</i>				
Black	13%	9%	12%	12%
Latino	8%	9%	11%	19%
Female	50%	54%	56%	51%
% College degree	46%	44%	47%	38%
Median age	44 years	52 years	53 years	39 years
<i>Political Characteristics</i>				
Republican	34%	31%	23%	
Democrat	37%	35%	34%	
Ideology (% moderates)	34%	22%	35%	

Note: All Census figures taken from the 2020 Census.

II. Additional details on identifying real, misinformation, and Placebo headlines

Our study estimated true recall and accuracy perceptions of misinformation across two categories of misinformation: 1) claims about the origins of the novel coronavirus and the government response to it, and 2) claims about treatment or antidotes for COVID-19.

To identify prominent headlines within each category, we searched news coverage in prominent U.S. newspapers and prominent fact-checking websites. Table A2 reports a complete list of all 22 headlines used in our recall analysis. All eight of the misinformation headlines were covered in the *New York Times*, with six also receiving coverage in the *Washington Post* or *USA Today*. Each headline was also debunked by either *Politifact* or *Snopes*, with six of the eight headlines being debunked on both sites; three were debunked on the World Health Organization’s COVID-19 “Mythbusters” webpage.¹ In sum, the claims in five of our headlines were debunked in five of these six sources; the claims of two of our headlines were

¹ Schwarz et al. (2007) employ a similar approach, assessing whether individuals could distinguish between the facts and myths on a Center for Disease Control flyer about the flu vaccine. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters>

debunked in four of these sources; and the claim of one of our headlines was debunked in three of these sources.

To provide points of comparison, we conducted similar searches of major news outlets to identify a parallel set of four headlines describing factual information about the origins of/government response to the virus, as well as four headlines presenting factual information about treatments for the virus. The core information in each of these headlines is featured in both the *New York Times* and *Washington Post*.

To account for the potential over-reporting in self-reported recall of misinformation, we followed prior research (Allcott & Gentzkow, 2017) and constructed three parallel sets of “placebo” fake news headlines that we invented. Media searches confirm that the claims advanced in these placebo headlines did not receive widespread media attention in early 2020. Comparing reported recall of prominent misinformation arguments and fabricated fake news arguments in the placebo group provides a measure of “true recall,” allowing us to generate a more precise estimate of how much misinformation about COVID-19 subjects have actually seen and remembered.

Table A2. Complete list of headlines by category and veracity.

Number	Type	Headline
<i>Origins/Response</i>		
1	Real	Scientists Have Strong Evidence Coronavirus Originated Naturally: Nothing suggests the virus was ‘man-made,’ experts say
2	Real	Apple and Google are Building a Coronavirus Tracking System into iOS and Android
3	Real	Restrictions Are Slowing Coronavirus Infections, New Data Suggest
4	Real	Cities That Went All In on Social Distancing in 1918 Emerged Stronger for It
5	Misinformation	5G Syndrome Maps Perfectly with Coronavirus Outbreaks
6	Misinformation	Bill Gates May Have Created Coronavirus to Microchip People
7	Misinformation	HHS Document Released Instructing MN Senator To Overcount COVID-19 Deaths
8	Misinformation	China Accused of Major Coronavirus Cover-up as Chilling Satellite Pics "Show Extent of Corpse Burning in Wuhan"
9	Placebo	Coronavirus Was a Bioweapon Created by Iran to Punish the West for Crippling Economic Sanctions
10	Placebo	Amazon is Including Hidden Devices in Select Products to Measure Social Distancing
11	Placebo	Wildly Inaccurate Coronavirus Models were Created by Climate Change Activists to Reduce Greenhouse Gas Emissions
<i>Treatments</i>		
12	Real	No Benefit, Higher Death Rate in Patients Taking Hydroxychloroquine for COVID-19
13	Real	“Such a Simple Thing to Do”: Why Positioning COVID-19 Patients on their Stomachs Can Save Lives
14	Real	Drug Used to Treat Ebola May Help COVID-19 Patients, Preliminary Results Suggest
15	Real	Plasma Treatment Being Tested in New York May be Coronavirus “Game Changer

16	Misinformation	Advice from Japanese Doctors Treating Coronavirus Cases: Drinking water every 15 minutes reduces your risk of contracting the virus
17	Misinformation	Using a Hair Dryer to Breathe in Hot Air Can Cure COVID-19 and Stop its Spread
18	Misinformation	There is an Expired Patent on the Coronavirus that Causes COVID-19, as well as on a Vaccine that Cures It
19	Misinformation	Good News: Coronavirus Destroyed By Chlorine Dioxide
20	Placebo	Acupuncture is Surprisingly Effective at Treating Those with Severe Coronavirus Symptoms
21	Placebo	Pharmaceutical Companies are Slowing Clinical Trials to Increase Price of COVID-19 Treatment
22	Placebo	Corona Beer Consumption has been Linked to the Spread of Coronavirus in the Southwest

III. Random assignment of headlines

The real and misinformation headlines summarized in Table A2 were organized into six question blocks on Qualtrics. Four blocks contained one real and one misinformation story from each of the two substantive categories (i.e., origins/response and treatments). For example, the first such block contained headlines 1, 5, 12, and 16 from Table A2. Each respondent was asked to evaluate two of these, chosen at random. The remaining two blocks were comprised of placebo headlines; the first placebo block contained the three placebo headlines for the origins/response category (i.e., headlines 9–11), while the second contained the three placebo headlines for the treatment category (i.e., headlines 20–22). Each subject was asked to evaluate ten headlines. Two headlines were selected at random from each of the first set of four blocks with real and misinformation headlines. One headline was selected at random from each of the two placebo blocks. The order with which the headlines drawn from each block was presented was randomized across respondents.

IV. Self-reported recall and belief of headlines across categories

The top panel of Figure A1 replicates the top panel of Figure 1 from the text, but with the percentage of subjects who self-reported recalling *and* believing headlines in each of our nine categories. The bottom panel of Figure A1 presents the difference in the percentage who reported recalling and believing prominent misinformation and placebo headlines in each topical category. This metric suggests further limitations on the reach of misinformation prevalent on social media. Only 14% of respondents, on average, reported recalling and believing misinformation headlines about COVID-19 treatments, and 19% reported recalling and believing misinformation headlines about the virus’s origins and the government response to the pandemic. Moreover, the percentage reporting that they recalled and believed misinformation about treatments is statistically indistinguishable from the corresponding figure in the corresponding placebo group. Individuals also struggled to recall and believe factual information, particularly about the efficacy of treatments (or lack thereof). On average, only one in three respondents recalled and believed factual headlines conveying COVID-19 treatment information.

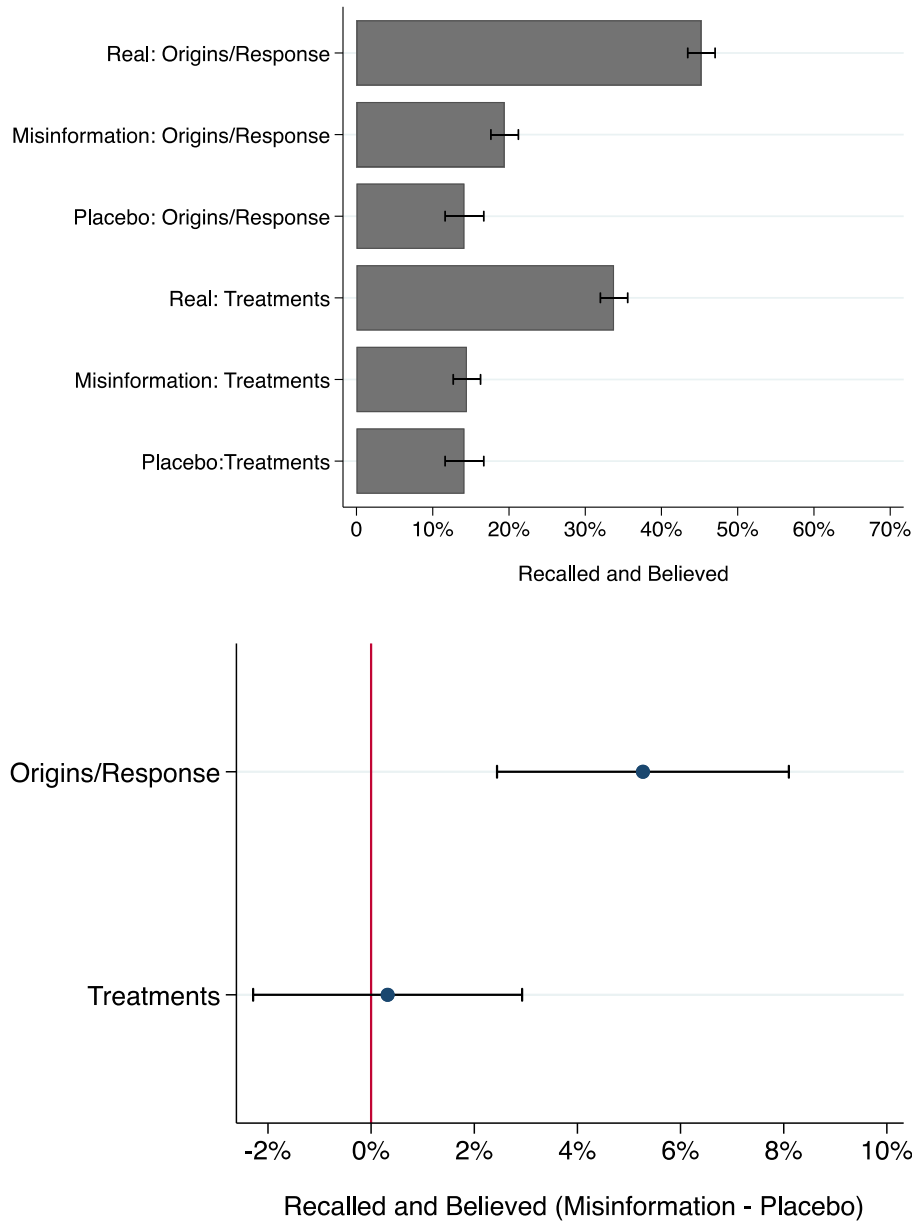


Figure A1. Percentage that recalled and believed real, misinformation, and Placebo headlines. I-bars indicate 95% confidence intervals around each mean.

V. Misinformation by foreign sources

The COVID-19 pandemic also affords an opportunity to examine public accuracy perceptions of misinformation promoted by foreign actors and to investigate whether the factors associated with accuracy misperceptions in such cases differ from those observed with respect to other types of misinformation. For example, Chinese officials openly pushed anti-American conspiracy theories, such as the claim that the U.S. Army brought the coronavirus to Wuhan, on social media (Barnes et al., 2020; Wong et al., 2020).

Accordingly, after answering whether they recalled the headlines discussed previously and whether they perceived each as accurate or not, subjects were also asked to evaluate the accuracy of three

additional headlines (Table A3). The claims of all three headlines were debunked in both the *New York Times* and *Washington Post*. Headlines 1 and 2 capture arguments made by Chinese sources that the virus either originated in the U.S. or that the U.S. Army brought the virus to Wuhan. While the claims in the two headlines are not necessarily incompatible, we worried that if exposed to both, some respondents might view them as such, which could affect their accuracy perceptions. As a result, respondents were randomly assigned to evaluate the accuracy of one of these two headlines (i.e., the first Chinese Source Misinformation question block contained these two headlines, and each respondent was randomly assigned to view either headline 1 or headline 2). All respondents then evaluated the accuracy of headline 3, arguing that only China has been successful in combating the virus. Figure 2 in the text presents the average percentage of respondents who believed the three headlines in the Chinese Source Misinformation category (half of the headline evaluations concerned headline 3; and the other half of the headline evaluations concerned headlines 1 and 2).

Table A3. Misinformation headlines from Chinese sources.

Number	Type	Headline
1	Misinformation	U.S. Army Brought Coronavirus Epidemic to Wuhan
2	Misinformation	COVID-19: Further Evidence the Virus Originated in the U.S.
3	Misinformation	The Chinese Method of Combatting Coronavirus is the Only One that has Proved Successful

VI. Additional analyses of accuracy perceptions

Figures 3–5 in the text graphically illustrate results from a series of multinomial logit regression models. Descriptive statistics for all variables in the analyses are presented in Table A4. The full results from these models are presented in Tables A5–A7.

Table A4. Descriptive statistics for all variables in analysis.

Characteristic	Mean	SD	Min	Max
<i>Political</i>				
Republican (with leaners)	.40	.49	0	1
Democrat (with leaners)	.46	.50	0	1
Republican (no leaners)	.34	.47	0	1
Democrat (no leaners)	.37	.48	0	1
Trump approval	.41	.49	0	1
<i>News Measures</i>				
TV News	3.11	.94	1	4
Newspapers	2.43	1.09	1	4
Facebook and social media	2.67	1.07	1	4
Additive news index	8.22	2.19	3	13
<i>Demographics</i>				
Educational attainment	4.07	1.65	1	8
College degree	.46	.50	0	1
Income	3.52	1.74	1	6
Age	44.78	16.59	18	97
Female	.50	.50	0	1
Black	.13	.34	0	1
Latino	.08	.28	0	1

Note: Median income range was \$40,000-\$59,999.

Table A5. Multinomial logit models of accuracy perceptions for misinformation headlines used to produce Figure 3.

	Origins/Response		Treatments		Chinese Sources	
	True	False	True	False	True	False
Republican	0.72*	0.59**	0.80*	0.39	0.41	0.75**
	(0.28)	(0.22)	(0.38)	(0.24)	(0.30)	(0.23)
Democrat	0.63*	0.82**	0.83*	0.76**	0.37	0.49*
	(0.26)	(0.19)	(0.37)	(0.19)	(0.29)	(0.20)
Approve of Trump	0.58*	-0.21	0.77**	-0.02	0.91**	0.04
	(0.23)	(0.18)	(0.29)	(0.21)	(0.27)	(0.19)
Education	0.19**	0.12**	0.22**	0.05	0.37**	0.17**
	(0.05)	(0.05)	(0.07)	(0.05)	(0.06)	(0.05)
Income	0.02	0.05	0.11	0.01	0.10	0.04
	(0.05)	(0.04)	(0.07)	(0.05)	(0.06)	(0.04)
Age	-0.01*	0.01*	-0.02**	0.01**	-0.02**	0.02**
	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)
Female	-0.71**	-0.46**	-0.83**	-0.19	-0.76**	-0.40**
	(0.16)	(0.13)	(0.20)	(0.14)	(0.18)	(0.14)
Black	0.28	-0.78**	0.31	-0.54*	0.44	-0.60**
	(0.25)	(0.21)	(0.33)	(0.21)	(0.27)	(0.21)
Latino	0.24	-0.03	-0.14	-0.18	0.25	-0.22
	(0.29)	(0.24)	(0.41)	(0.25)	(0.33)	(0.24)
Constant	-0.97*	-0.72*	-1.47**	0.17	-1.47**	-0.47
	(0.42)	(0.30)	(0.55)	(0.32)	(0.45)	(0.32)
Observations	1,856	1,856	1,890	1,890	1,876	1,876

*Note: All models are multinomial logit regressions; “unsure” is the omitted baseline category in each model. Robust standard errors clustered on respondent in parentheses. All significance tests are two-tailed. ** $p < .01$, * $p < .05$.*

Table A6. Multinomial logit model examining Trump approval and accuracy assessments of real headlines used to produce Figure 4.

	Real Headlines	
	True	False
Republican	0.45* (0.18)	0.33 (0.18)
Democrat	0.93** (0.16)	0.44** (0.17)
Approve of Trump	0.36* (0.15)	0.37* (0.15)
Education	0.10** (0.04)	0.08* (0.04)
Income	0.11** (0.03)	-0.07 (0.03)
Age	0.00 (0.00)	0.00 (0.00)
Female	-0.58** (0.11)	-0.48** (0.11)
Black	-0.18 (0.17)	-0.34 (0.17)
Latino	-0.05 (0.21)	0.13 (0.19)
Constant	-0.77** (0.26)	-0.26 (0.28)
Observations	3,758	3,758

*Note: All models are multinomial logit regressions; “unsure” is the omitted baseline category in each model. Robust standard errors clustered on respondent in parentheses. All significance tests are two-tailed. ** $p < .01$, * $p < .05$.*

Table A7. Multinomial logit model examining interaction of Trump approval and news consumption and accuracy perceptions of misinformation used to produce Figure 5.

	All Misinformation	
	True	False
Republican	0.46* (0.23)	0.55** (0.17)
Democrat	0.33 (0.22)	0.62** (0.14)
Approve of Trump	-0.66 (0.61)	0.22 (0.41)
News consumption	0.20** (0.05)	0.05 (0.03)
Approve of Trump X News consumption	0.14* (0.07)	-0.04 (0.05)
Education	0.19** (0.05)	0.11** (0.03)
Income	0.01 (0.04)	0.03 (0.03)
Age	-0.01** (0.00)	0.01** (0.00)
Female	-0.62** (0.14)	-0.35** (0.10)
Black	0.27 (0.21)	-0.65** (0.15)
Latino	0.01 (0.27)	-0.17 (0.17)
Constant	-2.34** (0.45)	-0.55 (0.30)
Observations	5,594	5,594

*Note: All models are multinomial logit regressions; “unsure” is the omitted baseline category in each model. Robust standard errors clustered on respondent in parentheses. All significance tests are two-tailed. ** $p < .01$, * $p < .05$.*

Partisan differences without Trump approval

Partisanship and opinions toward President Trump are strongly correlated, but not perfectly so in our data. The analyses in the text show that approval of Trump is a stronger predictor of believing misinformation than partisanship; indeed, partisan gaps all but disappear when including Trump approval in the model. However, we do find evidence of partisan gaps when estimating identical models to those described in the text but excluding Trump approval. Figure A2 presents the results. Republicans were both significantly more likely to believe misinformation headlines about the origins of the virus/government response to the pandemic and less likely to believe they were false than were Democrats ($p < .05$, two-tailed Wald test of coefficients). Democrats were significantly more likely to correctly flag misinformation headlines about COVID-19 treatments as false than were Republicans ($p < .05$, two-tailed Wald test of coefficients). By contrast, the partisan gaps in accuracy perceptions of misinformation from Chinese sources were substantively much smaller.

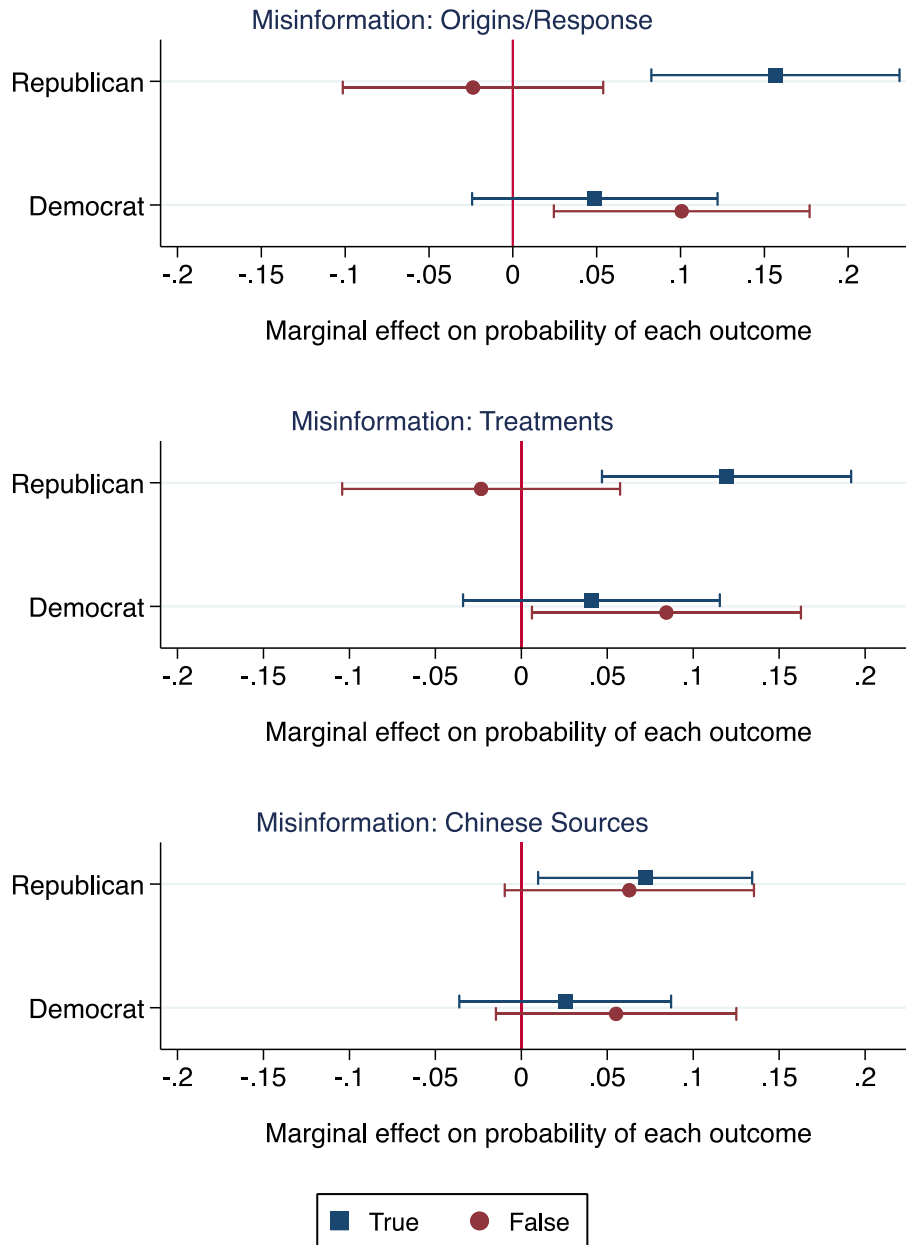


Figure A2. Partisan gaps in accuracy perceptions, excluding Trump approval. I-bars indicate 95% confidence intervals around each mean.

Excluding leaners

Consistent with research showing that “leaners” have similar opinions and behaviors to other partisans, the partisan indicators used in the analyses reported in the text include those who “lean” toward one party or the other as partisans. As a robustness check, we also re-estimated this analysis with partisan indicators excluding “leaners.” Figure A3 presents the results. The results are substantively similar to those presented in Figure 3. In additional models excluding Trump approval, we see evidence of modest partisan differences, with Democrats being more likely than Republicans to reject misinformation as false and Republicans modestly more likely than Democrats to label it as true. Trump approval is again a stronger predictor of accuracy perceptions.

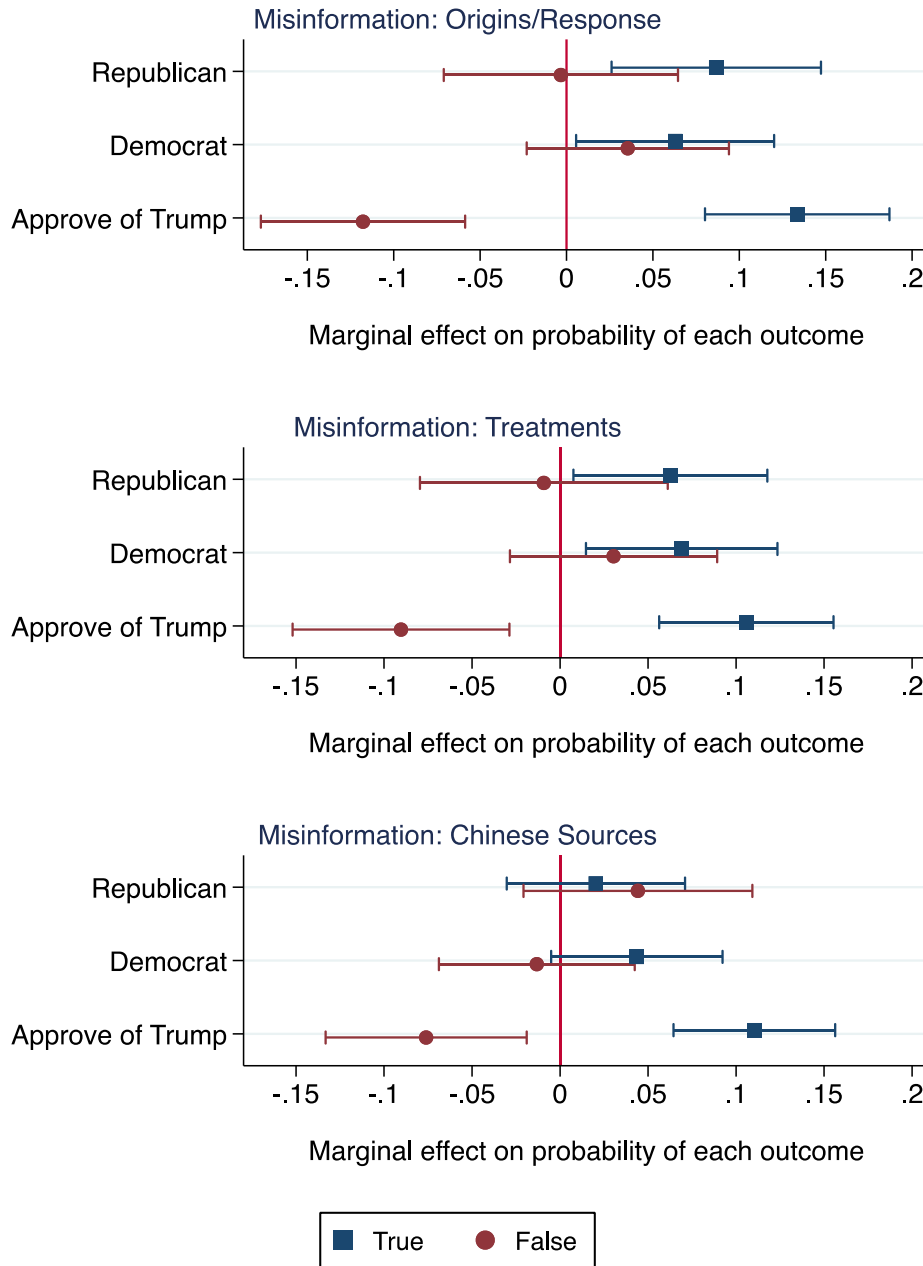


Figure A3. Replicating partisanship/Trump approval analysis excluding "leaners." I-bars indicate 95% confidence intervals around each mean.

Trump approval and accuracy perceptions of real headlines

Figure 4 in the text shows that Trump approval was not a significant predictor of accuracy perceptions toward real headlines. This analysis pooled real headlines about both the origins of/response to the virus and treatments for the virus. Figure A4 shows similar results estimating separate multinomial logits for each category.

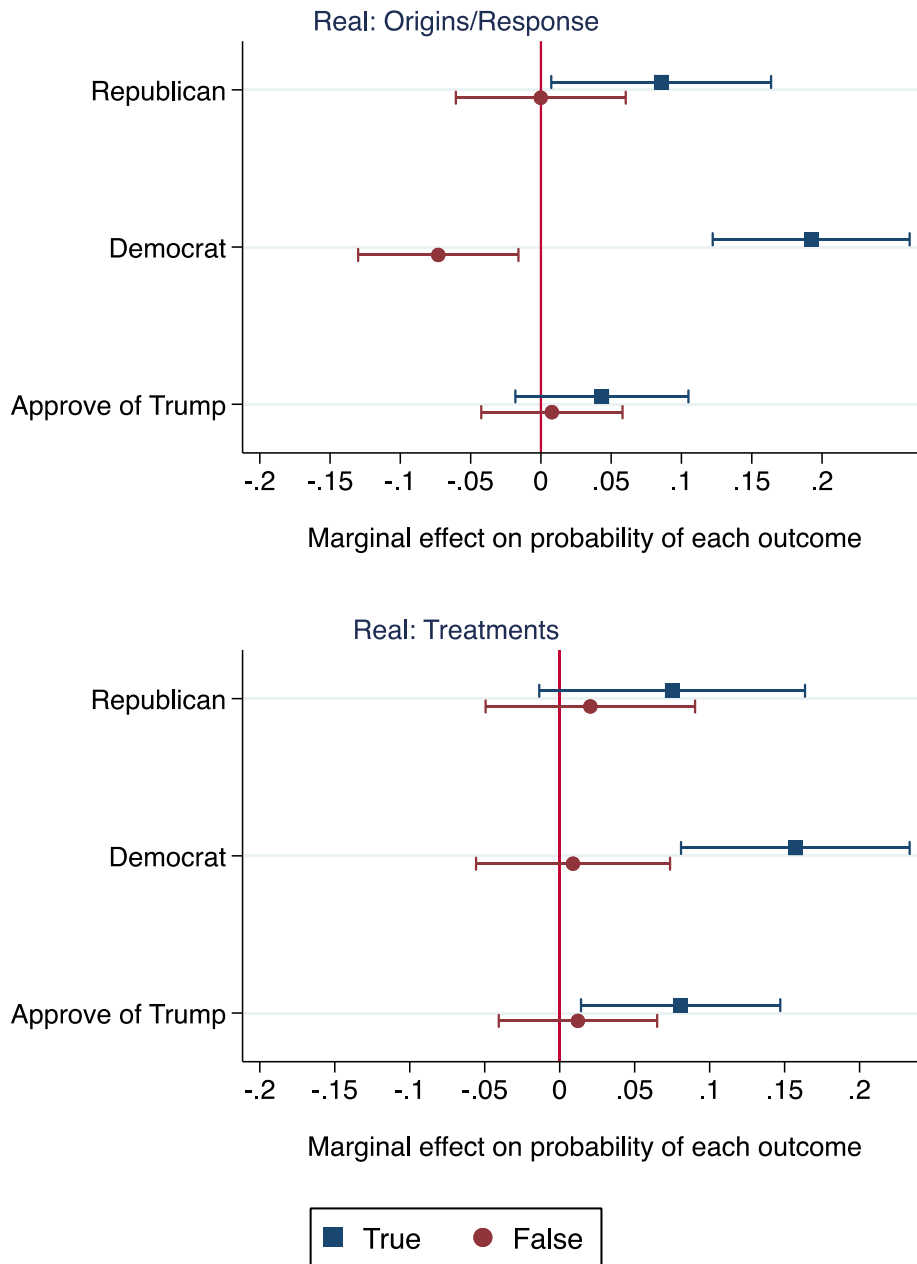


Figure A4. Trump approval and accuracy perceptions of real headlines by category. I-bars indicate 95% confidence intervals around each mean.

Trump approval and Placebo headlines

Figure 3 in the text shows that Trump approval was a significant predictor of believing prominent misinformation headlines. Figure A5 shows that Trump supporters were also significantly more likely to believe our placebo headlines—false claims about the pandemic that we created and that did not circulate on social media.

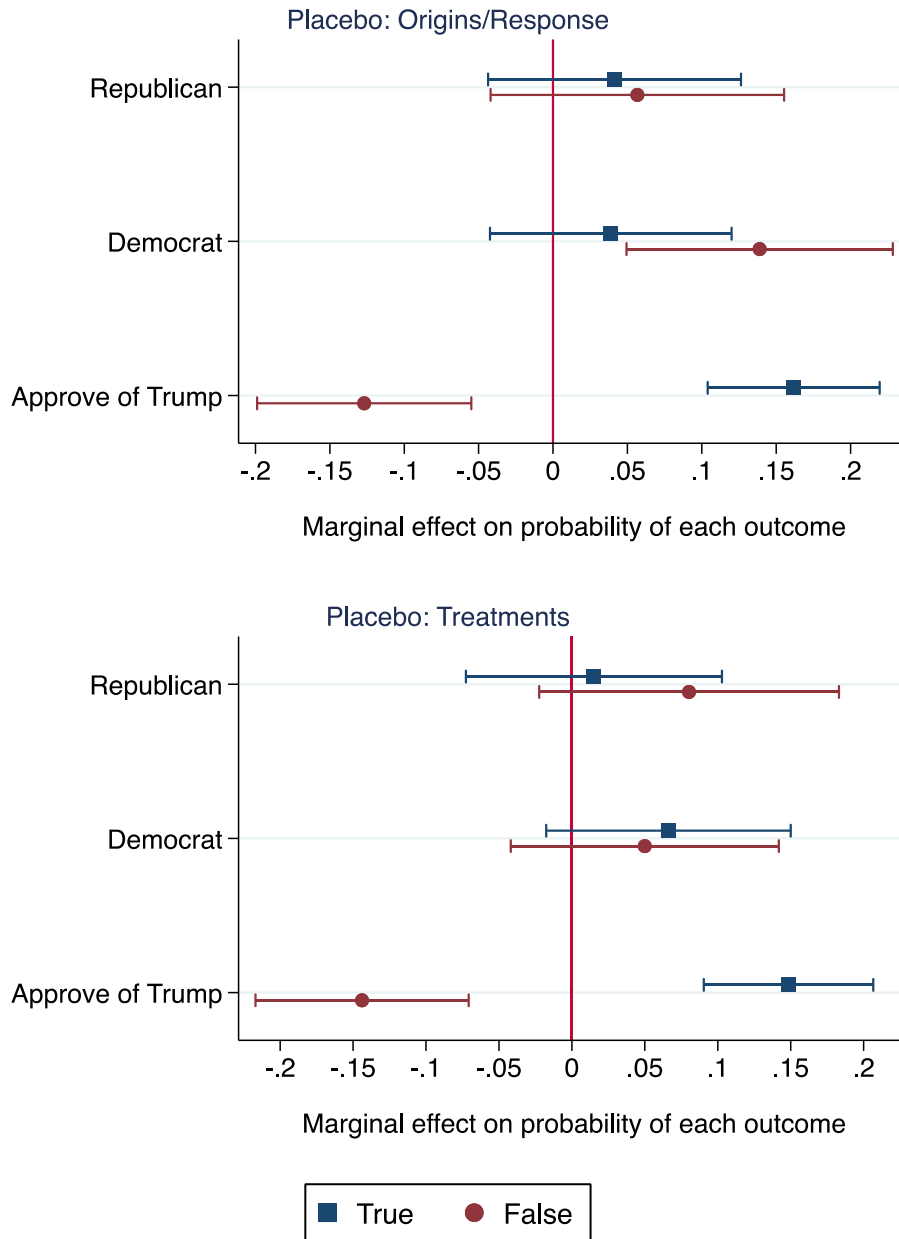


Figure A5. Trump approval and accuracy perceptions of Placebo headlines. I-bars indicate 95% confidence intervals around each mean.

Trump approval, news consumption, and propensity to believe misinformation by category

In the text, we pooled the three categories of misinformation in our study (i.e., origins/response, treatments, and Chinese sources) to analyze the interactive relationship between Trump approval and news consumption and the propensity to believe misinformation. In Figure A6, we present the results from multinomial logits that estimate this relationship for each category of misinformation separately. For misinformation about COVID-19 treatments and misinformation from Chinese sources, we observe a strong interactive relationship: as news consumption increased, the gap between Trump supporters and non-supporters widened significantly. With respect to accuracy assessments of misinformation about the origins of the virus/the government response to it, we do not find evidence of an interactive relationship.

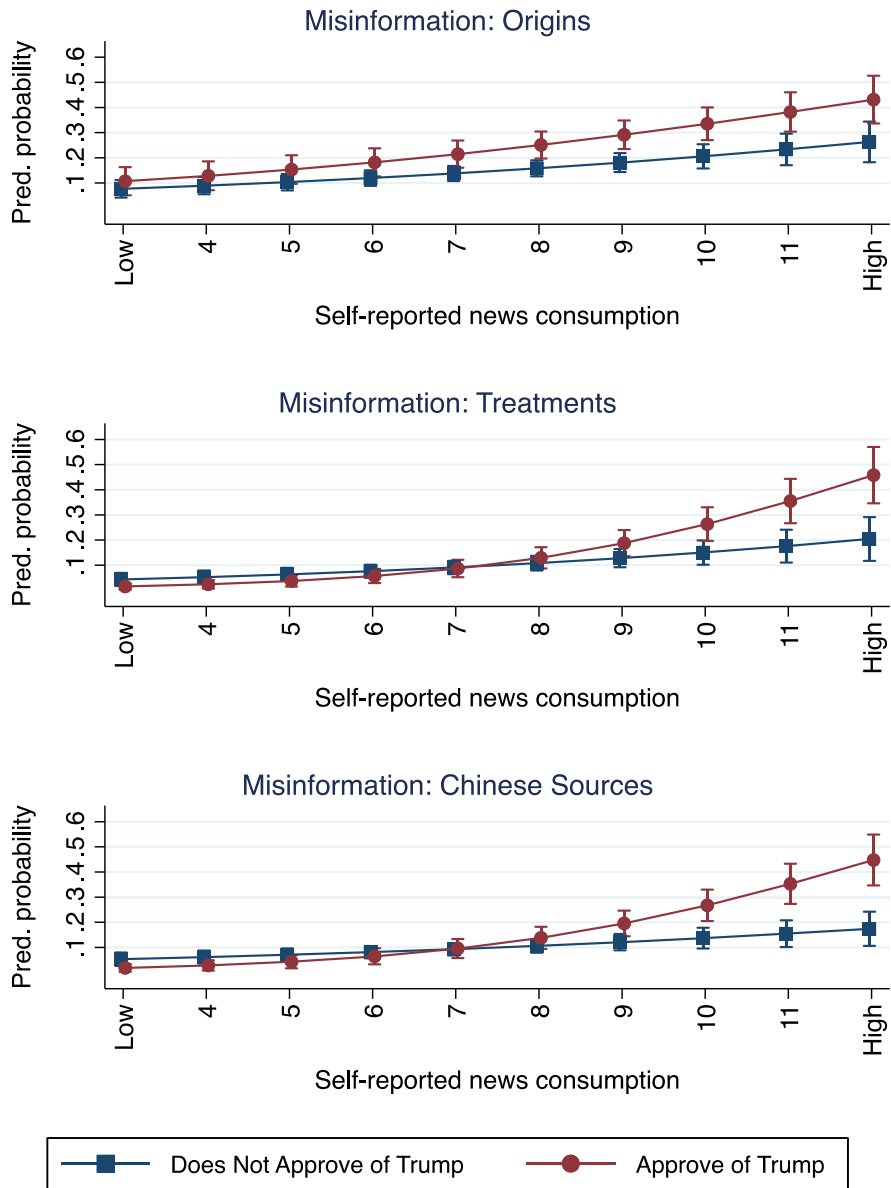


Figure A6. Trump approval and news consumption, by category of misinformation. I-bars indicate 95% confidence intervals around each mean.

The interaction of Trump approval and news consumption by source

The analyses in the text used an additive index of news consumption based on respondents' answers to how much they used three sources to follow the news: TV news, newspapers, and social media. To examine whether the interactive relationship is different for different news sources, we estimated three multinomial logit models in which we examine reliance on each news source individually, as well as its interaction with Trump approval. Figure A7 presents the results. In each case, we find that the gap between Trump supporters and non-supporters grows as consumption of news through the specified medium increases. We find little evidence of different relationships across media sources.

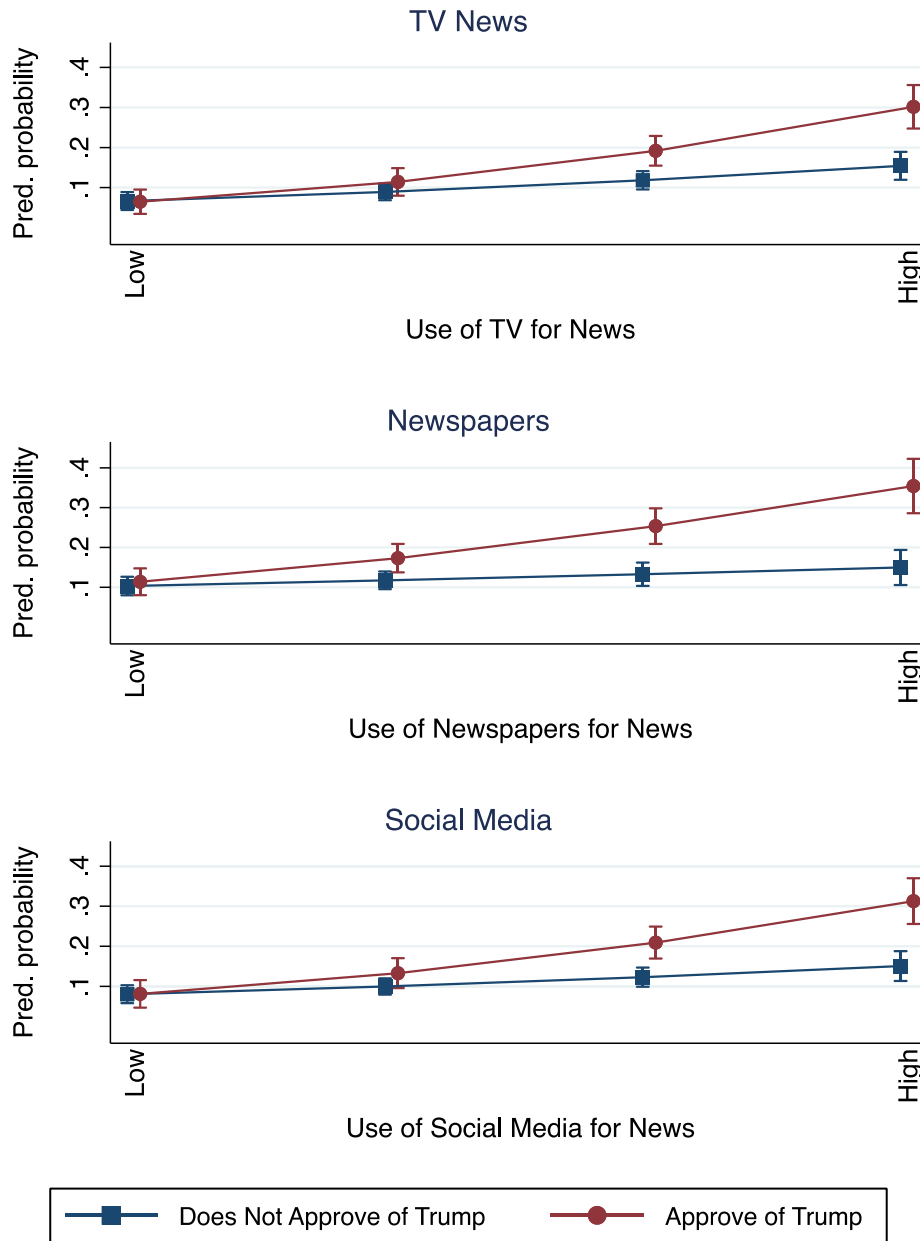


Figure A7. Interaction of Trump approval and news consumption by source. I-bars indicate 95% confidence intervals around each mean.

Robustness to excluding survey “speeders”

Inattentive survey respondents can inject noise into data, which can weaken correlations and inflate the prospects of null findings (Berinsky et al., 2021). While our survey did not include screener questions, we were able to identify “speeders” who completed the survey more quickly than most respondents. The bottom ten percent of survey takers completed the survey in roughly two and a half minutes or less. As a robustness check, we re-estimated all our analyses excluding these “speeders”. Figure A8 replicates our “true recall” analyses excluding speeders. Figure A9 replicates our assessment of partisanship, Trump approval, and propensity for believing misinformation. Figure A10 replicates our analysis of the interactive relationship of Trump approval and news consumption with the propensity to believe misinformation. All results are substantively similar to those presented in the text. This is consistent with Greszki, Meyer, and

Schoen (2015), who found that “speeding” often has little effect on marginal distributions and the results of explanatory models.

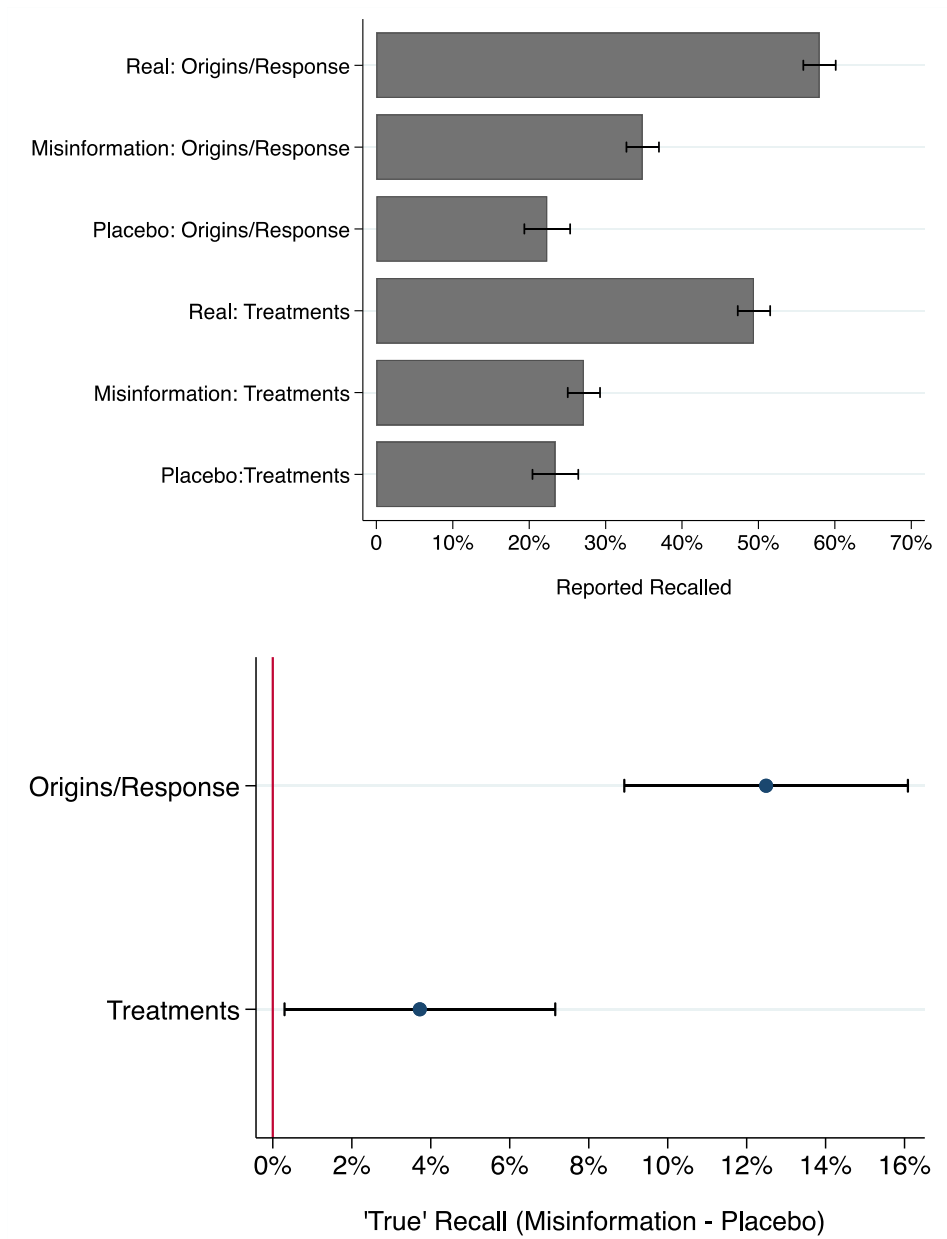


Figure A8. Replicating true recall analysis dropping “speeders.” I-bars indicate 95% confidence intervals around each mean.

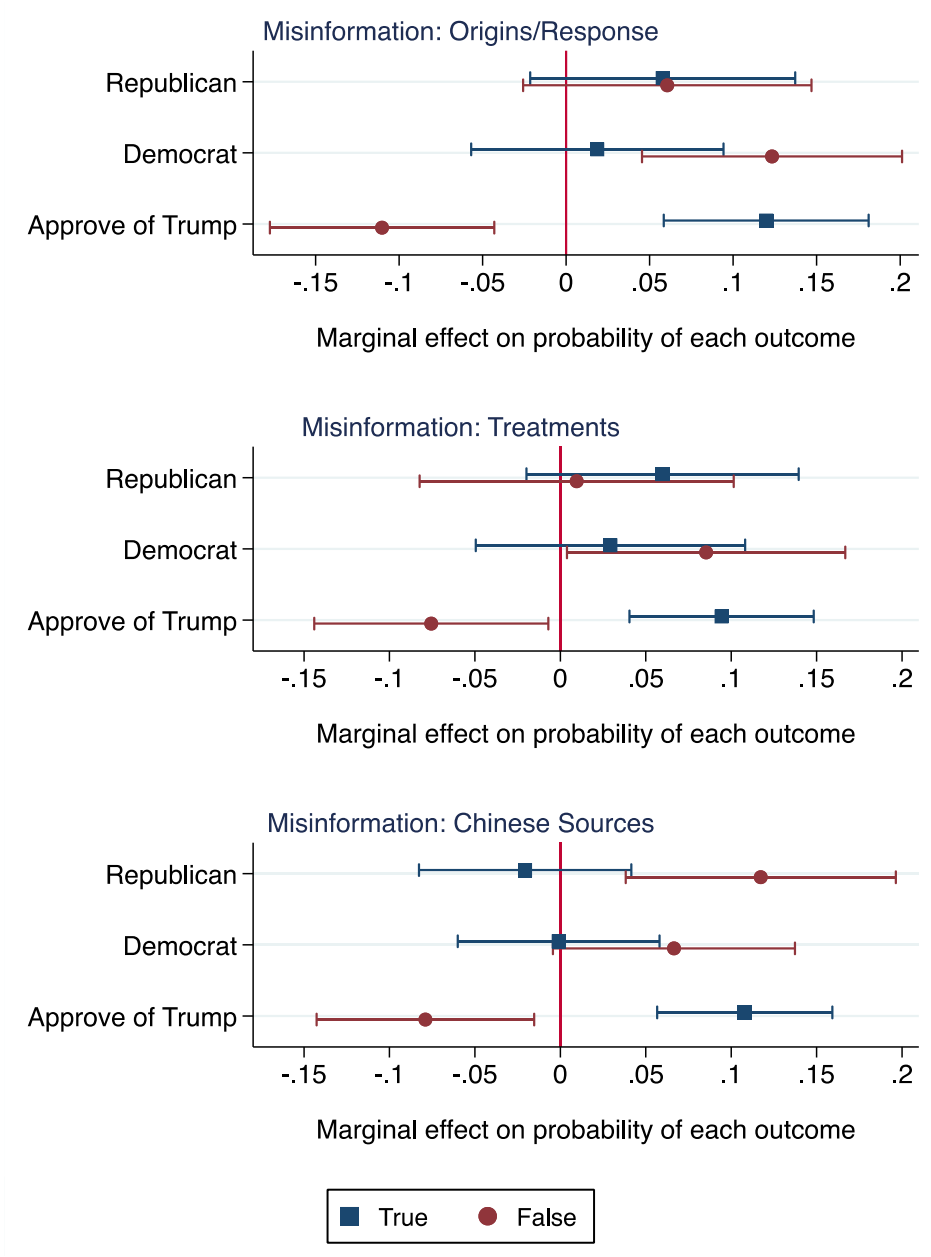


Figure A9. Trump approval and belief in misinformation dropping “speeders.” I-bars indicate 95% confidence intervals around each mean.

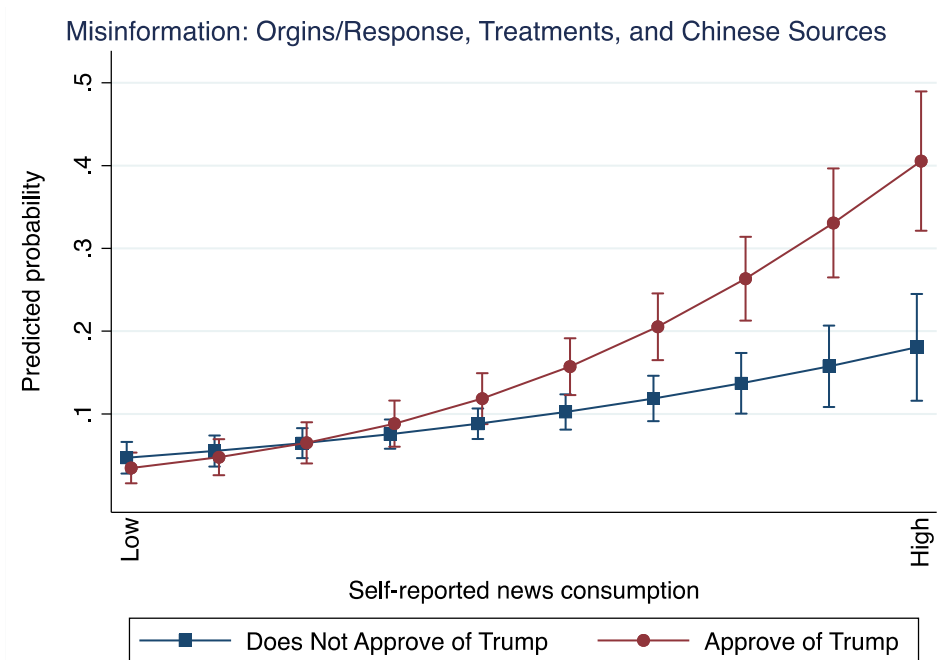


Figure A10. Trump approval, news consumption, and belief in misinformation dropping “speeders.” I-bars indicate 95% confidence intervals around each mean.

VII. Full question wording for all variables used in the analysis

Recall and accuracy perceptions

For each of the headlines in SI Table 2, subjects were asked two questions:

1. Do you recall seeing this claim about COVID-19 reported or discussed in recent months?
Answer choices: yes; no; unsure
2. Just your best guess, is this statement true?
Answer choices: yes; no; unsure.

News consumption by media source

1. How much, if at all, do you use each of the following approaches for staying up-to-date on the news?
 - Watching television news programs that report the day's news
 - Reading a newspaper (printed or online version)
 - Seeing or reading links to news stories on Facebook or other social media sites
Answer choices: a great deal; a fair amount; only a little; not at all.

Political partisanship

1. In politics, as of today, do you consider yourself a Republican, a Democrat, or an Independent?
Answer choices: Republican; Democrat; Independent; Other/don't know.
2. As of today, do you lean more toward the Democratic Party or the Republican Party? (asked only of those who selected “independent” to previous question)
Answer choices: Democratic Party; Republican Party; Neither/don't know.

Trump approval

1. Do you approve or disapprove of the way Donald Trump is handling his job as president?

Answer choices: approve; disapprove; don't know.

Demographics

1. What is your gender?

Answer choices: male; female; prefer not to say.

2. What best describes your race/ethnicity? Check all that apply.

Answer choices: American Indian; Asian; Black or African American; Hispanic; White; Other.

3. What is your average income range?

Answer choices: Below \$20,000; \$20,000–\$39,999; \$40,000–\$59,999; \$60,000–\$79,999; \$80,000–\$99,999; \$100,000 or more.

4. What is the highest level of education you have completed?

Answer choices: less than high school; high school/GED; some college; 2-year college degree; 4-year college degree; master's degree; doctoral degree; professional degree.