

Pre-registration for:  
*Perceiving Fact-Checks as Biased but Nevertheless Persuaded? Effects of Fact-Checking  
News Delivered by Partisan Media*

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**Data Deposition Statement**

All pre-registrations and data files will be shared publicly on the Open Science Framework via <https://osf.io/ycrv9/>. Alterations to this plan are limited.

**Research Questions and Hypothesis**

(Persuasive effect)

**Hypothesis 1 (H1):** As a result of exposure to fact-checking news, prior attitude (or belief) on the issue would be changed toward the direction suggested by the fact-checking news.

**Hypothesis 2 (H2):** The effect of fact-checking news would be consistent regardless of whether the content of the news is counter-attitudinal or pro-attitudinal.

**Hypothesis 3 (H3):** The effect of the fact-checking news would be consistent regardless of the political slant of the news media.

(Perceived bias)

**Hypothesis 4a (H4a):** The perceived bias on fact-checking news would be varied by the content of the fact-checking news.

**Hypothesis 4b (H4b):** The perceived bias on fact-checking news would vary by the perceived political slant of partisan media.

**Hypothesis 5a (H5a):** Attitude-consistent fact-checking news content would be perceived as less biased, while counter-attitudinal content would be perceived to be more biased.

**Hypothesis 5b (H5b):** Fact-checking news by in-group source would be perceived to be less biased, while fact-checking news by out-group source would be perceived to be more biased.

**Hypothesis 6 (H6):** The intensity of bias perception on fact-checking news would be increased as the ideological strength of an individual increases.

## **Sample**

Data collection will take place after the pre-registration. The data will be collected via Qualtrics online survey, while recruitment will be done via Amazon Mturk. The target sample size ( $N$ ) is more than 847 participants. An a priori power analysis, using a small effect size ( $f = 0.1$ ,  $d = 0.2$ ) with 80% power ( $\alpha = 0.05$ ,  $\beta = 0.8$ , two-tailed), suggests that we will need approximately 67 participants per each combination of factors.

Participants will be randomly assigned to one of three conditions: (1) correction by liberal media (MSNBC), (2) correction by conservative media (FOX), and (3) correction by neutral media (Reuters). A block-randomization would be used, randomly assigning treatment materials in each partisan group (Democrats, Republicans, and Independent). Fully crossed with one's ideological self-placement (liberal, conservative, and independent) and the valence of the misinformation treatment (pro- vs. counter-attitudinal misinformation), this creates a total of 18 treatment regimes. This requires us to recruit a minimum of 1,206 effective samples for this study. While prior studies generally indicate that online samples such as MTurk do not exhibit significant bias in terms of data quality (see, for instance, Buhrmester, Kwang, & Gosling, 2011; Coppock, Leeper, & Mullinix, 2018), considering a nontrivial degree of attenuation when recruiting participants via online survey, the final  $N$  we are targeting ( $N = 1500$ ) is a little higher than this required sample size.

## **Analytic Plan**

We will use linear models (OLS with robust standard errors) to analyze the effect of fact-check treatment on degree of agreement and on factual belief, as well as on bias perception regarding fact-check articles and fact-checkers. In these models, we will include a set of control variables based on the reading of previous studies, as well as other sets of control variables that are reasonably expected to be related to the focal dependent variables (see below for measurement details).

## **Treatment material**

### *Immigration issue*

(Democrats-consistent misinformation)

In his first presidential news conference, president Joe Biden said the following:

“Truth of the matter is nothing has changed. As many people came — 28% increase in children to the border in my administration; 31% in the last year in 2019, before the pandemic — in the Trump administration. It happens every single solitary year. There is a significant increase in the number of people coming to the border in the winter months of January, February, March. It happens every year.”

(Republican-consistent misinformation)

Arizona Gov. Doug Ducey in an interview with ABC News' "This Week," said the following:

Ducey, a Republican, said there has been a "460% spike in illegal apprehensions, over 100,000 people in custody," and blamed "the reverse of the Biden administration of the Trump policies, and it needs attention."

(Correction by partisan media or Reuter)

Elected to use articles from *Reuters.com* as a neutral one since previous studies indicate it is equally trusted by Republicans and Democrats as an objective news source (Budak, Goel, & Rao, 2016). *Fox News Channel (FNC)* was selected as conservative partisan media and *MSNBC* was selected as liberal partisan media.

In sum, there would be six groups crossing the content of fact-checking news (debunking Democrat-consistent vs. debunking Republican consistent) and political slant of news media (FNC vs. MSNBC vs. Reuter).

## **Outcome measures**

### ***Effect of fact-checking (repeated-measure)***

The effect of fact-checking news would be repeatedly measured (i.e., pre-exposure to the fact-checking and post-exposure to the fact-checking). The attitude and belief score would be simultaneously measured (Guess & Coppock, 2020).

### ***Attitude score (degree of agreement) (Both T1 and T2)***

1. How much do you agree with the statement or claim by President Joe Biden (or by Arizona Gov. Doug Ducey)?

- Strongly agree
- Generally agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Generally disagree
- Strongly disagree

2. How much are you certain about your answer to the prior question? (Only T1) (Li & Wagner, 2020)

- Very certain
- Somewhat certain
- Somewhat uncertain
- Very uncertain

***Factual belief score (Both T1 and T2)***

1. How much do you think that the given information or claim by President Joe Biden (or by Arizona Gov. Doug Ducey) is factually accurate?

- Very accurate
- Generally accurate
- Somewhat accurate
- Neither accurate nor inaccurate
- Somewhat not accurate
- Not very accurate
- Not at all accurate

2. How much are you certain about your answer to the prior question? (Only T1) (Li & Wagner, 2020)

- Very certain
- Somewhat certain
- Somewhat uncertain
- Very uncertain

***Bias perception (Only T2)***

To measure the perceived bias, we would use the four questions, adapted from previous research on hostile media effect (Gunther & Schmitt, 2004).

Q1. The **content** of the fact-checking news in the article was strictly neutral, or was it biased in favor of conservative or liberal?

-5 (strongly biased favorable toward liberal) to +5 (strongly biased favorable toward conservative), with 0 (strictly neutral) at midpoint.

Q2. The **fact checker** responsible for the article was strictly neutral, or was he biased in favor of conservative or liberal?

-5 (strongly biased favorable toward liberal) to +5 (strongly biased favorable toward conservative), with 0 (strictly neutral) at midpoint.

Q3 and Q4 are also coded in 11-points scales. The overall direction of perceived bias score would be constructed by averaging all the items, while the intensity of perceived bias would be constructed by converting the score to an absolute value ranging from 0 to 5.

## **Pre-treatment measures**

### ***Party affiliation***

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”]

Would you call yourself a strong Democrat or not very strong Democrat?

- Strong Democrat
- Not very strong Democrat

[if “Republican”]

Would you call yourself a strong Republican or not very strong Republican?

- Strong Republican
- Not very strong Republican

[if “Independent” or “Something else”]

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

### ***Prior attitude on the immigration issue***

***(Immigration opposition policy scale; Valentino, Brader, & Jardina, 2012)***

Please indicate your agreement or disagreement with the following statements.

1. The number of immigrants from foreign countries who are permitted to come to the United States should be increased, decreased or kept about the same.

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

2. Immigrants should only be allowed to take jobs that cannot be filled by American workers.

- Agree to the statement
- Disagree to the statement

3. Immigrants should be allowed to receive government benefits like Social Security and Medicaid.

- Agree to the statement
- Disagree to the statement

***General Political Knowledge (5 questions; Carpini & Keeter, 1993)***

Now we have a set of questions about politics. Many people do not know the answer to these questions. If you do not know the answer to some of these questions, please feel free to leave them blank or select "Don't know."

1. Do you happen to know what job or political office is now held by Kamala Harris?

- President
- Vice president (correct)
- Attorney General
- Speaker of the House
- Don't know

2. Whose responsibility is it to determine if a law is constitutional or not ... is it the president, the Congress, or the Supreme Court?

- President
- Congress
- Supreme court (correct)
- Don't know

3. How much of a majority is required for the U.S. Senate and House to override a presidential veto?

- Two thirds (correct)
- One-third
- Half
- Don't know

4. Do you happen to know which party has the most members in the United States House of Representatives?

- Democratic (correct)
- Republican
- Don't know

5. Which one of the parties would you say is more conservative on the national level?

- Democratic
- Republican (correct)
- Green
- Libertarian
- Don't know

***Knowledge on immigration issue (5 questions: Council on Foreign Relations)***

Next are some questions to help us see how much information about politics gets out to the public. 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.

*(from the quiz by Council on Foreign Relations)*

url: <https://www.cfr.org/quiz/see-how-much-you-know-about-immigration-united-states/>

1. Immigrants make up approximately 13 percent of the U.S. population? (True)

*(Pew Research Center)*

url: <https://www.pewresearch.org/fact-tank/2020/08/20/key-findings-about-u-s-immigrants/>

2. China is the top birthplaces for immigrants in the U.S. (False: Mexico)
3. Among new immigrant arrivals, Asians outnumber Hispanics (True)

*(Washington Post)*

URL: [Do Americans understand immigration? Here's a pop quiz to test your knowledge. - The Washington Post](#)

4. Most of the families and children detained at the U.S. southern border are illegal immigrants (False)
5. Parents from Mexico and Central America are wrong to bring their children to the U.S. southern border (False)

***Media Trust (5 questions; Strömbäck et al., 2020)***

1. The U.S. news media are fair when covering the news.
  - Strongly agree
  - Agree
  - Somewhat agree
  - Neither agree nor disagree
  - Somewhat disagree

- Disagree
  - Strongly disagree
2. The U.S. news media are unbiased when covering the news
- Strongly agree
  - Agree
  - Somewhat agree
  - Neither agree nor disagree
  - Somewhat disagree
  - Disagree
  - Strongly disagree
3. The U.S. news media tell the whole story when covering the news
- Strongly agree
  - Agree
  - Somewhat agree
  - Neither agree nor disagree
  - Somewhat disagree
  - Disagree
  - Strongly disagree
4. The U.S. news media are accurate when covering the news
- Strongly agree
  - Agree
  - Somewhat agree
  - Neither agree nor disagree
  - Somewhat disagree
  - Disagree
  - Strongly disagree
5. The U.S. news media separate facts from opinions when covering the news.
- Strongly agree
  - Agree
  - Somewhat agree
  - Neither agree nor disagree
  - Somewhat disagree
  - Disagree
  - Strongly disagree

***Involvement (2 questions)***

1. How much important is the illegal immigration issue to you personally?
- Extremely important



- Very important
- Moderately important
- Slightly important
- Not at all important

2. How much are you interested in the illegal immigration issue in general?

- Extremely interested
- Very interested
- Moderately interested
- Slightly interested
- Not at all interested

***Political ideology (1 question)***

Generally speaking, in politics do you consider yourself as conservative, liberal, middle-of-the-road, or don't you think of yourself in these terms?

- Extremely Conservative
- Conservative
- Somewhat Conservative
- Middle of the Road
- Somewhat Liberal
- Liberal
- Extremely Liberal

***Demographics (5 questions)***

Please answer the following questions asking your general demographic information such as age, gender, race and income level.

1. How old are you?

- Under 18
- 18 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55 - 64
- 65 - 74
- 75 - 84
- 85 or older

2. What is your gender?

- Male
- Female

- Non-binary / third gender

3. What is your race? (Please check one or more answers)

- White
- Black or African American
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Other

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

- Less than high school
- High school graduate
- Some college
- 2 year degree
- 4 year degree
- Professional degree
- Doctorate

5. How much total combined income do all members of your household earn before taxes?

- Less than \$5,000 - \$5,000 to \$9,999 - \$10,000 to \$14,999 - \$15,000 to \$19,999
- \$20,000 to \$24,999 - \$25,000 to \$29,999 - \$30,000 to \$34,999 - \$35,000 to \$39,999
- \$40,000 to \$44,999 - \$45,000 to \$49,999 - \$50,000 to \$54,999 - \$55,000 to \$59,999
- \$60,000 to \$64,999 - \$65,000 to \$69,999 - \$70,000 to \$74,999 - \$75,000 to \$79,999
- \$80,000 to \$84,999 - \$85,000 to \$89,999 - \$90,000 to \$94,999 - \$95,000 to \$99,999
- \$100,000 to \$124,999 - \$125,000 to \$149,999 - More than \$150,000

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