Supplemental Material for:

The COVID-19 Infodemic and the Efficacy of Interventions Intended to Reduce Misinformation

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Research Ethics

Our research followed relevant ethical regulations and all study protocols were approved by our university's institutional review board. Before participating, in accordance with the APSA Council's *Principals and Guidance for Human Subjects Research* all subjects read and agreed with an extensive consent form describing the study and research team; its risks and benefits; measures for ensuring anonymity; and rights to withdraw at any time for any reason.

In both of our surveys, after providing informed consent to participate in the study subjects read the following prompt: "While much of the news on social media is true, some articles contain false information. Please read the headline below and answer a few questions about it." All subjects were then randomly assigned to read a false headline about the COVID-19 pandemic or an unrelated false claim in the control group (Appendix S1). In some conditions, the headline was explicitly flagged as false. Neither experiment employed deception.

At the conclusion of the survey, the debrief thanked subjects for their participation; informed them that the primary goal of the study was to measure the spread of misinformation about COVID-19; and alerted subjects that the headline they read and evaluated for accuracy was false. The debrief then provided links to several reliable sources of factual information about COVID-19.

All subjects were recruited indirectly through the firm Lucid (<u>https://luc.id/</u>). Lucid charged a set fee for providing the agreed upon number of survey participants, which we paid directly to Lucid. The authors had no influence over the terms of compensation agreed upon between Lucid and those who accepted their invitation to take our survey.

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Omitted Control Group in Study 1

In addition to the three false COVID-19 headlines and the three false tag treatments, the experiment in study 1 also included a seventh experimental group, a control in which subjects read an unrelated false headline about abandoned wind turbines littering the United States. 45% of subjects judged this headline accurate, about the same percentage as believed the 5G COVID-19 headline in study 1 and less than the percentage that believed the George COVID-19 rate and US testing headlines. Because this is not a pure control, we omit this condition from the analysis.

Regression Analyses and Alternate Operationalization of Accuracy Perceptions

Randomization checks uncovered little evidence of any significant demographic imbalances across conditions in both surveys (Tables S2 and S3). As a result, the analysis in the text focuses on the differences in means across each headline and the respective correction treatment. OLS regressions with demographic controls yield substantively identical results to the difference in means analyses presented in the text (Tables S4 and S5).

The analyses in the text examine the difference in a four-point measure of accuracy perceptions across the corresponding treatment and control groups. However, analyses collapsing the "somewhat" and "very" accurate categories to assess the percentage believing each headline to be accurate yield similar results. See Figure S1.

Partisan Moderation

We also examined whether partisanship moderated the effects of the corrections treatments on sharing. The regression analyses in Table S6 and first differences in Figure 5 in the text found some evidence of partisan moderation on accuracy perceptions; but this evidence is in the opposite

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direction of a backfire effect. Similar analyses on sharing propensity found no evidence of partisan moderation (see Figure S2).

	Study 1	Study 2	2018 ANES	2018 GSS	US Census
Demographics					
Black	13%	13%	9%	16%	13%
Latino	9%	10%	11%	6%	18%
Female	51%	50%	52%	55%	51%
% College degree	44%	42%	39%	33%	32%
Median age	43 years	44 years	49 years	48 years	38 years
Political Characteristics					
Republican	34%	32%	29%	23%	
Democrat	36%	39%	34%	32%	
Ideology (% moderates)	33%	32%	21%	38%	

Table S1: Comparative Sample Demographics

Note: All Census figures taken from the 2018 American Community Survey

Table S2: Demographic Balance in Stu	dy 1
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				Georgia		Testing		5G	F-stat	istic
	Total	Control	Fake	Correction	Fake	Correction	Fake	Correction	(p-val	ue)
Democrat	0.36	0.36	0.36	0.39	0.30	0.41	0.36	0.33	1.46	(.19)
Republican	0.34	0.36	0.32	0.32	0.39	0.29	0.32	0.38	1.99	(.06)
Education	3.96	4.00	3.94	3.85	4.04	3.87	4.01	3.98	.58	(.74)
Age	44.71	45.73	45.09	43.90	45.52	43.95	44.28	44.49	.56	(.76)
Female	0.51	0.49	0.49	0.50	0.55	0.50	0.52	0.50	.41	(.88)
Black	0.13	0.12	0.12	0.12	0.13	0.14	0.15	0.14	.38	(.89)
Latino	0.09	0.08	0.09	0.08	0.08	0.14	0.08	0.10	1.59	(.15)
Social Media Use	2.52	2.51	2.53	2.61	2.51	2.55	2.51	2.44	.67	(.67)
Observations	2028	291	289	284	289	294	289	292		

Note: Far right column presents the p-value obtained from an F test from a one-way ANOVA of the null hypothesis of equal means across the seven experimental conditions. In no case can we reject the null of equal means, p < .05.

Table S3: Demographic	Balance in Study 2	2
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		Geo	orgia	Tes	ting	5	G	F-sta	tistic
	Total	Fake	Correction	Fake	Correction	Fake	Correction	(p-va	lue)
Democrat	0.39	0.37	0.35	0.42	0.38	0.38	0.40	.82	(.54)
Republican	0.32	0.32	0.35	0.29	0.33	0.31	0.30	.63	(.68)
Education	3.97	3.96	3.92	4.00	4.11	3.87	3.99	.79	(.56)
Age	45.10	44.36	47.31	44.84	44.08	45.24	44.88	1.51	(.18)
Female	0.50	0.47	0.50	0.51	0.50	0.51	0.51	.24	(.95)
Black	0.13	0.16	0.08	0.16	0.14	0.12	0.13	2.65	(.02)
Latino	0.10	0.10	0.11	0.08	0.10	0.09	0.11	.49	(.78)
Social Media Use	2.47	2.47	2.39	2.52	2.52	2.50	2.42	.90	(.48)
Observations	2000	338	322	338	333	330	339		

Note: Far right column presents the p-value obtained from an F test from a one-way ANOVA of the null hypothesis of equal means across the seven experimental conditions. In only one case can we reject the null of equal means, p < .05.

	GA Rate	US Testing	5G
False tag	-0.09	-0.03	-0.10
	(0.26)	(0.72)	(0.25)
Democrat	0.25***	-0.03	-0.02
	(0.01)	(0.74)	(0.83)
Republican	-0.08	0.51***	0.32***
	(0.40)	(0.00)	(0.00)
Education	0.02	0.01	-0.01
	(0.47)	(0.84)	(0.69)
Age	-0.01***	-0.01***	-0.01***
C	(0.00)	(0.00)	(0.00)
Female	0.04	-0.16**	-0.02
	(0.60)	(0.04)	(0.81)
Black	0.14	0.19	0.51***
	(0.25)	(0.13)	(0.00)
Latino	-0.10	0.05	0.13
	(0.49)	(0.70)	(0.39)
Constant	3.12***	3.13***	2.61***
	(0.00)	(0.00)	(0.00)
Observations	573	583	581
R-squared	0.10	0.12	0.09

 Table S4: False Tag Treatment Effects on Accuracy Perceptions with Demographic

 Controls

Note: OLS regressions with a four-point accuracy perception dependent variable. P-values in parentheses. Significance tests are two-tailed.

*** p<0.01, ** p<0.05, * p<0.10

	Georgia Rate	US Testing	5G
Journalistic factcheck	-0.27***	-0.23***	0.10
5	(0.00)	(0.00)	(0.25)
Democrat	0.12	0.01	-0.27**
	(0.17)	(0.94)	(0.01)
Republican	0.06	0.43***	-0.02
1	(0.51)	(0.00)	(0.87)
Education	0.01	-0.06***	0.00
	(0.66)	(0.01)	(0.99)
Age	-0.01***	-0.01***	-0.01***
C	(0.00)	(0.00)	(0.00)
Female	-0.04	-0.13*	-0.10
	(0.54)	(0.09)	(0.28)
Black	0.30**	0.16	0.27*
	(0.01)	(0.15)	(0.05)
Latino	0.04	0.12	-0.01
	(0.74)	(0.37)	(0.93)
Constant	2.94***	3.23***	2.79***
	(0.00)	(0.00)	(0.00)
Observations	660	671	669
R-squared	0.08	0.09	0.05

Table S5: Journalistic Factcheck Treatment Effects on Accuracy Perceptions with Demographic Controls

Note: OLS regressions with a four-point accuracy perception dependent variable. P-values in parentheses. Significance tests are two-tailed.

*** p<0.01, ** p<0.05, * p<0.10

	False tag		Journalistic	factcheck
	GA	Testing	GA	Testing
Correction	-0.02	-0.02	-0.03	-0.10
	(0.87)	(0.89)	(0.81)	(0.43)
Correction X Democrat	-0.00		-0.56***	
	(0.99)		(0.00)	
Democrat	0.38***		0.41***	
	(0.01)		(0.00)	
Correction X Republican		0.01	× ,	-0.25
-		(0.95)		(0.18)
Republican		0.47***		0.52***
-		(0.00)		(0.00)
Constant	2.42***	2.48***	2.47***	2.50***
	(0.00)	(0.00)	(0.00)	(0.00)
Observations	396	406	461	480
R-squared	0.04	0.05	0.05	0.05

Table S6: Testing for Partisan Moderation of Correction Effect on Accuracy Perceptions

Note: OLS regressions with a four-point accuracy perception dependent variable. Regressions limited to Democratic and Republican respondents. The first two models estimate the effects of the false tag from study 1. The second pair of models estimate the effect of the journalistic factcheck from study 2. P-values in parentheses. Significance tests are two-tailed.

*** p<0.01, ** p<0.05, * p<0.10

Figure S1: Effect of False tags and Journalistic Factchecks on Accuracy Perceptions (% Believing Very or Somewhat Accurate)



Note: Figure plots the difference in the percentage believing each headline to be accurate in the treatment vs. the control group across each false headline in both studies. I-bars present 95% confidence intervals around each difference in means.





Note: I-bars present 95% confidence intervals around each point estimate. Effects estimated from a logistic regression with social media sharing (yes or no) as the dependent variable.

Appendix S1: Experimental Design

Study 1 Experimental Matrix

	Covid-19 Origins	Partisan	Partisan	
	Misinformation	Misinformation	Misinformation	
	Headline	Headline	Headline	
No False Tag	1) 5G the source	2) Democrat	3) Republican	
	of	origin	origin	
	Coronavirus			
False Tag	4) 5G the source	5) Democrat	6) Republican	
	of	origin—	origin—	
	Coronavirus—	with false	with false	
	with false tag	tag	tag	

Study 2 Experimental Matrix

	Covid-19 Origins	Partisan	Partisan
	Misinformation	Misinformation	Misinformation
	Headline	Headline	Headline
No Journalistic	1) 5G the source	2) Democrat	3) Republican
Factcheck	of	origin	origin
	Coronavirus		
Journalistic	4) 5G the source	5) Democrat	6) Republican
Factcheck	of	origin—	origin—
	Coronavirus—	with	with
	with	journalistic	journalistic
	journalistic	factcheck	factcheck
	factcheck		