

# Counting the Pinocchios: The Effect of Summary Fact-Checking Data on Perceived Accuracy and Favorability of Politicians

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## Abstract

Can the media effectively hold politicians accountable for making false claims? Journalistic fact-checking assesses the accuracy of individual public statements by public officials, but less is known about whether this process effectively imposes reputational costs on misinformation-prone politicians who repeatedly make false claims. This study therefore explores the effects of exposure to summaries of fact-check ratings, a new format that presents a more comprehensive assessment of politician statement accuracy over time. Across three survey experiments, we compare the effects of negative individual statement ratings and summary fact-checking data on favorability and perceived statement accuracy of two prominent elected officials. As predicted, summary fact-checking has a greater effect on politician perceptions than does individual fact-checking. Notably, we do not observe the expected pattern of motivated reasoning: co-partisans are not consistently more resistant than are supporters of the opposition party. Our findings suggest that summary fact-checking is particularly effective at holding politicians accountable for misstatements.

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Fact-checking websites have changed how media outlets cover politics. Sites like PolitiFact, FactCheck.org, and the Washington Post Fact Checker seek to correct misinformation and hold politicians accountable by providing extensive coverage of the accuracy of claims made by political figures. Nevertheless, inaccurate claims made by politicians continue to mar public debate. How can journalists more effectively hold elites accountable when they spread misinformation?

Extensive research has been conducted on the effects of fact-checking on people's factual beliefs (e.g., Flynn, Nyhan, and Reifler 2017) and the effects of media scrutiny on how the public views politicians (e.g., Snyder and Strömberg 2010). However, less is known about how and under what conditions journalistic scrutiny might increase the reputational costs to politicians for promoting misinformation (though see Nyhan and Reifler 2015) — even successful fact-checks that change respondents' beliefs about a false statement have relatively little effect on the image of the offending politician (Nyhan et al. 2019; Swire-Thompson et al. 2019).

One promising alternative approach is summary fact-checking, which seeks to paint a more comprehensive picture of a politician's accuracy by aggregating all existing ratings of statements they have made. For example, when Donald Trump said Hillary Clinton “wants to abolish the Second Amendment,” PolitiFact conducted a traditional (individual) fact-check of this singular statement and rated it False using its “Truth-o-Meter” system (Qiu 2016). A summary fact-check, on the other hand, would describe the distribution of fact-check ratings for a given politician. For instance, PolitiFact editor Angie Drobnic Holan wrote a *New York Times* op-ed in December 2015 noting that the site had “fact-checked more than 70 Trump statements and rated fully three-quarters of them as Mostly False, False or ‘Pants on Fire’ ” (Holan 2015). By drawing on a larger number of ratings, this form of fact-checking could potentially provide stronger evidence of inaccuracy and have a greater influence on how the public perceives politicians than individual fact-checks do.

This study therefore compares the effects of summary fact-checking data and individual fact-check ratings on views of politicians who make misleading claims. Consistent with our preregistered hypotheses, summary fact-checking data reduces perceptions of politicians' accuracy and favorability more than exposure to a negative individual fact-check rating does. These results,

which are not consistently moderated by other factors such as partisanship, political knowledge, or education, demonstrate that fact-checking — especially when presented in a summary format — can play an important role in holding politicians accountable for misleading statements.

## Theory

Existing research offers mixed conclusions about the effects of fact-checks and corrective information. Meta-analyses conclude that corrections can moderately reduce misinformation (Chan et al. 2017; Walter and Murphy 2018). Similarly, recent work shows that individuals update their perceptions in the direction of corrective information (Wood and Porter 2019). Several studies also argue fact-checks can increase political knowledge and affect voter behavior (e.g., Gottfried et al. 2013; Fridkin, Kenney, and Wintersieck 2015), but others find that fact-checks may have limited effects or be counterproductive (e.g., Garrett and Weeks 2013; Garrett, Nisbet, and Lynch 2013). Fact-checks may be less likely to be effective when a misperception is salient or invokes strong cues, such as partisanship or outgroup membership (Flynn, Nyhan, and Reifler 2017).

However, less is known about the effects of summary fact-checks, which aggregate fact-check ratings of politicians, and how those effects compare to fact-checks of individual statements by politicians. Though the summary fact-check format is relatively uncommon, fact-checkers and other media outlets increasingly provide these statistics for politicians to help readers differentiate between candidates who have made a few false statements and those with long histories of spreading misinformation. For instance, fact-checkers like Holan and media outlets frequently compile multiple ratings of a given politician on the PolitiFact's Truth-O-Meter or the Pinocchios scale of the *Washington Post* Fact Checker.

To date, most studies have focused on how fact-checks affect belief accuracy. However, summary fact-checking does not attempt to correct specific false or misleading claims. We therefore assess its effects on perceptions of politicians (a key mechanism of democratic accountability) rather than factual beliefs. If the images of politicians suffer as a result of getting repeatedly fact-

checked, politicians would face a stronger reputational incentive to avoid making false statements (Nyhan and Reifler 2015).

Our theoretical expectations were that people would be less likely to dismiss a falsehood as an isolated incident and instead view the politician’s behavior as more problematic when presented with summary data, which offers stronger evidence of a pattern of inaccuracy.<sup>1</sup> Exposure to summary fact-checking might promote greater updating of respondent views toward a candidate compared to a fact-check of an individual statement through various mechanisms. These include a memory-based “running tally” (e.g., Fiorina 1981) in which candidate inaccuracy is more likely to be registered as a negative consideration, online processing of negative affect inspired by information about a sustained record of inaccuracy (e.g., Lodge and Taber 2005), or a Bayesian process in which more information about past inaccuracy leads to greater updating of candidate attitudes (Zechman 1979).<sup>2</sup>

There are reasons to doubt this hypothesis, however. First, the way in which information is presented can sometimes matter more than the strength of evidence presented. For instance, one recent study found that a compelling narrative about a single event was more important than broader statistical information about a topic in changing public opinion (Norris and Mullinix 2019). In addition, Swire-Thompson et al. (2019) found that presenting numerous fact-checks only affected ratings of target politicians when false statements outnumbered true ones and even then generated very small effects. Adjudicating between the effects of summary and individual fact-checks thus merits scholarly attention.

We specifically proposed three hypotheses and two research questions, all of which were pre-registered. First, drawing on the experimental literature supporting the efficacy of fact-checks, we predicted that individuals exposed to negative fact-checking of a politician in either format would view that politician less favorably and perceive them as less accurate (H1). For reasons discussed above, we also predicted that summary fact-checking data would have a larger effect on these out-

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<sup>1</sup>Concerns about selection bias and subjectivity still apply, however — see, e.g., Uscinski and Butler (2013).

<sup>2</sup>Pinpointing the exact mechanism(s) is beyond the scope of this study but identified as a key topic for future research in the conclusion.

come variables than an individual fact-checking rating (H2). Finally, per theories of motivated reasoning (e.g., Kunda 1990; Taber and Lodge 2006) we predicted that the favorability and perceived accuracy of politicians would decrease more when individuals viewed fact-checking of the opposition party compared to their own (H3).

In addition, we propose two related research questions, asking whether participants' political knowledge or level of education would moderate the effects of fact-checking (RQ1) and whether prior fact-checking exposure would affect attitudes toward fact-checking (RQ2). Existing evidence is limited on both points. Fact-checking may be more effective among the politically knowledgeable (Fridkin, Kenney, and Wintersieck 2015), but they may also be more skilled at resisting corrective information (Taber and Lodge 2006). No published studies examine the effects of fact-checking on attitudes toward the practice.

The following sections discuss three survey experiments that test these hypotheses and research questions. We describe Study 1 in detail and more briefly review Studies 2 and 3, which are slight variants of Study 1 that address limitations in the design of prior studies.

## **Study 1**

### **Methods**

Prior to conducting the study, we preregistered the design, hypotheses, and analysis plan in the EGAP archive, which is an online platform where researchers preregister study designs to promote scientific accountability.<sup>3</sup> The sample consists of 2,825 participants recruited via Amazon Mechanical Turk, an online marketplace frequently used to recruit research participants (e.g., Berinsky, Huber, and Lenz 2012).<sup>4</sup> Data collection took place from May 7–10, 2016. Participants were required to be United States residents age 18 or older with at least a 95% HIT (“Human Intel-

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<sup>3</sup>Anonymized preregistrations for all three studies are attached. Deviations from the preregistered study plan are noted below.

<sup>4</sup>An additional 719 respondents were excluded because they participated in a pilot study or did not consent to participate.

ligence Task”) approval rating on Mechanical Turk. Demographically, our sample mirrors other Mechanical Turk studies in being younger and more liberal, educated, and white than the general U.S. population. Specific demographic distributions can be found in Online Appendix C.

## **Experimental design**

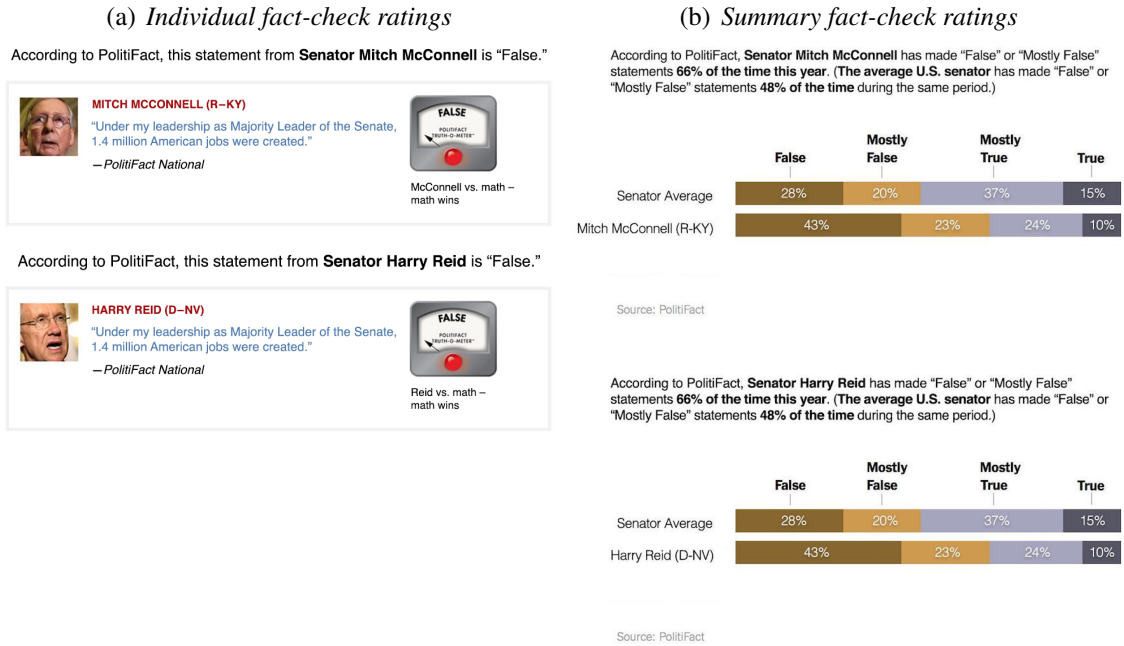
Our study used a 3x2 between-subjects design that randomly varied fact-check type and politician partisanship. Respondents were randomly assigned to one of three treatments: an individual fact-check rating of a fictitious statement about job creation, a summary fact-check rating, or the control condition. Fact-checks used in all three studies were negative, indicating that the statements in question were not accurate. Participants were also randomly assigned to a target politician: Mitch McConnell (R-KY), the Senate Majority Leader, or Harry Reid (D-NV), the Senate Minority Leader. McConnell and Reid were chosen because they belong to different parties but are comparable figures.

The graphics in our individual fact-check rating treatment were adapted from PolitiFact’s “Truth-O-Meter”; both senators were presented as making the same false claim. Participants in the summary fact-checking data condition were exposed to a graphic adapted from *The New York Times* (Holan 2015) presenting either McConnell or Reid as making more false statements than the average senator. Figure 1 presents the graphics used for respondents in the treatment conditions.<sup>5</sup> Finally, participants in the control group were shown a graphic displaying predicted weather for Des Moines, Iowa. We included a caption for each graphic to ensure that participants understood the information presented and to match the format and design of the stimuli between conditions as closely as possible (see Online Appendix A).

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<sup>5</sup>See Online Appendix A for the full survey instrument and stimulus materials, including the graphic used in the control conditions. The treatment graphics were designed to resemble real-world stimuli as closely as possible (see Online Appendix C for examples).

Figure 1: Treatment graphics



Respondents were randomly assigned to see one of the four fact-checking treatments portrayed here or to a control condition. See Online Appendix A for question wording and stimulus materials.

## Procedure

Participants were first required to provide informed consent and their age. They then answered questions regarding their demographics, party affiliation, and political knowledge before the experimental manipulation. Demographic and knowledge characteristics did not vary significantly between our three experimental groups (see Table C1 in Online Appendix C). After a brief task intended to conceal the study's purpose, participants answered questions measuring three outcome variables: favorability towards McConnell or Reid, perceived accuracy of that senator, and favorability towards fact-checking (see Online Appendix A for full survey text).<sup>6</sup> Participants were then debriefed and compensated for their time.

<sup>6</sup>Respondents were also asked about their perceptions of the other senator to whom they were not assigned, but we exclude those responses from all analyses below because of the possibility of a contrast effect.

## Measures

Our study measured two primary outcome variables on five-point scales: how often statements made by the senator are accurate from “never” (1) to “all of the time” (5) and how favorable or unfavorable their views of the senator are from “very unfavorable” (1) to “very favorable” (5). For our second research question, we asked four questions about participants’ perceptions of fact-checking (see Online Appendix A for details). We also consider several pre-treatment moderators. For H3, we classify participants’ partisanship by which political party they identify with or lean towards. To explore RQ1, we measured the education level and political knowledge of participants. We classify those with a bachelor’s degree or above as having a high level of education and those who correctly answer at least four of five questions on a standard political knowledge battery as high knowledge in a median split.

## Results

We analyze the effects of our experiment using ordinary least squares (OLS) regression with robust standard errors.<sup>7</sup>

### Main effects of fact-check type

Consistent with our first preregistered hypothesis (H1), exposure to either negative summary fact-checking data or a negative individual fact-check rating led to significantly lower accuracy and favorability ratings than we observed in the control condition. These findings hold for both outcome measures and both target politicians (see Table 1). Consistent with H1, respondents provided with an individual fact-check rating ( $\beta=-0.16$ ,  $SE=0.05$ ) or summary fact-checking data ( $\beta=-0.33$ ,  $SE=0.05$ ) about McConnell rated the accuracy of his statements lower than those in the control

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<sup>7</sup>OLS allows us to better communicate effect sizes and confidence intervals than ANOVA and directly estimates the causal quantities of interest (e.g., the ATE) with minimum assumptions. However, equivalent ordered probit models are also provided in Online Appendix C for all OLS models in the main text. Per our preregistration, we analyze the results separately by candidate rather than pooling because we reject the null of no difference in treatment effects by fact-checking target (i.e., politician) for at least one outcome variable in each study.



Table 1: Effects of fact-check type on politician accuracy and favorability ratings

	<u>McConnell</u>		<u>Reid</u>	
	Accuracy	Favorability	Accuracy	Favorability
Individual fact-check rating	-0.16** (0.05)	-0.28** (0.06)	-0.22** (0.06)	-0.20** (0.06)
Summary fact-checking data	-0.33** (0.05)	-0.59** (0.06)	-0.65** (0.05)	-0.62** (0.06)
Constant (control mean)	2.65** (0.04)	2.54** (0.04)	2.99** (0.04)	2.92** (0.04)
Summary–individual	-0.17** (0.05)	-0.31** (0.06)	-0.44** (0.05)	-0.42** (0.06)
N	1435	1435	1393	1393

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors.

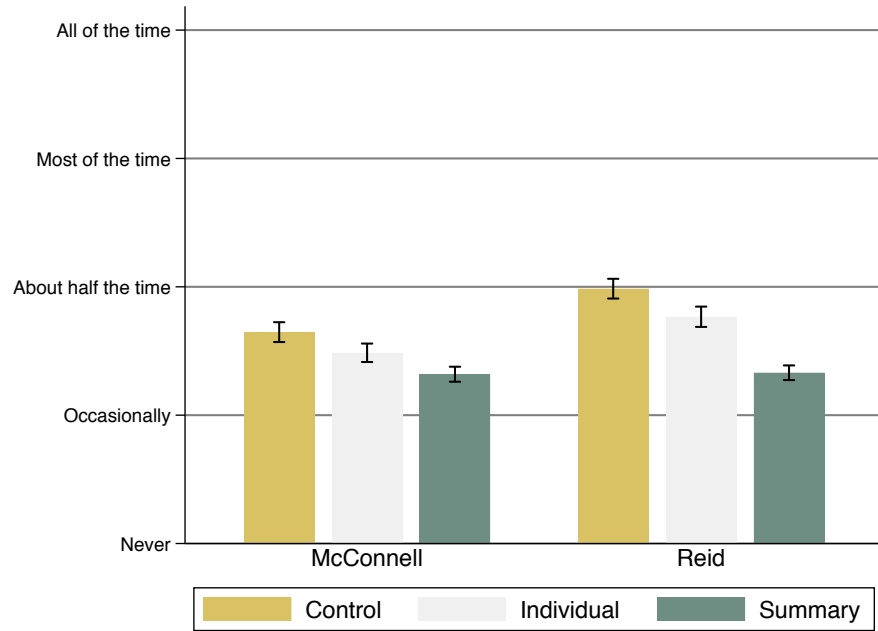
condition. Results were substantively identical for those exposed to an individual fact-check rating ( $\beta=-0.22$ ,  $SE=0.06$ ) or summary fact-check data ( $\beta=-0.65$ ,  $SE=0.05$ ) about Reid. Results were identical for favorability ratings. When asked about McConnell’s favorability, the individual fact-check rating ( $\beta=-0.28$ ,  $SE=0.06$ ) and summary fact-checking data ( $\beta=-0.59$ ,  $SE=0.06$ ) groups rated him lower than the control group did; the individual ( $\beta=-0.20$ ,  $SE=0.06$ ) and summary ( $\beta=-0.62$ ,  $SE=0.06$ ) groups assigned to Reid did the same.

Our second preregistered hypothesis (H2) predicted that the summary fact-checking data group would rate politicians lower than those exposed to negative individual fact-check ratings. The results correspond directly with our hypothesis: the summary fact-checking data group rated McConnell lower on accuracy ( $\beta=-0.17$ ,  $SE=0.05$ ) and favorability ( $\beta=-0.31$ ,  $SE=0.06$ ) than did the individual fact-check rating group. Similarly, respondents assigned to unfavorable summary fact-checking data about Reid rated him lower on accuracy ( $\beta=-0.44$ ,  $SE=0.05$ ) and favorability ( $\beta=-0.43$ ,  $SE=0.06$ ) than did those who saw a rating of an individual statement by Reid.

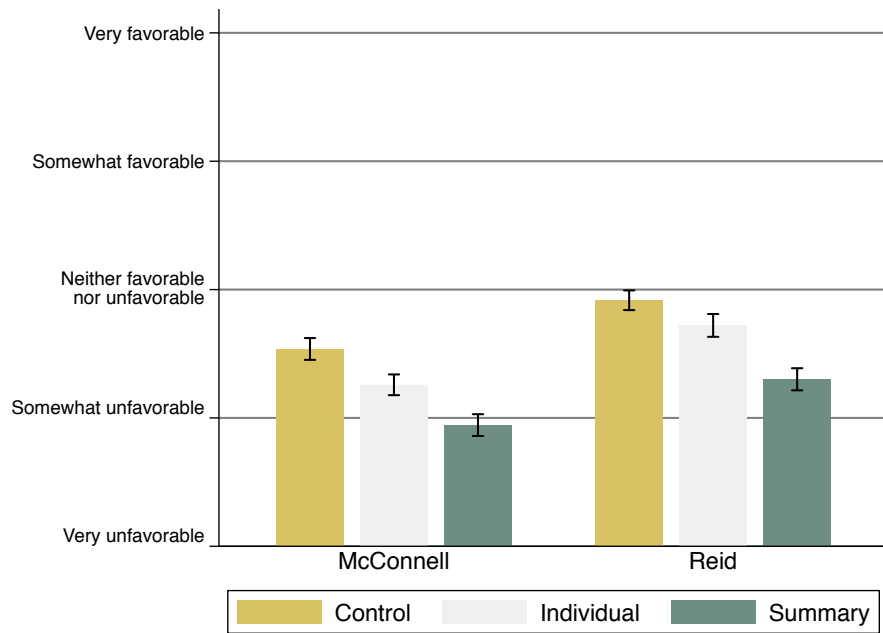
Figure 2 illustrates the substantive magnitude of these effects. As displayed in Figure 2a, control group participants perceived the senators’ statements as more accurate (McConnell: mean=2.64,  $SE=0.04$ ; Reid: mean=2.98,  $SE=0.04$ ) than did the individual fact-checking group (McConnell:

Figure 2: Perceived accuracy and candidate favorability by fact-check type

(a) *Perceived accuracy*



(b) *Favorability*



Means by condition (control, individual fact-check rating, or summary fact-checking data); see Online Appendix A for question wording and stimulus materials.

mean=2.49, SE=0.04; Reid: mean=2.77, SE=0.04), but the summary fact-checking group rated them as least accurate of all (McConnell: mean=2.32, SE=0.03; Reid: mean=2.33, SE=0.03). Figure 2b presents similar results for favorability ratings. Participants in the control condition viewed the senators more favorably (McConnell: mean=2.54, SE=0.04; Reid: mean=2.92, SE=0.04) than those who viewed individual fact-checks (McConnell: mean=2.26, SE=0.04; Reid: mean=2.72, SE=0.05). Those who viewed summary fact-checking data rated the senators the least favorably (McConnell: mean=1.95, SE=0.04; Reid: mean=2.30, SE=0.04).

### **Party interactions**

To check for directionally motivated reasoning (H3), we estimate heterogeneous treatment effects by party in Table 2.<sup>8</sup> Contrary to our hypothesis, these models do not suggest a directionally motivated response to negative fact-checking information. For instance, we expected the negative effect of summary fact-checking data on perceptions of Reid's accuracy to be greater among Republicans than among independents and Democrats. Instead, the negative effect is greater among Democrats than among both independents ( $\beta=-0.54$ , SE=0.15) and Republicans ( $\beta=-0.25$ , SE=0.11) (the latter estimate represents the difference in the two summary fact-check interaction coefficients). We therefore do not discuss H3 further.

### **Research questions**

Our first research question asked whether political knowledge or education would moderate treatment effects overall or among partisans. Our findings did not yield consistent results. Both fact-check types reduced McConnell favorability ratings more among people with low knowledge than among those with high knowledge. However, summary fact-checking data reduced Reid accuracy ratings more among respondents with high knowledge. Our findings are thus inconclusive. For our education results, we compared participants with and without a bachelor's degree. We

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<sup>8</sup>These preregistered models and all others testing for heterogeneous treatment effects below and in Online Appendix C include interactions between our treatment conditions and the potential moderators in question as well as all constituent terms per Brambor, Clark, and Golder (2006).

Table 2: Effects of fact-check type by party

	<u>McConnell</u>		<u>Reid</u>	
	Accuracy	Favorability	Accuracy	Favorability
Individual fact-check rating	-0.40*	-0.52**	0.01	0.01
	(0.16)	(0.17)	(0.16)	(0.16)
Individual FC × Democrat	0.26	0.25	-0.21	-0.22
	(0.17)	(0.19)	(0.18)	(0.17)
Individual FC × Republican	0.26	0.29	-0.26	-0.13
	(0.19)	(0.20)	(0.19)	(0.19)
Democrat (with leaners)	-0.13	-0.36**	0.64**	0.72**
	(0.12)	(0.13)	(0.13)	(0.12)
Republican (with leaners)	0.30*	0.34*	0.19	-0.15
	(0.12)	(0.14)	(0.14)	(0.13)
Summary fact-checking data	-0.40**	-0.70**	-0.24	-0.45**
	(0.13)	(0.17)	(0.14)	(0.15)
Summary FC × Democrat	0.14	0.11	-0.54**	-0.31
	(0.15)	(0.19)	(0.15)	(0.16)
Summary FC × Republican	-0.04	0.13	-0.29	0.09
	(0.16)	(0.20)	(0.17)	(0.19)
Constant	2.65**	2.67**	2.53**	2.51**
	(0.10)	(0.12)	(0.12)	(0.11)
N	1435	1435	1393	1393

\*  $p < 0.05$ , \*\*  $p < 0.01$  (two-sided). OLS models with robust standard errors.

find only one significant difference in fact-check effects by education. Thus, we cannot conclude that education affects participants' responses toward fact-checks of either type.<sup>9</sup> Similarly, fact-checking exposure had no measurable effect on perceptions of fact-checking for the four outcome measures we examined: favorability toward fact-checking, demand for more fact-checking, and the perceived accuracy and fairness of fact-checking.<sup>10</sup> See Online Appendix C for full results from these models. (We obtain similar results when we interact our treatments with measures of political knowledge and education — see Online Appendix C. We therefore do not discuss our

<sup>9</sup>See Online Appendix C for the results of these simple exploratory models as well as our preregistered analyses, which instead interact the treatments with both partisan indicators as well as linear or tercile measures of education or knowledge.

<sup>10</sup>These results did not scale together well in a factor analysis. Per our preregistration, we therefore analyze each outcome measure separately.

research questions further.)

## **Discussion**

The results of this study confirm that summary fact-checking is more effective at influencing individuals' perceived accuracy and favorability of selected politicians than is individual fact-checking. These results did not vary by party or other preregistered moderators. The design we employed has two principal limitations. First, the summary fact-check we tested also includes fact-check information for an average senator; perhaps comparisons to the average senator drove the summary fact-check's larger effects rather than the rating aggregation itself. Second, summary fact-checks explicitly lay out the politician's record of accuracy, while an individual fact-check is centered around a single statement. Asking about overall accuracy might result in participants repeating back what they saw in the summary, rather than acting on an updated belief. We conduct two additional experiments to address these concerns.<sup>11</sup>

## **Study 2**

Study 2 replicated Study 1 except for two changes. In addition to measuring accuracy and favorability ratings of Senators Reid and McConnell, we included a new question that tested participants' perceived accuracy of a new statement putatively made by the senator about whom they saw a fact-check ("Kentucky/Nevada has more private sector jobs than ever before"). This measure addresses a potential concern about response bias in Study 1. By asking respondents to rate a novel statement, we can better test whether respondents are actively updating their beliefs rather than merely reporting what they saw in the fact-check graphics. In addition, we altered the summary fact-check graphic to remove the comparison to an average senator to address a potential design confound. This change clarifies whether the aggregate information provided by the summary fact-check ac-

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<sup>11</sup>In each subsequent study, we exclude respondents who had taken part in earlier studies.

counts for its stronger effects or if they are the result of a contrast effect with an average senator.<sup>12</sup> Study 2 was conducted November 4–8, 2016, similar demographically to Study 1, and also preregistered at EGAP.

## Results

Study 2 results were similar to Study 1 for the two existing outcome measures (see Table B1). As in Study 1, respondents perceived the general accuracy of statements made by McConnell and Reid as lower when exposed to summary fact-checking versus an individual fact-check rating ( $-.11$ ,  $p < .05$  for McConnell;  $-.43$ ,  $p < .01$  for Reid). We again find that favorability toward the target politician was reduced more by summary fact-checking information versus a fact-check of an individual statement, though the results were not statistically significant for McConnell ( $-.09$ ,  $p < .20$  for McConnell;  $-.36$ ,  $p < .01$  for Reid). However, our fact-checking manipulation did not have the anticipated effect on our new outcome measure, an accuracy rating of a new statement by the target politician. Participants shown a fact-check of an individual statement by McConnell ( $\beta = -0.42$ ,  $SE = 0.04$ ) actually rated the new statement about more jobs being created as significantly *less* accurate than those shown summary fact-checking data ( $\beta = -0.32$ ,  $SE = 0.04$ ; difference =  $0.10$ ,  $p < .05$ ). In addition, the difference in the accuracy rating of the new statement by Reid was null for participants shown an individual fact-checking rating ( $\beta = -0.33$ ,  $SE = 0.04$ ) and those shown summary fact-checking data ( $\beta = -0.35$ ,  $SE = 0.04$ ).

## Discussion

Study 2 largely replicated the results of Study 1. Summary fact-checking information typically had more negative effects on the perceived accuracy of a politician and favorability toward that figure than an individual fact-check rating did. However, we found an anomalous result in how respondents evaluated the accuracy of a new statement attributed to the politician in question.

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<sup>12</sup>See Online Appendix B for the altered graphic. No changes were made to the individual fact-check rating treatment.

This difference in accuracy rating may have been the result of an inadvertent confound between the topic of the individual fact-check (a claim about job creation during their tenure as Majority Leader) and the topic of the novel statement that participants rated afterward (private sector jobs in the Majority Leader's state). We therefore replicate our findings again in Study 3 below using a design that removes this confound.

## Study 3

Study 3 corrected a confound in the design of Study 2. Due to concerns about the close conceptual relationship between the topic for the fact-check of an individual statement (job creation) and the topic of the new statement whose accuracy respondents were asked to assess in Study 2 (private sector jobs), respondents were instead asked in Study 3 to evaluate the accuracy of the following statement from either McConnell or Reid: "I haven't switched my position on the Trans-Pacific Partnership trade deal." Study 3 was conducted January 12–16, 2017, similar to previous studies' demographics, and also preregistered with EGAP.

## Results

Study 3 replicated the findings in Studies 1 and 2 (see Table B2). The perceived accuracy of statements made by McConnell and Reid and favorability toward them were lower when respondents were shown summary fact-checking data compared to an individual fact-check rating ( $p < .01$  in each case). Most notably, when the topic confound in Study 2 was removed (by changing the topic of the novel statement), participants shown summary fact-checking data on McConnell ( $\beta = -0.37$ ,  $SE = 0.05$ ) rated the new statement as less accurate than those shown an individual fact-check rating of McConnell ( $\beta = -0.17$ ,  $SE = 0.05$ ; difference =  $-0.20$ ,  $p < .01$ ). Those shown summary fact-checking data on Reid ( $\beta = -0.46$ ,  $SE = 0.05$ ) also rated the additional statement as less accurate than participants shown an individual fact-checking rating of Reid ( $\beta = -0.24$ ,  $SE = 0.05$ ; difference =  $-0.22$ ,  $p < .01$ ).

## **Discussion**

The results of Study 3 help explain the unexpected finding in Study 2, where participants who saw an individual fact-check rating viewed a new statement by that politician as less accurate than those who saw summary fact-checking information. We hypothesized that this finding was the result of the topic of the fact-check graphic and the novel statement being closely related. When this confound was removed and we asked respondents to evaluate a novel statement on an unrelated issue, we found the expected relationship: participants who were shown summary fact-checking data rated the novel statement as less accurate than those who were shown an individual fact-checking rating did.

## **Conclusion**

Summary fact-checking data has significantly greater effects on perceptions of political figures than fact-check ratings of an individual statement do. Compared to respondents who see an unfavorable or negative fact-check rating of a single statement, those who see unfavorable summary fact-checking data view the politicians in question less favorably and perceive statements they make as less accurate. These effects are also not consistently moderated by other factors, including partisan affiliation, political knowledge, or education. The lack of partisan heterogeneity is particularly important given frequent concerns that directionally motivated reasoning undermines fact-checking effectiveness (e.g., Graves and Glaisyer 2012).

These results suggest that news organizations should use summary fact-checking to encourage responsible conduct by political figures. However, caution is still required. First, fact-checking individual statements is still the best way to set the record straight about a specific claim. In addition, reporters and editors must consider whether aggregated fact-checks accurately represent a political figure's overall record or will leave a distorted impression (Uscinski and Butler 2013).

Future research should consider other research questions and approaches we did not evaluate. First, it would be valuable to test fact-checks of non-quantitative claims as well as different stimu-



lus graphics or ratings. Additional studies could also consider more controversial targets or issues; vary the source of fact-checks; or test the effects of *positive* fact-checks. Second, we did not directly assess factual beliefs about a specific statement. Third, it would be worthwhile to further investigate the mechanisms for this effect (a difficult question under any circumstances).

Still, these results are an important first step toward understanding this new format, which we find has greater effects on perceptions of politicians than does an individual fact-check rating. By increasing the reputational risk of making false claims in this way, summary fact-checking may help to discourage politicians from promoting misinformation in the first place.

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# Online Appendices

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## Online Appendix A

[Consent]

This study is being conducted by (omitted for peer review). We ask for your attention for a few minutes and we thank you for your attention and your responses. Your participation is voluntary and you may decline the interview or withdraw at any time. No information that identifies you will be collected or retained by the researchers. However, any online interaction carries some risk of being accessed. Do you consent to participate in the interview?

-Yes

-No [excluded from survey if selected]

[Demographics]

How old are you?

-Under 18 [excluded from survey if selected]

-18 - 24

-25 - 34

-35 - 44

-45 - 54

-55 - 64

-65 - 74

-75 - 84

-85 or older

In what state do you currently reside?

-Alabama

-Alaska

-Arizona

-Arkansas

-California

-Colorado

-Connecticut

-Delaware

-District of Columbia

-Florida

-Georgia

-Hawaii

-Idaho

-Illinois

-Indiana

-Iowa

-Kansas

-Kentucky

-Louisiana

- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- Nevada
- New Hampshire
- New Jersey
- New Mexico
- New York
- North Carolina
- North Dakota
- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Vermont
- Virginia
- Washington
- West Virginia
- Wisconsin
- Wyoming
- Puerto Rico
- I do not reside in the United States

What is your gender?

- Male
- Female
- Other

Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or something else?

- Republican
- Democrat
- Independent

-Something else

[if Democrat selected] Would you call yourself a strong Democrat or not a very strong Democrat?

-Strong Democrat

-Not very strong Democrat

[if Republican selected] Would you call yourself a strong Republican or not a very strong Republican?

-Strong Republican

-Not very strong Republican

[if Independent or Something else selected] Do you think of yourself as closer to the Republican Party or to the Democratic Party?

-Closer to the Republican party

-Closer to the Democratic party

-Neither

When it comes to politics, would you describe yourself as liberal, conservative, or neither liberal nor conservative?

-Very conservative

-Somewhat conservative

-Slightly conservative

-Moderate; middle of the road

-Slightly liberal

-Somewhat liberal

-Very liberal

What is the highest degree or level of school you have completed?

-Did not graduate from high school

-High school diploma or the equivalent (GED)

-Some college

-Associate degree

-Bachelor's degree

-Master's degree

-Professional or doctorate degree

Please check one or more categories below to indicate what race(s) you consider yourself to be.

-White

-Black or African American

-American Indian or Alaska Native

-Asian/Pacific Islander

-Multi-racial

-Other \_\_\_\_\_

Are you of Spanish or Hispanic origin or descent?

-Yes



- No
- Don't know

[Political knowledge]

The next set of questions help us learn what types of information are commonly known to the public. Please answer these questions on your own without asking anyone or looking up the answers. Many people don't know the answers to these questions, but we'd be grateful if you would please answer every question even if you're not sure what the right answer is. For how many years is a United States Senator elected — that is, how many years are there in one full term of office for a U.S. Senator?

- None of these
- Two years
- Four years
- Six years [correct]
- Eight years
- Don't know

How many times can an individual be elected President of the United States under current laws?

- Once
- Twice [correct]
- Three times
- Unlimited number of terms
- Don't know

How many U.S. senators are there from each state?

- One
- Two [correct]
- Four
- Depends on which state
- Don't know

Who is the Prime Minister of the United Kingdom?

- Richard Branson
- Tony Hayward
- Nick Clegg
- David Cameron [correct]
- Don't know

For how many years is a member of the United States House of Representatives elected — that is, how many years are there in one full term of office for a U.S. House member?

- One year
- Two years [correct]
- Four years
- Six years
- Eight years

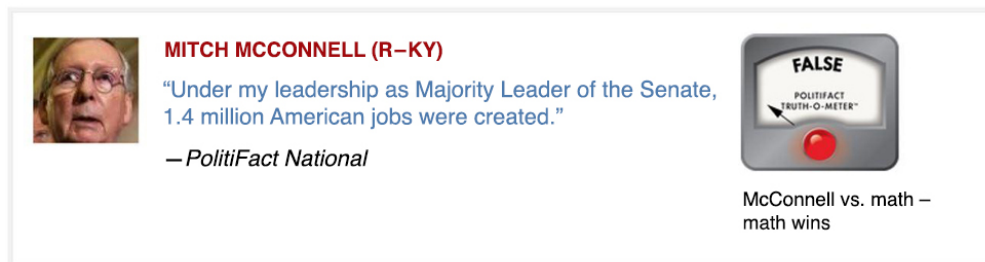
-Don't know

[Experimental randomization]

[Individual fact-check: Mitch McConnell]

PolitiFact is a media outlet that rates the accuracy of statements made by political figures. Please consider the following information from PolitiFact about Senator Mitch McConnell (R-KY), the Majority Leader of the Senate.

According to PolitiFact, this statement from **Senator Mitch McConnell** is "False."



**MITCH MCCONNELL (R-KY)**  
"Under my leadership as Majority Leader of the Senate, 1.4 million American jobs were created."  
— *PolitiFact National*

**FALSE**  
POLITIFACT TRUTH-O-METER™

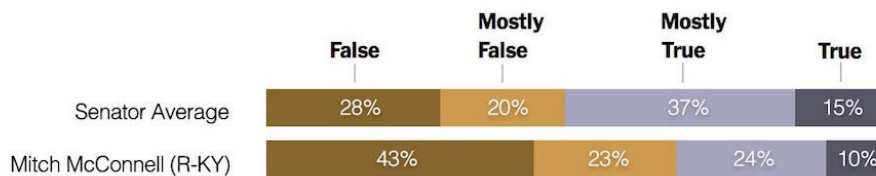
McConnell vs. math – math wins

[Summary fact-check: Mitch McConnell]

PolitiFact is a media outlet that rates the accuracy of statements made by political figures. Please consider the following information from PolitiFact about Senator Mitch McConnell (R-KY), the former Majority Leader of the Senate.

[Study 1]

According to PolitiFact, **Senator Mitch McConnell** has made "False" or "Mostly False" statements **66% of the time this year**. (The average U.S. senator has made "False" or "Mostly False" statements **48% of the time** during the same period.)



Source: PolitiFact

[Studies 2 and 3]

According to PolitiFact, **Senator Mitch McConnell** has made “False” or “Mostly False” statements **66% of the time this year.**



Source: PolitiFact

[Individual fact-check: Harry Reid]

PolitiFact is a media outlet that rates the accuracy of statements made by political figures. Please consider the following information from PolitiFact about Senator Harry Reid (D-NV), the Majority Leader of the Senate.

According to PolitiFact, this statement from **Senator Harry Reid** is “False.”

**HARRY REID (D-NV)**  
“Under my leadership as Majority Leader of the Senate, 1.4 million American jobs were created.”  
— *PolitiFact National*

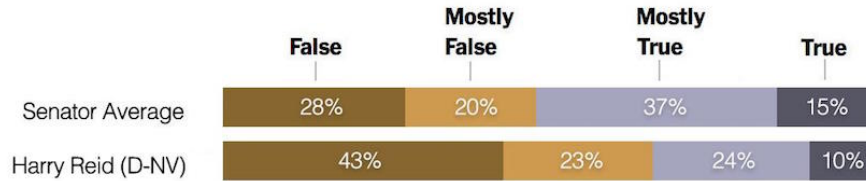
Reid vs. math – math wins

[Summary fact-check: Harry Reid]

PolitiFact is a media outlet that rates the accuracy of statements made by political figures. Please consider the following information from PolitiFact about Senator Harry Reid (D-NV), the former Majority Leader of the Senate.

[Study 1]

According to PolitiFact, **Senator Harry Reid** has made “False” or “Mostly False” statements **66% of the time this year**. (The average U.S. senator has made “False” or “Mostly False” statements **48% of the time** during the same period.)



Source: PolitiFact

[Studies 2 and 3]

According to PolitiFact, **Senator Harry Reid** has made “False” or “Mostly False” statements **66% of the time this year**.



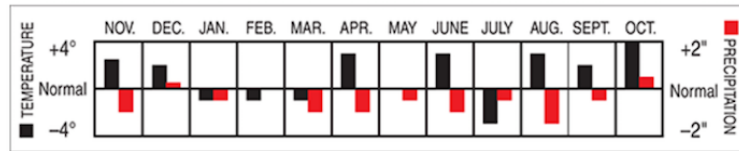
Source: PolitiFact

[Control condition]

The Old Farmer’s Almanac is a publication that has been in existence since 1792. It is known for its long-range weather forecasts. Please consider the following information from The Old Farmer’s Almanac about weather in Des Moines, Iowa.

According to The Old Farmer’s Almanac, the most precipitation in Des Moines this year is predicted to take place in August.

## Temperature and Precipitation November 2015 to October 2016



[Cover story]

We are interested in assessing whether people find text or graphics more clear and informative.

Did you find the text or the graphic on the previous page more clear?

- Text
- Graphic
- Equally clear

Did you find the text or the graphic more informative?

- Text
- Graphic
- Equally informative

[Primary outcome measures for respondents in the treatment conditions who were randomly assigned to see fact-checking information about McConnell or those in the control condition who were randomly assigned to see questions about him first]

The next few questions will be about Senator Mitch McConnell (R-KY), the Majority Leader of the Senate. In general, how often do you think that he makes accurate statements?

- All of the time (5)
- Most of the time (4)
- About half the time (3)
- Occasionally (2)
- Never (1)

Do you have a favorable or unfavorable view of Senator McConnell (R-KY)?

- Very favorable (5)
- Somewhat favorable (4)
- Neither favorable nor unfavorable (3)
- Somewhat unfavorable (2)
- Very unfavorable (1)

[study 2 only]

The following statement was said by Senator Mitch McConnell (R-KY). We would like to know how accurate you believe the statement to be.

“Kentucky has more private sector jobs than ever before.”

- Very accurate (4)
- Somewhat accurate (3)
- Not very accurate (2)
- Not at all accurate (1)

[study 3 only]

The following statement was said by Senator Mitch McConnell (R-KY). We would like to know how accurate you believe the statement to be.

“I haven’t switched my position on the Trans-Pacific Partnership trade deal.”

- Very accurate (4)
- Somewhat accurate (3)
- Not very accurate (2)
- Not at all accurate (1)

The next few questions will be about Senator Harry Reid (D-NV), the former Majority Leader of the Senate. In general, how often do you think that he makes accurate statements?

- All of the time (5)
- Most of the time (4)
- About half the time (3)
- Occasionally (2)
- Never (1)

Do you have a favorable or unfavorable view of Senator Reid (D-NV)?

- Very favorable (5)
- Somewhat favorable (4)
- Neither favorable nor unfavorable (3)
- Somewhat unfavorable (2)
- Very unfavorable (1)

[Primary outcome measures for respondents in the treatment conditions who were randomly assigned to see fact-checking information about Reid or those in the control condition who were randomly assigned to see questions about him first]

The next few questions will be about Senator Harry Reid (D-NV), the former Majority Leader of the Senate. In general, how often do you think that he makes accurate statements?

- All of the time (5)
- Most of the time (4)
- About half the time (3)
- Occasionally (2)
- Never (1)

Do you have a favorable or unfavorable view of Senator Reid (D-NV)?

- Very favorable (5)
- Somewhat favorable (4)
- Neither favorable nor unfavorable (3)

- Somewhat unfavorable (2)
- Very unfavorable (1)

[study 2 only]

The following statement was said by Senator Harry Reid (D-NV). We would like to know how accurate you believe the statement to be.

“Nevada has more private sector jobs than ever before.”

- Very accurate (4)
- Somewhat accurate (3)
- Not very accurate (2)
- Not at all accurate (1)

[study 3 only]

The following statement was said by Senator Harry Reid (D-NV). We would like to know how accurate you believe the statement to be.

“I haven’t switched my position on the Trans-Pacific Partnership trade deal.”

- Very accurate (4)
- Somewhat accurate (3)
- Not very accurate (2)
- Not at all accurate (1)

These next few questions will be about Senator Mitch McConnell (R-KY), the Majority Leader of the Senate. In general, how often do you think that he makes accurate statements?

- All of the time (5)
- Most of the time (4)
- About half the time (3)
- Occasionally (2)
- Never (1)

Do you have a favorable or unfavorable view of Senator McConnell (R-KY)?

- Very favorable (5)
- Somewhat favorable (4)
- Neither favorable nor unfavorable (3)
- Somewhat unfavorable (2)
- Very unfavorable (1)

[Views of fact-checking (seen by all respondents)]

Fact-checking is a new development in journalism that assesses the accuracy of statements made by political figures. How familiar or unfamiliar are you with the fact-checking movement in journalism, which includes websites such as PolitiFact and Factcheck.org?

- Very familiar (6)
- Somewhat familiar (5)
- Slightly familiar (4)

- Slightly unfamiliar (3)
- Somewhat unfamiliar (2)
- Very unfamiliar (1)

In general, how favorable or unfavorable is your overall opinion of the fact-checking movement in journalism?

- Very favorable (6)
- Somewhat favorable (5)
- Slightly favorable (4)
- Slightly unfavorable (3)
- Somewhat unfavorable (2)
- Very unfavorable (1)

Thinking about the amount of fact-checking that you see being performed today by journalists, do you think there should be more fact-checking, the current amount of fact-checking is about right, or there should be less fact-checking?

- There should be more fact-checking (3)
- The current amount of fact-checking is about right (2)
- There should be less fact-checking (1)

In general, how often do you think articles published by fact-checkers are accurate?

- All of the time (5)
- Most of the time (4)
- About half the time (3)
- Occasionally (2)
- Never (1)

In presenting the news dealing with political and social issues, do you think fact-checkers deal fairly with all sides or tend to favor one side?

- Fact-checkers tend to deal fairly with all sides (1)
- Fact-checkers tend to favor one side (0)

In general, would you say fact-checkers tend to be liberal, neutral, or conservative?

- Liberal
- Neutral
- Conservative

[Debriefing]

Thank you for answering these questions. The purpose of this study was not to assess whether people find text or graphics more informative, but rather to examine the effects of how political facts are presented. During this survey, participants were asked a series of questions about general information and their political opinions. Before answering these questions, some participants viewed different presentations of results from political fact-checks. These fact-check results were fabricated by the researchers for the purposes of the experiment. Thank you again for your participation. Please do not share any information about the nature of this study with other potential



participants. This research is not intended to support or oppose any political candidate or office. The research has no affiliation with any political candidate or campaign and has received no financial support from any political candidate or campaign. Should you have any questions about this study, please contact (omitted for peer review).

It is essential for the validity of this study that we know whether participants looked up any information online during the study. Did you make an effort to look up information during the study? Please be honest; you will not be penalized in any way if you did.

-Yes, I looked up information

-No, I did not look up information

Do you have any comments on the survey? Please let us know about any problems you had or aspects of the survey that were confusing.

[text box]

## Online Appendix B

According to PolitiFact, **Senator Mitch McConnell** has made “False” or “Mostly False” statements **66% of the time this year**.



Source: PolitiFact

According to PolitiFact, **Senator Harry Reid** has made “False” or “Mostly False” statements **66% of the time this year**.



Source: PolitiFact

Table B1: Effects of fact-check type on politician accuracy and favorability ratings

	<u>Mitch McConnell</u>			<u>Harry Reid</u>		
	General accuracy	Statement accuracy	Opinion favorability	General accuracy	Statement accuracy	Opinion favorability
Individual fact-check rating	-0.33** (0.06)	-0.42** (0.04)	-0.30** (0.06)	-0.25** (0.05)	-0.33** (0.04)	-0.20** (0.06)
Summary fact-checking data	-0.44** (0.05)	-0.32** (0.04)	-0.39** (0.06)	-0.68** (0.05)	-0.35** (0.04)	-0.56** (0.06)
Constant (control mean)	2.84** (0.04)	2.63** (0.03)	2.58** (0.04)	3.00** (0.04)	2.77** (0.03)	2.91** (0.04)
Summary–individual	-0.11* (0.05)	0.10* (0.04)	-0.09 (0.06)	-0.43** (0.05)	-0.02 (0.04)	-0.36** (0.06)
N	1359	1358	1359	1454	1450	1454

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors.

Table B2: Effects of fact-check type on politician accuracy and favorability ratings

	<u>Mitch McConnell</u>			<u>Harry Reid</u>		
	General accuracy	Statement accuracy	Opinion favorability	General accuracy	Statement accuracy	Opinion favorability
Individual fact-check rating	-0.21** (0.06)	-0.17** (0.05)	-0.27** (0.06)	-0.27** (0.06)	-0.24** (0.05)	-0.15* (0.06)
Summary fact-checking data	-0.45** (0.05)	-0.37** (0.05)	-0.48** (0.06)	-0.69** (0.05)	-0.46** (0.05)	-0.54** (0.06)
Constant (control mean)	2.79** (0.04)	2.61** (0.04)	2.53** (0.05)	3.07** (0.04)	2.73** (0.03)	2.93** (0.04)
Summary–individual	-0.24** (0.05)	-0.20** (0.04)	-0.21** (0.06)	-0.41** (0.05)	-0.22** (0.04)	-0.39** (0.06)
N	1399	1399	1399	1438	1438	1438

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors.

# Online Appendix C

## Individual statement ratings and summary fact-checking data

An example of an individual statement rating (source: <https://tinyurl.com/jd9f4hm>):



**DONALD TRUMP**  
Says Hillary Clinton "wants to abolish the Second Amendment."



This claim misses the mark

An example of summary fact-checking data (source: <https://tinyurl.com/pspfvqp>):

## Clinton's statements by ruling

Click on the ruling to see all of Clinton's statements for that ruling.

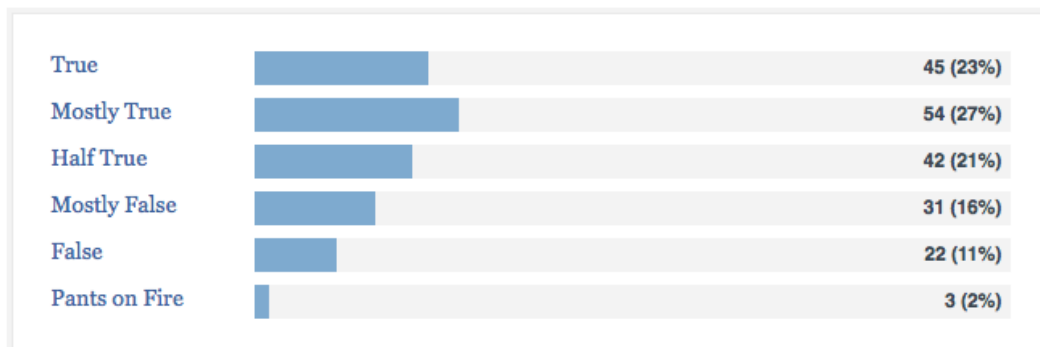


Table C1: Mean demographic values by treatment group

	Control	Individual	Summary	<i>p</i> -value
<i>Female</i>				
Study 1	51%	49%	49%	0.67
Study 2	51%	51%	51%	0.98
Study 3	53%	51%	56%	0.15
<i>White</i>				
Study 1	82%	82%	81%	0.86
Study 2	80%	79%	80%	0.93
Study 3	81%	80%	80%	0.85
<i>Age 35 or younger</i>				
Study 1	62%	64%	62%	0.41
Study 2	64%	63%	63%	0.78
Study 3	58%	60%	62%	0.22
<i>College degree</i>				
Study 1	56%	53%	55%	0.49
Study 2	52%	52%	51%	0.76
Study 3	54%	51%	53%	0.47
<i>Democrat (includes leaners)</i>				
Study 1	62%	59%	61%	0.51
Study 2	59%	59%	60%	0.80
Study 3	57%	58%	56%	0.60
<i>Independent</i>				
Study 1	10%	11%	13%	0.10
Study 2	11%	11%	11%	0.83
Study 3	12%	12%	11%	0.58
<i>Republican (includes leaners)</i>				
Study 1	28%	30%	26%	0.14
Study 2	30%	30%	29%	0.96
Study 3	32%	30%	33%	0.20
<i>Total respondents</i>				
Study 1	938	939	960	
Study 2	935	968	918	
Study 3	922	959	964	

*p*-values are calculated using a  $\chi^2$  test of the association between experimental condition and the demographic characteristic in question.

Table C2: Effects of fact-check type on politician accuracy and favorability ratings (Study 1)

	<u>McConnell</u>		<u>Reid</u>	
	Accuracy	Favorability	Accuracy	Favorability
Individual fact-check rating	-0.22** (0.08)	-0.31** (0.07)	-0.28** (0.08)	-0.22** (0.07)
Summary fact-checking data	-0.43** (0.07)	-0.67** (0.07)	-0.87** (0.08)	-0.70** (0.07)
Summary–individual	-0.21** (0.07)	-0.36** (0.07)	-0.58** (0.07)	-0.48** (0.07)
N	1435	1435	1393	1393

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). Ordered probit models with robust standard errors (cutpoints omitted).

Table C3: Political knowledge interaction models (Study 1)

	<u>McConnell</u>		<u>Reid</u>	
	Accuracy	Favorability	Accuracy	Favorability
Individual fact-check rating	-0.27 (0.14)	-0.44* (0.14)	-0.26 (0.16)	-0.44** (0.16)
Individual FC $\times$ political knowledge	0.03 (0.04)	0.05 (0.04)	0.01 (0.04)	0.07 (0.05)
Political knowledge	-0.06* (0.03)	-0.19** (0.03)	0.06* (0.03)	-0.01 (0.03)
Summary fact-checking data	-0.44** (0.13)	-0.97** (0.15)	-0.33* (0.14)	-0.66** (0.16)
Summary FC $\times$ political knowledge	0.03 (0.04)	0.11** (0.04)	-0.10* (0.04)	0.01 (0.05)
Constant	2.85** (0.10)	3.17** (0.10)	2.78** (0.11)	2.96** (0.10)
N	1435	1435	1393	1393

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors. No consistent evidence is found of moderation if we instead interact the treatment indicators with a median or tercile split for political knowledge (results available upon request).

Table C4: Knowledge/party interaction models (Study 1)

	<u>McConnell</u>		<u>Reid</u>	
	Accuracy	Favorability	Accuracy	Favorability
Individual fact-check rating	-0.04 (0.32)	0.03 (0.37)	0.18 (0.41)	-0.37 (0.44)
Summary fact-checking data	-0.28 (0.29)	-0.39 (0.40)	0.46 (0.38)	-0.27 (0.35)
Democrat (with leaners)	0.17 (0.27)	0.59 (0.31)	0.75* (0.36)	0.05 (0.30)
Republican (with leaners)	0.39 (0.27)	0.65* (0.32)	0.99** (0.38)	0.13 (0.32)
Political knowledge	0.00 (0.07)	0.01 (0.09)	0.15 (0.09)	-0.12 (0.08)
Democrat × knowledge	-0.09 (0.08)	-0.29** (0.09)	-0.03 (0.10)	0.20* (0.09)
Republican × knowledge	-0.03 (0.09)	-0.09 (0.10)	-0.24* (0.11)	-0.09 (0.10)
Individual FC × Democrat	-0.37 (0.37)	-0.51 (0.41)	-0.33 (0.46)	-0.12 (0.48)
Individual FC × Republican	0.14 (0.42)	-0.36 (0.43)	-0.68 (0.49)	0.07 (0.50)
Individual FC × knowledge	-0.12 (0.10)	-0.19 (0.11)	-0.05 (0.11)	0.11 (0.12)
Individual FC × Democrat × knowledge	0.20 (0.11)	0.25* (0.12)	0.03 (0.12)	-0.03 (0.13)
Individual FC × Republican × knowledge	0.05 (0.13)	0.22 (0.13)	0.13 (0.14)	-0.06 (0.14)
Summary FC × Democrat	-0.13 (0.34)	-0.59 (0.44)	-0.85* (0.42)	-0.66 (0.40)
Summary FC × Republican	-0.25 (0.37)	-0.64 (0.47)	-0.90* (0.45)	-0.07 (0.44)
Summary FC × knowledge	-0.04 (0.09)	-0.09 (0.12)	-0.21* (0.11)	-0.07 (0.10)
Summary FC × Democrat × knowledge	0.08 (0.10)	0.21 (0.13)	0.09 (0.12)	0.11 (0.12)
Summary FC × Republican × knowledge	0.06 (0.11)	0.23 (0.14)	0.19 (0.13)	0.07 (0.13)
Constant	2.64** (0.22)	2.63** (0.28)	2.03** (0.33)	2.90** (0.28)
N	1435	1435	1393	1393

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors.

Table C5: Education interaction models (Study 1)

	<u>McConnell</u>		<u>Reid</u>	
	Accuracy	Favorability	Accuracy	Favorability
Individual fact-check rating	-0.15 (0.08)	-0.35** (0.09)	-0.19* (0.08)	-0.25** (0.08)
Individual FC × college	-0.02 (0.11)	0.13 (0.12)	-0.04 (0.11)	0.11 (0.12)
College graduate	0.04 (0.08)	-0.14 (0.09)	0.19* (0.08)	0.09 (0.08)
Summary fact-checking data	-0.30** (0.08)	-0.61** (0.09)	-0.54** (0.07)	-0.68** (0.08)
Summary FC × college	-0.04 (0.10)	0.03 (0.12)	-0.21* (0.10)	0.12 (0.12)
Constant	2.63** (0.06)	2.62** (0.06)	2.88** (0.06)	2.87** (0.05)
N	1435	1435	1393	1393

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors. Results are consistent if we instead interact the treatment groups with an ordinal scale of educational attainment.



Table C6: Education/party interaction models (Study 1)

	<u>McConnell</u>		<u>Reid</u>	
	Accuracy	Favorability	Accuracy	Favorability
Individual fact-check rating	-0.16 (0.19)	-0.56* (0.23)	-0.04 (0.24)	-0.25 (0.23)
Summary fact-checking data	-0.29 (0.17)	-0.83** (0.24)	-0.10 (0.22)	-0.44* (0.21)
Democrat (with leaners)	0.09 (0.14)	-0.30 (0.19)	0.58** (0.20)	0.51** (0.16)
Republican (with leaners)	0.35* (0.16)	0.30 (0.21)	0.25 (0.22)	-0.14 (0.19)
College graduate	0.35 (0.21)	-0.11 (0.25)	0.15 (0.25)	-0.16 (0.21)
Democrat × college	-0.44 (0.23)	-0.09 (0.27)	0.10 (0.27)	0.38 (0.23)
Republican × college	-0.15 (0.25)	0.09 (0.28)	-0.10 (0.29)	-0.00 (0.26)
Individual FC × Democrat	-0.02 (0.21)	0.20 (0.25)	-0.10 (0.26)	0.03 (0.25)
Individual FC × Republican	0.05 (0.24)	0.26 (0.27)	-0.20 (0.28)	0.07 (0.27)
Individual FC × college	-0.56 (0.32)	0.06 (0.36)	0.15 (0.32)	0.57 (0.31)
Individual FC × Democrat × college	0.62 (0.35)	0.09 (0.39)	-0.25 (0.35)	-0.55 (0.34)
Individual FC × Republican × college	0.52 (0.38)	0.05 (0.41)	-0.17 (0.38)	-0.48 (0.38)
Summary FC × Democrat	-0.03 (0.20)	0.28 (0.27)	-0.56* (0.23)	-0.38 (0.23)
Summary FC × Republican	0.05 (0.23)	0.23 (0.30)	-0.33 (0.26)	0.03 (0.27)
Summary FC × college	-0.24 (0.27)	0.25 (0.34)	-0.28 (0.28)	-0.02 (0.30)
Summary FC × Democrat × college	0.35 (0.29)	-0.32 (0.37)	0.06 (0.31)	0.14 (0.33)
Summary FC × Republican × college	-0.10 (0.32)	-0.21 (0.40)	0.09 (0.34)	0.11 (0.37)
Constant	2.48** (0.12)	2.72** (0.18)	2.45** (0.19)	2.59** (0.15)
N	1435	1435	1393	1393

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors.

Table C7: Treatment effects on views of fact-checking (Study 1)

	<u>Mitch McConnell</u>				<u>Harry Reid</u>			
	Favorability	Quantity	Accuracy	Fairness	Favorability	Quantity	Accuracy	Fairness
Individual fact-check rating	0.09 (0.07)	0.06 (0.03)	0.03 (0.05)	0.01 (0.03)	0.03 (0.07)	-0.02 (0.03)	0.00 (0.05)	-0.01 (0.03)
Summary fact-checking data	0.13 (0.07)	0.06 (0.03)	0.02 (0.05)	0.04 (0.03)	-0.04 (0.07)	0.01 (0.03)	-0.02 (0.05)	-0.00 (0.03)
Constant (control mean)	4.02** (0.05)	2.72** (0.02)	3.57** (0.03)	0.53** (0.02)	4.10** (0.05)	2.77** (0.02)	3.61** (0.03)	0.56** (0.02)
N	1426	1428	1428	1427	1385	1387	1384	1385

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors. All differences between summary and individual conditions are insignificant (available upon request).

## Additional Study 2 results

Table C8: Effects of fact-check type on politician accuracy and favorability ratings (Study 2)

	Mitch McConnell			Harry Reid		
	General accuracy	Statement accuracy	Opinion favorability	General accuracy	Statement accuracy	Opinion favorability
Individual fact-check rating	-0.44** (0.08)	-0.71** (0.08)	-0.35** (0.07)	-0.32** (0.07)	-0.58** (0.07)	-0.24** (0.07)
Summary fact-checking data	-0.57** (0.08)	-0.54** (0.08)	-0.44** (0.07)	-0.88** (0.07)	-0.60** (0.08)	-0.65** (0.07)
Summary–individual	-0.13 (0.07)	0.17* (0.07)	-0.10 (0.07)	-0.56** (0.07)	-0.03 (0.07)	-0.41** (0.07)
N	1359	1358	1359	1454	1450	1454

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). Ordered probit models with robust standard errors (cutpoints omitted).

Table C9: Effects of fact-check type by party (Study 2)

	Mitch McConnell			Harry Reid		
	General accuracy	Statement accuracy	Opinion favorability	General accuracy	Statement accuracy	Opinion favorability
Individual fact-check rating	-0.67** (0.15)	-0.43** (0.13)	-0.55** (0.14)	-0.27 (0.16)	-0.30* (0.13)	-0.12 (0.15)
Individual FC × Democrat	0.42** (0.16)	0.00 (0.14)	0.30 (0.16)	-0.07 (0.17)	-0.05 (0.13)	-0.14 (0.17)
Individual FC × Republican	0.32 (0.18)	0.06 (0.15)	0.26 (0.17)	0.21 (0.19)	0.02 (0.15)	0.04 (0.19)
Democrat (with leaners)	-0.40** (0.12)	-0.07 (0.10)	-0.54** (0.11)	0.54** (0.12)	0.22* (0.09)	0.62** (0.12)
Republican (with leaners)	0.09 (0.13)	0.19 (0.10)	0.20 (0.11)	-0.02 (0.14)	-0.03 (0.10)	-0.18 (0.14)
Summary fact-checking data	-0.63** (0.15)	-0.47** (0.14)	-0.73** (0.16)	-0.42** (0.15)	-0.34* (0.14)	-0.35* (0.17)
Summary FC × Democrat	0.26 (0.17)	0.19 (0.15)	0.41* (0.18)	-0.40* (0.16)	0.02 (0.15)	-0.26 (0.18)
Summary FC × Republican	0.13 (0.18)	0.14 (0.16)	0.36 (0.19)	-0.09 (0.18)	-0.08 (0.16)	-0.23 (0.20)
Constant	3.04** (0.10)	2.61** (0.09)	2.84** (0.09)	2.69** (0.11)	2.66** (0.09)	2.60** (0.11)
N	1359	1358	1359	1454	1450	1454

\*  $p < 0.05$ , \*\*  $p < 0.01$  (two-sided). OLS models with robust standard errors.

Table C10: Political knowledge interaction models (Study 2)

	Mitch McConnell			Harry Reid		
	General accuracy	Statement accuracy	Opinion favorability	General accuracy	Statement accuracy	Opinion favorability
Individual fact-check rating	-0.39** (0.15)	-0.43** (0.11)	-0.44** (0.15)	-0.51** (0.14)	-0.46** (0.10)	-0.38** (0.13)
Individual FC × knowledge	0.02 (0.04)	0.00 (0.03)	0.04 (0.05)	0.08 (0.04)	0.04 (0.03)	0.06 (0.04)
Knowledge	-0.02 (0.03)	-0.00 (0.02)	-0.14** (0.03)	0.04 (0.03)	0.02 (0.02)	-0.01 (0.03)
Summary fact-checking data	-0.31* (0.14)	-0.38** (0.11)	-0.56** (0.16)	-0.61** (0.13)	-0.35** (0.11)	-0.69** (0.14)
Summary FC × knowledge	-0.04 (0.04)	0.02 (0.03)	0.05 (0.05)	-0.02 (0.04)	0.00 (0.03)	0.04 (0.05)
Constant	2.90** (0.10)	2.63** (0.07)	3.03** (0.10)	2.88** (0.11)	2.72** (0.07)	2.94** (0.09)
N	1359	1358	1359	1454	1450	1454

\*  $p < 0.05$ , \*\*  $p < 0.01$  (two-sided). OLS models with robust standard errors. No consistent evidence is found of moderation if we instead interact the treatment indicators with a median or tercile split for political knowledge (results available upon request).

Table C11: Knowledge/party interaction models (Study 2)

	Mitch McConnell			Harry Reid		
	General accuracy	Statement accuracy	Opinion favorability	General accuracy	Statement accuracy	Opinion favorability
Individual fact-check rating	-0.86*	-0.69*	-0.78*	-0.26	-0.23	-0.57
	(0.36)	(0.31)	(0.38)	(0.44)	(0.29)	(0.34)
Summary fact-checking data	-0.35	-0.79*	-0.77	-0.34	-0.56	-0.77
	(0.41)	(0.38)	(0.46)	(0.41)	(0.34)	(0.40)
Democrat (with leaners)	-0.22	-0.25	-0.38	0.42	0.17	-0.23
	(0.30)	(0.25)	(0.28)	(0.35)	(0.22)	(0.26)
Republican (with leaners)	0.03	-0.07	-0.12	0.27	-0.04	-0.23
	(0.34)	(0.28)	(0.30)	(0.38)	(0.25)	(0.30)
Political knowledge	0.01	-0.06	-0.14	0.04	0.00	-0.17*
	(0.08)	(0.07)	(0.08)	(0.09)	(0.07)	(0.07)
Democrat × knowledge	-0.06	0.06	-0.05	0.04	0.01	0.27**
	(0.09)	(0.08)	(0.08)	(0.10)	(0.07)	(0.08)
Republican × knowledge	0.02	0.08	0.10	-0.10	0.00	0.01
	(0.10)	(0.08)	(0.09)	(0.11)	(0.08)	(0.09)
Individual FC × Democrat	0.69	0.27	0.40	-0.47	-0.45	0.07
	(0.41)	(0.34)	(0.43)	(0.47)	(0.31)	(0.37)
Individual FC × Republican	0.27	0.28	0.28	0.07	0.09	0.52
	(0.44)	(0.36)	(0.43)	(0.51)	(0.34)	(0.42)
Individual FC × knowledge	0.06	0.08	0.07	-0.00	-0.02	0.14
	(0.11)	(0.10)	(0.11)	(0.12)	(0.09)	(0.10)
Individual FC × Democrat × knowledge	-0.09	-0.08	-0.02	0.13	0.13	-0.07
	(0.12)	(0.11)	(0.13)	(0.13)	(0.09)	(0.11)
Individual FC × Republican × knowledge	0.02	-0.07	0.00	0.05	-0.03	-0.15
	(0.13)	(0.11)	(0.13)	(0.15)	(0.10)	(0.13)
Summary FC × Democrat	0.01	0.43	0.20	-0.35	0.22	0.15
	(0.45)	(0.40)	(0.50)	(0.44)	(0.36)	(0.43)
Summary FC × Republican	0.07	0.50	0.31	-0.18	0.31	0.12
	(0.49)	(0.42)	(0.52)	(0.48)	(0.40)	(0.48)
Summary FC × knowledge	-0.09	0.10	0.01	-0.02	0.08	0.13
	(0.11)	(0.11)	(0.13)	(0.12)	(0.11)	(0.13)
Summary FC × Democrat × knowledge	0.08	-0.08	0.07	-0.02	-0.07	-0.13
	(0.12)	(0.12)	(0.14)	(0.13)	(0.12)	(0.14)
Summary FC × Republican × knowledge	0.02	-0.12	0.02	0.03	-0.14	-0.11
	(0.13)	(0.13)	(0.15)	(0.14)	(0.13)	(0.15)
Constant	3.01**	2.80**	3.28**	2.56**	2.64**	3.15**
	(0.27)	(0.24)	(0.26)	(0.33)	(0.21)	(0.24)
N	1359	1358	1359	1454	1450	1454

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors.

Table C12: Education interaction models (Study 2)

	Mitch McConnell			Harry Reid		
	General accuracy	Statement accuracy	Opinion favorability	General accuracy	Statement accuracy	Opinion favorability
Individual fact-check rating	-0.32** (0.08)	-0.40** (0.06)	-0.31** (0.08)	-0.19* (0.08)	-0.36** (0.06)	-0.26** (0.08)
Individual FC × college	-0.02 (0.11)	-0.04 (0.09)	0.01 (0.12)	-0.11 (0.11)	0.07 (0.08)	0.12 (0.11)
College graduate	0.04 (0.08)	0.06 (0.06)	-0.16 (0.08)	0.23** (0.08)	0.05 (0.05)	0.05 (0.08)
Summary fact-checking data	-0.42** (0.08)	-0.31** (0.07)	-0.43** (0.09)	-0.53** (0.08)	-0.33** (0.06)	-0.59** (0.09)
Summary FC × college	-0.05 (0.11)	-0.02 (0.09)	0.07 (0.13)	-0.28** (0.10)	-0.03 (0.08)	0.05 (0.12)
Constant	2.81** (0.06)	2.60** (0.05)	2.67** (0.06)	2.88** (0.06)	2.75** (0.04)	2.89** (0.06)
N	1359	1358	1359	1454	1450	1454

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors. Results are consistent if we instead interact the treatment groups with an ordinal scale of educational attainment.

Table C13: Education/party interaction models (Study 2)

	Mitch McConnell			Harry Reid		
	General accuracy	Statement accuracy	Opinion favorability	General accuracy	Statement accuracy	Opinion favorability
Individual fact-check rating	-0.79** (0.19)	-0.49** (0.17)	-0.68** (0.21)	-0.15 (0.20)	-0.31* (0.16)	-0.24 (0.18)
Summary fact-checking data	-0.80** (0.19)	-0.42* (0.20)	-0.88** (0.25)	-0.37* (0.19)	-0.52** (0.17)	-0.63** (0.21)
Democrat (with leaners)	-0.45** (0.17)	-0.10 (0.14)	-0.56** (0.16)	0.59** (0.16)	0.25* (0.11)	0.43** (0.15)
Republican (with leaners)	0.14 (0.17)	0.21 (0.14)	0.21 (0.16)	0.08 (0.18)	-0.13 (0.13)	-0.23 (0.17)
College graduate	0.09 (0.21)	0.08 (0.18)	-0.10 (0.18)	0.40 (0.23)	-0.01 (0.19)	-0.39 (0.23)
Democrat × college	0.07 (0.23)	0.04 (0.20)	0.05 (0.21)	-0.24 (0.25)	-0.06 (0.20)	0.48 (0.25)
Republican × college	-0.12 (0.25)	-0.05 (0.21)	-0.03 (0.23)	-0.30 (0.28)	0.20 (0.22)	0.22 (0.28)
Republican × college	-0.12 (0.25)	-0.05 (0.21)	-0.03 (0.23)	-0.30 (0.28)	0.15 (0.20)	0.22 (0.28)
Individual FC × Democrat	0.66** (0.22)	0.10 (0.19)	0.52* (0.24)	-0.20 (0.23)	-0.14 (0.17)	-0.10 (0.20)
Individual FC × Republican	0.43 (0.23)	0.15 (0.20)	0.37 (0.24)	0.16 (0.25)	0.09 (0.20)	0.08 (0.23)
Individual FC × college	0.28 (0.29)	0.12 (0.25)	0.29 (0.29)	-0.37 (0.32)	0.04 (0.26)	0.32 (0.33)
Individual FC × Democrat × college	-0.47 (0.33)	-0.20 (0.28)	-0.44 (0.32)	0.39 (0.35)	0.16 (0.28)	-0.19 (0.35)
Individual FC × Republican × college	-0.23 (0.35)	-0.21 (0.30)	-0.22 (0.34)	0.18 (0.38)	-0.16 (0.30)	-0.18 (0.40)
Summary FC × Democrat	0.50* (0.22)	0.16 (0.22)	0.57* (0.28)	-0.33 (0.21)	0.17 (0.19)	0.03 (0.24)
Summary FC × Republican	0.42 (0.24)	0.10 (0.23)	0.56* (0.29)	0.02 (0.23)	0.23 (0.21)	0.02 (0.26)
Summary FC × college	0.34 (0.30)	-0.11 (0.27)	0.31 (0.32)	-0.18 (0.31)	0.42 (0.28)	0.73* (0.35)
Summary FC × Democrat × college	-0.46 (0.33)	0.08 (0.29)	-0.33 (0.36)	-0.02 (0.33)	-0.38 (0.30)	-0.75* (0.38)
Summary FC × Republican × college	-0.57 (0.36)	0.07 (0.31)	-0.40 (0.38)	-0.17 (0.36)	-0.72* (0.33)	-0.69 (0.42)
Constant	3.00** (0.14)	2.58** (0.12)	2.88** (0.14)	2.55** (0.14)	2.66** (0.10)	2.74** (0.13)
N	1359	1358	1359	1454	1450	1454

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors.

Table C14: Effects on views of fact-checking (Study 2)

	<u>Mitch McConnell</u>				<u>Harry Reid</u>			
	Favorability	Quantity	Accuracy	Fairness	Favorability	Quantity	Accuracy	Fairness
Individual fact-check rating	0.09 (0.08)	0.04 (0.03)	0.02 (0.05)	0.06 (0.03)	0.02 (0.08)	-0.01 (0.03)	-0.07 (0.05)	-0.01 (0.03)
Summary fact-checking data	-0.11 (0.08)	-0.07 (0.04)	-0.07 (0.05)	0.00 (0.03)	0.07 (0.08)	-0.02 (0.03)	-0.07 (0.05)	0.01 (0.03)
Constant (control mean)	4.95** (0.06)	2.72** (0.02)	3.60** (0.03)	0.49** (0.02)	4.92** (0.05)	2.74** (0.02)	3.67** (0.03)	0.57** (0.02)
N	1351	1348	1351	1345	1447	1447	1447	1447

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors. All differences between summary and individual conditions are insignificant (available upon request).



## Additional Study 3 results

Table C15: Effects of fact-check type on politician accuracy and favorability ratings (Study 3)

	Mitch McConnell			Harry Reid		
	General accuracy	Statement accuracy	Opinion favorability	General accuracy	Statement accuracy	Opinion favorability
Individual fact-check rating	-0.27** (0.08)	-0.26** (0.07)	-0.29** (0.07)	-0.36** (0.08)	-0.38** (0.07)	-0.17* (0.07)
Summary fact-checking data	-0.56** (0.07)	-0.56** (0.08)	-0.52** (0.07)	-0.89** (0.08)	-0.71** (0.08)	-0.60** (0.07)
Summary–individual	-0.29** (0.07)	-0.30** (0.07)	-0.23** (0.07)	-0.53** (0.07)	-0.33** (0.07)	-0.42** (0.07)
N	1399	1399	1399	1438	1438	1438

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). Ordered probit models with robust standard errors (cutpoints omitted).

Table C16: Effects of fact-check type by party (Study 3)

	Mitch McConnell			Harry Reid		
	General accuracy	Statement accuracy	Opinion favorability	General accuracy	Statement accuracy	Opinion favorability
Individual fact-check rating	-0.24 (0.15)	-0.35** (0.12)	-0.24 (0.14)	-0.04 (0.16)	-0.43** (0.14)	-0.15 (0.15)
Individual FC × Democrat	0.08 (0.17)	0.29* (0.14)	-0.03 (0.16)	-0.41* (0.17)	0.20 (0.15)	-0.11 (0.17)
Individual FC × Republican	-0.07 (0.18)	0.04 (0.14)	-0.08 (0.17)	-0.07 (0.19)	0.20 (0.17)	0.09 (0.19)
Democrat (with leaners)	-0.37** (0.13)	-0.33** (0.10)	-0.55** (0.11)	0.69** (0.13)	0.17 (0.10)	0.62** (0.10)
Republican (with leaners)	0.31* (0.13)	0.11 (0.11)	0.45** (0.11)	-0.06 (0.14)	-0.15 (0.11)	-0.36** (0.12)
Summary fact-checking data	-0.73** (0.15)	-0.59** (0.14)	-0.92** (0.15)	-0.36* (0.15)	-0.52** (0.12)	-0.40** (0.14)
Summary FC × Democrat	0.40* (0.16)	0.28 (0.16)	0.51** (0.17)	-0.57** (0.17)	0.08 (0.14)	-0.25 (0.16)
Summary FC × Republican	0.13 (0.17)	0.15 (0.16)	0.38* (0.18)	0.01 (0.18)	0.08 (0.15)	0.00 (0.18)
Constant	2.90** (0.12)	2.76** (0.09)	2.71** (0.09)	2.70** (0.12)	2.68** (0.10)	2.70** (0.09)
N	1399	1399	1399	1438	1438	1438

\*  $p < 0.05$ , \*\*  $p < 0.01$  (two-sided). OLS models with robust standard errors.

Table C17: Political knowledge interaction models (Study 3)

	Mitch McConnell			Harry Reid		
	General accuracy	Statement accuracy	Opinion favorability	General accuracy	Statement accuracy	Opinion favorability
Individual fact-check rating	-0.40** (0.14)	-0.20 (0.12)	-0.23 (0.15)	-0.34* (0.13)	-0.12 (0.11)	-0.12 (0.13)
Individual FC × knowledge	0.07 (0.04)	0.01 (0.04)	-0.00 (0.05)	0.02 (0.04)	-0.04 (0.03)	-0.01 (0.04)
Knowledge	-0.08** (0.03)	-0.04 (0.03)	-0.13** (0.03)	0.05 (0.03)	0.02 (0.02)	0.02 (0.03)
Summary fact-checking data	-0.71** (0.12)	-0.52** (0.11)	-0.76** (0.15)	-0.61** (0.12)	-0.55** (0.11)	-0.79** (0.14)
Summary FC × knowledge	0.09* (0.04)	0.05 (0.04)	0.09* (0.05)	-0.02 (0.04)	0.03 (0.03)	0.08 (0.04)
Constant	3.04** (0.10)	2.72** (0.09)	2.92** (0.10)	2.93** (0.10)	2.68** (0.08)	2.86** (0.09)
N	1399	1399	1399	1438	1438	1438

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors. No consistent evidence is found of moderation if we instead interact the treatment indicators with a median or tercile split for political knowledge (results available upon request).

Table C18: Knowledge/party interaction models (Study 3)

	Mitch McConnell			Harry Reid		
	General accuracy	Statement accuracy	Opinion favorability	General accuracy	Statement accuracy	Opinion favorability
Individual fact-check rating	-0.40 (0.38)	-0.23 (0.26)	-0.23 (0.31)	-0.07 (0.34)	-0.16 (0.30)	-0.28 (0.32)
Summary fact-checking data	-0.95** (0.35)	-0.27 (0.30)	-0.78* (0.34)	-0.42 (0.35)	-0.39 (0.29)	-0.58 (0.30)
Democrat (with leaners)	-0.25 (0.29)	0.03 (0.24)	-0.14 (0.23)	0.30 (0.30)	0.22 (0.23)	0.00 (0.18)
Republican (with leaners)	0.14 (0.30)	0.39 (0.25)	0.23 (0.24)	0.22 (0.31)	0.08 (0.25)	0.12 (0.23)
Political knowledge	-0.07 (0.08)	0.08 (0.07)	-0.06 (0.07)	-0.01 (0.08)	0.05 (0.06)	-0.05 (0.05)
Democrat × knowledge	-0.03 (0.09)	-0.12 (0.08)	-0.13 (0.08)	0.12 (0.08)	-0.02 (0.06)	0.19** (0.06)
Republican × knowledge	0.06 (0.10)	-0.10 (0.09)	0.08 (0.09)	-0.09 (0.09)	-0.08 (0.07)	-0.16* (0.07)
Individual FC × Democrat	-0.02 (0.43)	0.14 (0.31)	0.02 (0.37)	-0.40 (0.38)	-0.06 (0.33)	0.08 (0.36)
Individual FC × Republican	0.05 (0.45)	-0.07 (0.33)	-0.07 (0.39)	-0.20 (0.41)	0.18 (0.36)	0.30 (0.40)
Individual FC × knowledge	0.06 (0.12)	-0.05 (0.09)	0.00 (0.10)	0.01 (0.10)	-0.09 (0.09)	0.04 (0.10)
Individual FC × Democrat × knowledge	0.03 (0.13)	0.06 (0.10)	-0.01 (0.12)	0.01 (0.11)	0.09 (0.10)	-0.05 (0.11)
Individual FC × Republican × knowledge	-0.05 (0.14)	0.05 (0.11)	-0.01 (0.13)	0.04 (0.12)	0.01 (0.11)	-0.07 (0.12)
Summary FC × Democrat	0.37 (0.38)	-0.21 (0.34)	0.20 (0.39)	-0.40 (0.39)	-0.24 (0.32)	-0.46 (0.34)
Summary FC × Republican	0.19 (0.42)	-0.33 (0.36)	-0.18 (0.41)	-0.03 (0.41)	-0.15 (0.35)	-0.04 (0.38)
Summary FC × knowledge	0.08 (0.10)	-0.12 (0.10)	-0.06 (0.11)	0.02 (0.10)	-0.04 (0.08)	0.06 (0.09)
Summary FC × Democrat × knowledge	0.00 (0.11)	0.17 (0.11)	0.11 (0.12)	-0.05 (0.11)	0.11 (0.09)	0.08 (0.11)
Summary FC × Republican × knowledge	-0.03 (0.12)	0.17 (0.12)	0.19 (0.13)	0.01 (0.01)	0.07 (0.07)	0.02 (0.02)
Constant	3.10** (0.26)	2.55** (0.21)	2.88** (0.19)	2.72** (0.27)	2.54** (0.21)	2.85** (0.15)
N	1399	1399	1399	1438	1438	1438

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors.

Table C19: Education interaction models (Study 3)

	Mitch McConnell			Harry Reid		
	General accuracy	Statement accuracy	Opinion favorability	General accuracy	Statement accuracy	Opinion favorability
Individual fact-check rating	-0.24** (0.08)	-0.20** (0.07)	-0.20* (0.09)	-0.33** (0.08)	-0.28** (0.07)	-0.24** (0.08)
Individual FC × college	0.05 (0.12)	0.06 (0.10)	-0.15 (0.13)	0.10 (0.11)	0.07 (0.09)	0.16 (0.12)
College graduate	-0.02 (0.08)	-0.04 (0.08)	-0.04 (0.09)	0.04 (0.08)	0.01 (0.06)	0.06 (0.09)
Summary fact-checking data	-0.45** (0.08)	-0.33** (0.07)	-0.51** (0.09)	-0.71** (0.07)	-0.49** (0.07)	-0.66** (0.09)
Summary FC × college	0.01 (0.11)	-0.07 (0.10)	0.04 (0.13)	0.05 (0.10)	0.07 (0.09)	0.23 (0.12)
Constant	2.80** (0.06)	2.63** (0.06)	2.55** (0.06)	3.05** (0.06)	2.72** (0.05)	2.90** (0.06)
N	1399	1399	1399	1438	1438	1438

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors. Results are consistent if we instead interact the treatment groups with an ordinal scale of educational attainment.

Table C20: Education/party interaction models (Study 3)

	Mitch McConnell			Harry Reid		
	General accuracy	Statement accuracy	Opinion favorability	General accuracy	Statement accuracy	Opinion favorability
Individual fact-check rating	-0.12 (0.21)	-0.24 (0.15)	-0.27 (0.18)	-0.08 (0.21)	-0.43* (0.18)	-0.31 (0.20)
Summary fact-checking data	-0.54** (0.20)	-0.44* (0.18)	-0.92** (0.19)	-0.24 (0.21)	-0.35* (0.17)	-0.49* (0.19)
Democrat (with leaners)	-0.23 (0.19)	-0.21 (0.15)	-0.48** (0.16)	0.62** (0.18)	0.32* (0.14)	0.50** (0.14)
Republican (with leaners)	0.47* (0.19)	0.18 (0.14)	0.37* (0.15)	-0.00 (0.20)	0.10 (0.16)	-0.40* (0.17)
College graduate	0.27 (0.23)	0.15 (0.18)	0.03 (0.19)	-0.03 (0.25)	0.39* (0.18)	-0.11 (0.18)
Democrat × college	-0.29 (0.25)	-0.23 (0.21)	-0.13 (0.22)	0.14 (0.27)	-0.36 (0.20)	0.24 (0.20)
Republican × college	-0.32 (0.26)	-0.13 (0.21)	0.16 (0.23)	-0.10 (0.29)	-0.54* (0.22)	0.10 (0.24)
Individual FC × Democrat	-0.09 (0.24)	0.11 (0.19)	0.07 (0.22)	-0.35 (0.23)	0.19 (0.20)	0.00 (0.23)
Individual FC × Republican	-0.25 (0.25)	-0.07 (0.19)	0.02 (0.23)	-0.18 (0.26)	0.16 (0.22)	0.25 (0.26)
Individual FC × college	-0.24 (0.32)	-0.24 (0.24)	0.07 (0.28)	0.12 (0.31)	0.08 (0.28)	0.45 (0.29)
Individual FC × Democrat × college	0.34 (0.35)	0.37 (0.28)	-0.21 (0.33)	-0.16 (0.34)	-0.07 (0.31)	-0.37 (0.32)
Individual FC × Republican × college	0.35 (0.37)	0.25 (0.29)	-0.22 (0.35)	0.18 (0.37)	-0.02 (0.33)	-0.45 (0.36)
Summary FC × Democrat	0.19 (0.22)	0.15 (0.21)	0.50* (0.23)	-0.75** (0.23)	-0.16 (0.19)	-0.34 (0.22)
Summary FC × Republican	-0.08 (0.24)	0.04 (0.21)	0.39 (0.23)	-0.19 (0.25)	-0.16 (0.21)	0.10 (0.25)
Summary FC × college	-0.50 (0.28)	-0.50 (0.27)	0.02 (0.35)	-0.35 (0.30)	-0.42 (0.23)	0.24 (0.29)
Summary FC × Democrat × college	0.54 (0.31)	0.47 (0.30)	0.01 (0.38)	0.45 (0.33)	0.55* (0.26)	0.11 (0.32)
Summary FC × Republican × college	0.53 (0.34)	0.42 (0.31)	-0.06 (0.40)	0.47 (0.35)	0.52 (0.28)	-0.25 (0.36)
Constant	2.77** (0.17)	2.69** (0.12)	2.69** (0.13)	2.71** (0.17)	2.52** (0.13)	2.74** (0.12)
N	1399	1399	1399	1438	1438	1438

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors.

Table C21: Effects on views of fact-checking (Study 3)

	<u>Mitch McConnell</u>				<u>Harry Reid</u>			
	Favorability	Quantity	Accuracy	Fairness	Favorability	Quantity	Accuracy	Fairness
Individual fact-check rating	-0.03 (0.08)	0.04 (0.03)	0.00 (0.05)	-0.01 (0.03)	0.08 (0.08)	0.04 (0.03)	0.04 (0.05)	0.04 (0.03)
Summary fact-checking data	0.07 (0.08)	0.01 (0.03)	0.00 (0.05)	0.00 (0.03)	0.08 (0.08)	0.04 (0.03)	-0.03 (0.05)	0.00 (0.03)
Constant (control mean)	5.00** (0.06)	2.75** (0.02)	3.60** (0.03)	0.54** (0.02)	4.92** (0.06)	2.72** (0.02)	3.62** (0.03)	0.52** (0.02)
N	1391	1390	1394	1396	1431	1433	1431	1432

\*  $p < 0.05$ , \*\*  $p < .01$  (two-sided). OLS models with robust standard errors. All differences between summary and individual conditions are insignificant (available upon request).

## **PREREGISTRATION**

### **Background and explanation of rationale**

Fact-checking is an increasingly popular way for American political journalists to verify the accuracy of statements by political figures. The trend has grown rapidly, with prominent organizations such as FactCheck.org and PolitiFact receiving national recognition and journalism awards. The work of fact-checking organizations is often cited in the media, giving credibility and professional acceptance to this new form of political coverage.

There is currently very little literature on the effects of fact-checking. Moreover, existing research on the effects of correcting misperceptions has generated conflicting results. Nyhan and Reifler (2010) found that corrections failed to reduce misperceptions and, in some extreme cases produced a “backfire effect” in which corrections strengthened misperceptions. Fridkin et al. (2015) showed that fact-checks of negative television advertisements influenced people’s assessments of the accuracy, usefulness, and tone of negative political advertisements. Finally, Nyhan and Reifler (2016) showed that there was no evidence that exposure to fact-checking affected people’s attitudes toward the practice, trust in politicians, or feelings of political efficacy, but exposure to fact-checking did increase how much people knew about contemporary political controversies and debates.

The specific objective of this project is to examine the effects of summary fact-checking, an innovation in the field that is becoming more common. This format presents an overview of ratings of the accuracy of a politician’s statements rather than an evaluation of a single statement. Our study will measure the effects of summary fact-checks on a politician’s perceived accuracy and favorability. This project will also compare the effects of summary fact-checks to individual fact-checks that only verify a singular statement. We expect that summary fact-checking will be seen as more comprehensive and less selective than individual fact-checks and may therefore have a greater effect on public perceptions of politicians.

Our experiment will therefore assess whether or not the effect of individual fact-checks differs from the effect of summary fact-checks on an individual’s favorability toward a politician or the perceived accuracy of their statements. We will also take the political affiliation of both the participant and the politician into account, so we can determine whether the effects of individual and summary fact-checks vary by whether the target is a co-partisan or an opposition partisan. Finally, we will also consider whether these effects vary by political knowledge and analyze whether exposure to summary or individual fact-checks affects attitudes toward the practice more generally. The results of this experiment will allow us to understand the efficacy of different forms of fact-checking, which may help us better understand how news outlets’ fact-checking practices influence public opinion.

## **What are the hypotheses to be tested/quantities of interest to be estimated?**

H1: Exposure to an individual fact-check or to summary fact-check information will reduce perceptions of politician accuracy and favorability

H2: Perceptions of politician accuracy and favorability will be lower for participants exposed to summary fact-check information than for those exposed to an individual fact-check

H3: Perceptions of politician accuracy and favorability will change more in response to individual or summary fact-check exposure among opposition partisans than among co-partisans

RQ1: Will the effects of exposure to fact-check information on perceptions of politician accuracy and favorability vary by political knowledge/education or between partisans who are low vs. high in political knowledge/education?

RQ2: Will exposure to fact-check information change opinions toward the practice of fact-checking generally?

## **How will these hypotheses be tested?**

[The study protocol is attached.]

### *Eligibility and exclusion criteria for participants*

Participants will be United States residents age 18 and over recruited on the Amazon Mechanical Turk online marketplace. All Turkers are eligible to participate in this study who meet the specified qualifications and did not take part in an earlier pilot study. The sample size will be approximately 2500-3000 – data collection will continue until all funds allocated to the project are exhausted. Researchers have no role in selecting the participants after listing the project on Mechanical Turk.

### *Randomization approach*

We will use a between-subjects design in which respondents are randomly assigned to one of six conditions by the Qualtrics online survey platform (p=1/6 for each):

Summary fact-check treatment conditions:

- Fact-checking a Democrat (Harry Reid; asked about him first)
- Fact-checking a Republican (Mitch McConnell; asked about him first)

Individual fact-check treatment conditions:

- Fact-checking a Democrat (Harry Reid; asked about him first)
- Fact-checking a Republican (Mitch McConnell; asked about him first)



Control conditions (placebo image/text; no fact-check provided):

- Asked about perceptions of a Democrat first (Harry Reid)
- Asked about perceptions of a Republican first (Mitch McConnell)

### *Data collection and blinding*

Data will be collected on the Qualtrics online survey platform. There may be some online discussion among Mechanical Turk workers about the details of our survey. This cannot be prevented and we hope that these participants preserve the integrity of the research.

### *Primary and secondary outcome measures*

Our primary outcome variables are perceptions of the favorability and accuracy of the fact-check target (McConnell or Reid) compared to participants in the control group who were asked first about the same person. Each outcome variable will be measured on a five-point scale:

The next few questions will be about Senator Mitch McConnell (R-KY), the Majority Leader of the Senate. In general, how often do you think that he makes accurate statements?

- All of the time (5)
- Most of the time (4)
- About half the time (3)
- Occasionally (2)
- Never (1)

Do you have a favorable or unfavorable view of Senator McConnell (R-KY)?

- Very favorable (5)
- Somewhat favorable (4)
- Neither favorable nor unfavorable (3)
- Somewhat unfavorable (2)
- Very unfavorable (1)

The next few questions will be about Senator Harry Reid (D-NV), the former Majority Leader of the Senate. In general, how often do you think that he makes accurate statements?

- All of the time (5)
- Most of the time (4)
- About half the time (3)
- Occasionally (2)
- Never (1)

Do you have a favorable or unfavorable view of Senator Reid (D-NV)?

- Very favorable (5)

- Somewhat favorable (4)
- Neither favorable nor unfavorable (3)
- Somewhat unfavorable (2)
- Very unfavorable (1)

Our secondary outcome variables measure opinions toward fact-checking using the following questions, which will be analyzed separately and also as a composite measure if they scale together using principal components factor analysis.

In general, how favorable or unfavorable is your overall opinion of the fact-checking movement in journalism?

- Very favorable (6)
- Somewhat favorable (5)
- Slightly favorable (4)
- Slightly unfavorable (3)
- Somewhat unfavorable (2)
- Very unfavorable (1)

Thinking about the amount of fact-checking that you see being performed today by journalists, do you think there should be more fact-checking, the current amount of fact-checking is about right, or there should be less fact-checking?

- There should be more fact-checking. (3)
- The current amount of fact-checking is about right. (2)
- There should be less fact-checking. (1)

In general, how often do you think articles published by fact-checkers are accurate?

- All of the time (5)
- Most of the time (4)
- About half the time (3)
- Occasionally (2)
- Never (1)

In presenting the news dealing with political and social issues, do you think fact-checkers deal fairly with all sides or tend to favor one side?

- Fact-checkers tend to deal fairly with all sides. (1)
- Fact-checkers tend to favor one side. (0)

### *Statistical analyses*

For each of our analyses, we will use OLS with robust standard errors and estimate ordered probit models with robust standard errors as a robustness check. Unless otherwise noted, all experimental treatment effects will be estimated as intent to treat effects. Leaners will be treated as partisans in our statistical analyses. Perceptions of politicians will only be assessed for the first politician for which outcome measures were collected to avoid contrast effects.

Participants' political knowledge will be assessed with a standard five-question battery that test participant knowledge of U.S. electoral rules and awareness of current political figures. Partisanship is measured on a standard seven-point scale administered via branching questions.

Our primary model will be pooled regressions for individuals who saw either candidate, but we will also estimate regressions interacting target politician with fact-checking type (the main explanatory variable). If we cannot reject the null of no difference in effects by target, we will present the pooled model and also present separate results for Reid and McConnell either in the main text or an appendix. If the effects of key explanatory variables differ depending on the fact-checking target, we will present separate models for Reid and McConnell in the main text for expositional clarity and present interactive models in an appendix. We will estimate marginal effects as appropriate when interaction terms are included in our models. (We will also estimate our treatment effect models with standard demographic controls and report these results if the treatment effect estimate is substantively different from the model only including partisan affiliation.)

To test H1, we will estimate the model  $y=b_0+b_1*\text{summaryFC}+b_2*\text{individualFC}$  for the accuracy and favorability outcome measures. To test H2, we will then evaluate  $b_1-b_2$  directly for each outcome measure.

To test H3, we will estimate the model  $y=b_0+b_1*\text{summaryFC}+b_2*\text{individualFC}+b_3*\text{copartisan}+b_4*\text{opposition}+b_5*\text{summaryFCXcopartisan}+b_6*\text{summaryFCXopposition}+b_7*\text{individualFCXcopartisan}+b_8*\text{individualFCXopposition}$  and then estimate  $b_5-b_6$  and  $b_7-b_8$ .

[Per above, we will estimate all pairwise comparisons in treatment effects between partisan groups. However, we expect to encounter power problems given the relatively small number of pure independents and may thus focus on the comparison between the co-partisan and opposition partisan groups.]

To test RQ1, we will first estimate the model  $y=b_0+b_1*\text{summaryFC}+b_2*\text{individualFC}+b_3*\text{knowledge}+b_4*\text{summaryFCXknowledge}+b_5*\text{individualFCXknowledge}$  and then estimate  $y=b_0+b_1*\text{summaryFC}+b_2*\text{individualFC}+b_3*\text{copartisan}+b_4*\text{opposition}+b_5*\text{summaryFCXcopartisan}+b_6*\text{summaryFCXopposition}+b_7*\text{individualFCXcopartisan}+b_8*\text{individualFCXopposition}+b_9*\text{knowledge}+b_{10}*\text{summaryFCXknowledge}+b_{11}*\text{individualFCXknowledge}+b_{12}*\text{copartisanXknowledge}+b_{13}*\text{oppositionXknowledge}+b_{14}*\text{summaryFCXknowledgeXopposition}+b_{15}*\text{individualFCXknowledgeXopposition}$ . In each model, we will estimate whether the effects of the fact-checks vary by political knowledge versus the control group and each other (and, in the latter case, by partisanship as well). We will test whether the effect of knowledge is linear per Hainmueller et al. and follow their recommendations if not. We may also present a simple median split on knowledge in the main text and report the continuous interaction model in the

appendix for expositional clarity. We will follow the same procedures for education, grouping all the some college/associate groups together in the continuous measure and treating college/non-college as the relevant binary measure.

To test RQ2, we will estimate the model  $y=b_0+b_1*\text{summaryFC}+b_2*\text{individualFC}$  for individual fact-check opinion measures and the composite fact-check opinion measure (if they scale together) and then estimate  $b_1-b_2$ .

## **PREREGISTRATION**

### **Background and explanation of rationale**

**[Note: This preregistration is an updated version of our preregistration for EGAP study 20160507AA. We are conducting a replication study. We note deviations from the original design below but the preregistrations are otherwise identical.]**

Fact-checking is an increasingly popular way for American political journalists to verify the accuracy of statements by political figures. The trend has grown rapidly, with prominent organizations such as FactCheck.org and PolitiFact receiving national recognition and journalism awards. The work of fact-checking organizations is often cited in the media, giving credibility and professional acceptance to this new form of political coverage.

There is currently very little literature on the effects of fact-checking. Moreover, existing research on the effects of correcting misperceptions has generated conflicting results. Nyhan and Reifler (2010) found that corrections failed to reduce misperceptions and, in some extreme cases produced a “backfire effect” in which corrections strengthened misperceptions. Fridkin et al. (2015) showed that fact-checks of negative television advertisements influenced people’s assessments of the accuracy, usefulness, and tone of negative political advertisements. Finally, Nyhan and Reifler (2016) showed that there was no evidence that exposure to fact-checking affected people’s attitudes toward the practice, trust in politicians, or feelings of political efficacy, but exposure to fact-checking did increase how much people knew about contemporary political controversies and debates.

The specific objective of this project is to examine the effects of summary fact-checking, an innovation in the field that is becoming more common. This format presents an overview of ratings of the accuracy of a politician’s statements rather than an evaluation of a single statement. Our study will measure the effects of summary fact-checks on a politician’s perceived accuracy and favorability. This project will also compare the effects of summary fact-checks to individual fact-checks that only verify a singular statement. We expect that summary fact-checking will be seen as more comprehensive and less selective than individual fact-checks and may therefore have a greater effect on public perceptions of politicians.

Our experiment will therefore assess whether or not the effect of individual fact-checks differs from the effect of summary fact-checks on an individual’s favorability toward a politician or the perceived accuracy of their statements. We will also take the political affiliation of both the participant and the politician into account, so we can determine whether the effects of individual and summary fact-checks vary by whether the target is a co-partisan or an opposition partisan. Finally, we will also consider whether these effects vary by political knowledge and analyze whether exposure to summary or individual fact-checks affects attitudes toward the practice

more generally. The results of this experiment will allow us to understand the efficacy of different forms of fact-checking, which may help us better understand how news outlets' fact-checking practices influence public opinion.

This replication experiment modifies the summary fact-checking treatment to omit any comparison between the senator in question and the average senator. Minor modifications were also made to correct typographical errors and to update the content of the survey to be accurate for administration in November 2016. (The first study was administered in May 2016.)

### **What are the hypotheses to be tested/quantities of interest to be estimated?**

H1: Exposure to a negative individual fact-check or to summary fact-check information will reduce perceptions of politician accuracy and favorability

H2: Perceptions of politician accuracy and favorability will be lower for participants exposed to negative summary fact-check information than for those exposed to an individual fact-check

H3: Perceptions of politician accuracy and favorability will change more in response to individual or summary fact-check exposure among opposition partisans than among co-partisans

RQ1: Will the effects of exposure to fact-check information on perceptions of politician accuracy and favorability vary by political knowledge/education or between partisans who are low vs. high in political knowledge/education?

RQ2: Will exposure to fact-check information change opinions toward the practice of fact-checking generally?

### **How will these hypotheses be tested?**

[The study protocol is attached.]

#### *Eligibility and exclusion criteria for participants*

Participants will be United States residents age 18 and over recruited on the Amazon Mechanical Turk online marketplace. All Turkers are eligible to participate in this study who meet the specified qualifications and did not take part in an earlier pilot study or our first experiment. The sample size will be approximately 2825 to match the sample size in our prior experiment– data collection will continue until all funds allocated to the project (\$2,000) are exhausted. Researchers have no role in selecting the participants after listing the project on Mechanical Turk.

#### *Randomization approach*

We will use a between-subjects design in which respondents are randomly assigned to one of six conditions by the Qualtrics online survey platform ( $p=1/6$  for each):

Summary fact-check treatment conditions:

- Fact-checking a Democrat (Harry Reid; asked about him first)
- Fact-checking a Republican (Mitch McConnell; asked about him first)

Individual fact-check treatment conditions:

- Fact-checking a Democrat (Harry Reid; asked about him first)
- Fact-checking a Republican (Mitch McConnell; asked about him first)

Control conditions (placebo image/text; no fact-check provided):

- Asked about perceptions of a Democrat first (Harry Reid)
- Asked about perceptions of a Republican first (Mitch McConnell)

Participants will first be randomized into one of the three conditions (summary fact-check, individual fact-check, or control) with equal probability ( $1/3$ ) and then randomized into the Reid or McConnell versions of each with equal probability ( $1/2$ ).

#### *Data collection and blinding*

Data will be collected on the Qualtrics online survey platform. There may be some online discussion among Mechanical Turk workers about the details of our survey. This cannot be prevented and we hope that these participants preserve the integrity of the research.

#### *Primary and secondary outcome measures*

Our primary outcome variables are perceptions of the favorability and accuracy of the fact-check target (McConnell or Reid) compared to participants in the control group who were asked first about the same person. Each outcome variable will be measured on a five-point scale:

The next few questions will be about Senator Mitch McConnell (R-KY), the Majority Leader of the Senate. In general, how often do you think that he makes accurate statements?

- All of the time (5)
- Most of the time (4)
- About half the time (3)
- Occasionally (2)
- Never (1)

Do you have a favorable or unfavorable view of Senator McConnell (R-KY)?

- Very favorable (5)
- Somewhat favorable (4)

- Neither favorable nor unfavorable (3)
- Somewhat unfavorable (2)
- Very unfavorable (1)

The following statement was said by Senator Mitch McConnell (R-KY). We would like to know how accurate you believe the statement to be.

“Kentucky has more private sector jobs than ever before.”

- Very accurate (4)
- Somewhat accurate (3)
- Not very accurate (2)
- Not at all accurate (1)

The next few questions will be about Senator Harry Reid (D-NV), the former Majority Leader of the Senate. In general, how often do you think that he makes accurate statements?

- All of the time (5)
- Most of the time (4)
- About half the time (3)
- Occasionally (2)
- Never (1)

Do you have a favorable or unfavorable view of Senator Reid (D-NV)?

- Very favorable (5)
- Somewhat favorable (4)
- Neither favorable nor unfavorable (3)
- Somewhat unfavorable (2)
- Very unfavorable (1)

The following statement was said by Senator Harry Reid (D-NV). We would like to know how accurate you believe the statement to be.

“Nevada has more private sector jobs than ever before.”

- Very accurate (4)
- Somewhat accurate (3)
- Not very accurate (2)
- Not at all accurate (1)

Our secondary outcome variables measure opinions toward fact-checking using the following questions, which will be analyzed separately and also as a composite measure if they scale together using principal components factor analysis.

In general, how favorable or unfavorable is your overall opinion of the fact-checking movement in journalism?

- Very favorable (6)
- Somewhat favorable (5)
- Slightly favorable (4)
- Slightly unfavorable (3)



- Somewhat unfavorable (2)
- Very unfavorable (1)

Thinking about the amount of fact-checking that you see being performed today by journalists, do you think there should be more fact-checking, the current amount of fact-checking is about right, or there should be less fact-checking?

- There should be more fact-checking. (3)
- The current amount of fact-checking is about right. (2)
- There should be less fact-checking. (1)

In general, how often do you think articles published by fact-checkers are accurate?

- All of the time (5)
- Most of the time (4)
- About half the time (3)
- Occasionally (2)
- Never (1)

In presenting the news dealing with political and social issues, do you think fact-checkers deal fairly with all sides or tend to favor one side?

- Fact-checkers tend to deal fairly with all sides. (1)
- Fact-checkers tend to favor one side. (0)

### *Statistical analyses*

For each of our analyses, we will use OLS with robust standard errors and estimate ordered probit models with robust standard errors as a robustness check. Unless otherwise noted, all experimental treatment effects will be estimated as intent to treat effects. Leaners will be treated as partisans in our statistical analyses. Perceptions of politicians will only be assessed for the first politician for which outcome measures were collected to avoid contrast effects.

Participants' political knowledge will be assessed with a standard five-question battery that test participant knowledge of U.S. electoral rules and awareness of current political figures. Partisanship is measured on a standard seven-point scale administered via branching questions.

Our primary model will be pooled regressions for individuals who saw either candidate, but we will also estimate regressions interacting target politician with fact-checking type (the main explanatory variable). If we cannot reject the null of no difference in effects by target, we will present the pooled model and also present separate results for Reid and McConnell either in the main text or an appendix. If the effects of key explanatory variables differ depending on the fact-checking target, we will present separate models for Reid and McConnell in the main text for expositional clarity and present interactive models in an appendix. We will estimate marginal effects as appropriate when interaction terms are included in our models. (We will also estimate our treatment effect models with standard demographic

controls and report these results if the treatment effect estimate is substantively different from the model only including partisan affiliation.)

To test H1, we will estimate the model  $y=b_0+b_1*\text{summaryFC}+b_2*\text{individualFC}$  for the accuracy and favorability outcome measures. To test H2, we will then evaluate  $b_1-b_2$  directly for each outcome measure.

To test H3, we will estimate the model  $y=b_0+b_1*\text{summaryFC}+b_2*\text{individualFC}+b_3*\text{copartisan}+b_4*\text{opposition}+b_5*\text{summaryFCXcopartisan}+b_6*\text{summaryFCXopposition}+b_7*\text{individualFCXcopartisan}+b_8*\text{individualFCXopposition}$  and then estimate  $b_5-b_6$  and  $b_7-b_8$ .

[Per above, we will estimate all pairwise comparisons in treatment effects between partisan groups. However, we expect to encounter power problems given the relatively small number of pure independents and may thus focus on the comparison between the co-partisan and opposition partisan groups.]

To test RQ1, we will first estimate the model  $y=b_0+b_1*\text{summaryFC}+b_2*\text{individualFC}+b_3*\text{knowledge}+b_4*\text{summaryFCXknowledge}+b_5*\text{individualFCXknowledge}$  and then estimate  $y=b_0+b_1*\text{summaryFC}+b_2*\text{individualFC}+b_3*\text{copartisan}+b_4*\text{opposition}+b_5*\text{summaryFCXcopartisan}+b_6*\text{summaryFCXopposition}+b_7*\text{individualFCXcopartisan}+b_8*\text{individualFCXopposition}+b_9*\text{knowledge}+b_{10}*\text{summaryFCXknowledge}+b_{11}*\text{individualFCXknowledge}+b_{12}*\text{copartisanXknowledge}+b_{13}*\text{oppositionXknowledge}+b_{14}*\text{summaryFCXknowledgeXopposition}+b_{15}*\text{individualFCXknowledgeXopposition}$ . In each model, we will estimate whether the effects of the fact-checks vary by political knowledge versus the control group and each other (and, in the latter case, by partisanship as well). We will test whether the effect of knowledge is linear per Hainmueller et al. and follow their recommendations if not. We may also present a simple median split on knowledge in the main text and report the continuous interaction model in the appendix for expositional clarity. We will follow the same procedures for education, grouping all the some college/associate groups together in the continuous measure and treating college/non-college as the relevant binary measure.

To test RQ2, we will estimate the model  $y=b_0+b_1*\text{summaryFC}+b_2*\text{individualFC}$  for individual fact-check opinion measures and the composite fact-check opinion measure (if they scale together) and then estimate  $b_1-b_2$ .

## **PREREGISTRATION**

### **Background and explanation of rationale**

**[Note: This preregistration is an updated version of our preregistration for EGAP studies 20160507AA and 20161104AB. We are conducting a replication study. We note deviations from the original design below but the preregistrations are otherwise identical.]**

Fact-checking is an increasingly popular way for American political journalists to verify the accuracy of statements by political figures. The trend has grown rapidly, with prominent organizations such as FactCheck.org and PolitiFact receiving national recognition and journalism awards. The work of fact-checking organizations is often cited in the media, giving credibility and professional acceptance to this new form of political coverage.

There is currently very little literature on the effects of fact-checking. Moreover, existing research on the effects of correcting misperceptions has generated conflicting results. Nyhan and Reifler (2010) found that corrections failed to reduce misperceptions and, in some extreme cases produced a “backfire effect” in which corrections strengthened misperceptions. Fridkin et al. (2015) showed that fact-checks of negative television advertisements influenced people’s assessments of the accuracy, usefulness, and tone of negative political advertisements. Finally, Nyhan and Reifler (2016) showed that there was no evidence that exposure to fact-checking affected people’s attitudes toward the practice, trust in politicians, or feelings of political efficacy, but exposure to fact-checking did increase how much people knew about contemporary political controversies and debates.

The specific objective of this project is to examine the effects of summary fact-checking, an innovation in the field that is becoming more common. This format presents an overview of ratings of the accuracy of a politician’s statements rather than an evaluation of a single statement. Our study will measure the effects of summary fact-checks on a politician’s perceived accuracy and favorability. This project will also compare the effects of summary fact-checks to individual fact-checks that only verify a singular statement. We expect that summary fact-checking will be seen as more comprehensive and less selective than individual fact-checks and may therefore have a greater effect on public perceptions of politicians.

Our experiment will therefore assess whether or not the effect of individual fact-checks differs from the effect of summary fact-checks on an individual’s favorability toward a politician or the perceived accuracy of their statements. We will also take the political affiliation of both the participant and the politician into account, so we can determine whether the effects of individual and summary fact-checks vary by whether the target is a co-partisan or an opposition partisan. Finally, we will also consider whether these effects vary by political knowledge and analyze whether exposure to summary or individual fact-checks affects attitudes toward the practice

more generally. The results of this experiment will allow us to understand the efficacy of different forms of fact-checking, which may help us better understand how news outlets' fact-checking practices influence public opinion.

This replication is identical to 20161104AB except the wording of a dependent variable is changed (see below).

### **What are the hypotheses to be tested/quantities of interest to be estimated?**

H1: Exposure to a negative individual fact-check or to summary fact-check information will reduce perceptions of politician accuracy and favorability

H2: Perceptions of politician accuracy and favorability will be lower for participants exposed to negative summary fact-check information than for those exposed to an individual fact-check

H3: Perceptions of politician accuracy and favorability will change more in response to individual or summary fact-check exposure among opposition partisans than among co-partisans

RQ1: Will the effects of exposure to fact-check information on perceptions of politician accuracy and favorability vary by political knowledge/education or between partisans who are low vs. high in political knowledge/education?

RQ2: Will exposure to fact-check information change opinions toward the practice of fact-checking generally?

### **How will these hypotheses be tested?**

[The study protocol is attached.]

#### *Eligibility and exclusion criteria for participants*

Participants will be United States residents age 18 and over recruited on the Amazon Mechanical Turk online marketplace. All Turkers are eligible to participate in this study who meet the specified qualifications and did not take part in an earlier pilot study or our first experiment. The sample size will be approximately 2825 to match the sample size in our previous experiments. Researchers have no role in selecting the participants after listing the project on Mechanical Turk.

#### *Randomization approach*

We will use a between-subjects design in which respondents are randomly assigned to one of six conditions by the Qualtrics online survey platform (p=1/6 for each):

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Participants will first be randomized into one of the three conditions (summary fact-check, individual fact-check, or control) with equal probability (1/3) and then randomized into the Reid or McConnell versions of each with equal probability (1/2).

#### *Data collection and blinding*

Data will be collected on the Qualtrics online survey platform. There may be some online discussion among Mechanical Turk workers about the details of our survey. This cannot be prevented and we hope that these participants preserve the integrity of the research.

#### *Primary and secondary outcome measures*

Our primary outcome variables are perceptions of the favorability and accuracy of the fact-check target (McConnell or Reid) compared to participants in the control group who were asked first about the same person. Each outcome variable will be measured on a five-point scale:

The next few questions will be about Senator Mitch McConnell (R-KY), the Majority Leader of the Senate. In general, how often do you think that he makes accurate statements?

- All of the time (5)
- Most of the time (4)
- About half the time (3)
- Occasionally (2)
- Never (1)

Do you have a favorable or unfavorable view of Senator McConnell (R-KY)?

- Very favorable (5)
- Somewhat favorable (4)
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The following statement was said by Senator Mitch McConnell (R-KY). We would like to know how accurate you believe the statement to be.

“I haven't switched my position on the Trans-Pacific Partnership trade deal.”  
[changed from 20161104AB due to a potential confound with the content of the individual fact-check treatment]

- Very accurate (4)
- Somewhat accurate (3)
- Not very accurate (2)
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