

Supplementary Materials for
How Does Topical Diversity Affect Source Credibility?
Fact-Checking Coverage of Politics, Science, and Popular Culture

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1 Experimental Design

1.1 Experimental Stimuli

Participants were randomly assigned to one of the following five conditions:

- Baseline: Partisan politics only
- Treatment 1: Popular culture only
- Treatment 2: Science only
- Treatment 3: Partisan politics & popular culture
- Treatment 4: Partisan politics & science

Baseline: Partisan Politics Only

In Table S1, the headline items 1, 2, 4, and 5 cover the issues on which political elites of both political parties made misstatements (Wood and Porter 2019). Thus, it is plausible to attribute either party as the source of misstatements on each topic. Headline items 3 and 6 also adopt issues from Wood and Porter (2019), on which there existed partisan gaps in factual beliefs (solar power, defense spending). To avoid the list of headlines priming negativity, headlines 3 and 6 are presented as interrogative sentences without a reference to a political party. Following fact-checking practices, the headlines are either in the form of correcting misstatements or raising questions about factual controversies or confusions. The phrase and tone of the headlines are designed to be similar between [Items 1,2,3] and [Items 4,5,6].

Table S1: List of Headlines on Partisan Topics

Item	Topic	Headline
1	Black teenager pregnancy	What [Republicans/Democrats] get incorrect about the pregnancy rate among black teenagers
2	Gun homicide	[Republican/Democratic] Party offers misleading statistics on gun violence
3	Solar power employment	Are there more jobs in solar than oil in the US?
4	Abortion	What [Republicans/Democrats] get wrong about the number of abortions over time
5	Immigration	[Republican/Democratic] National Committee misrepresents the deportation rate of illegal immigrants
6	Defense spending	Has US defense spending decreased in recent years?

To ensure that the results do not hinge on the specific associations between topic and political party and the order of headlines, one of the two variations of topic-party associations (Table S2; Version 1 or Version 2) was randomly presented, and the order of headlines was randomized. Although randomizing party reference at the item level is another possibility, I choose this approach to keep the reference to political parties balanced in all conditions.

Table S2: Two Randomized Variations of the Baseline Condition

Version 1		Version 2	
1-R	What [Republicans] get incorrect about the pregnancy rate among black teenagers	1-D	What [Democrats] get incorrect about the pregnancy rate among black teenagers
2-D	[Democratic] Party offers misleading statistics on gun violence	2-R	[Republican] Party offers misleading statistics on gun violence
3	Are there more jobs in solar than oil in the US?	6	Has US defense spending decreased in recent years?
4-D	What [Democrats] get wrong about the number of abortions over time	4-R	What [Republicans] get wrong about the number of abortions over time
5-R	[Republican] National Committee misrepresents the deportation rate of illegal immigrants	5-D	[Democratic] National Committee misrepresents the deportation rate of illegal immigrants
6	Has US defense spending decreased in recent years?	3	Are there more jobs in solar than oil in the US?

Treatment 1: Popular Culture Only

In this condition, six headlines on popular culture issues were presented. Item (a) is adopted from an example of non-political fact-checking coverage introduced in (Graves 2016, p. 90), published by PolitiFact (Mariano 2011). Item (b) is adopted from Mutz (2007), whose experimental design employed sports as the topic for non-political news exposure, and a fact-check published by Snopes on home field advantage (Snopes 2019). Item (c) is based on LaMarre et al. (2014), whose experimental design used the story of cartoon characters (Tom and Jerry) for the non-political message condition, and a fact-check published by Snopes on the Disney character Goofy (Evon 2019). Items (d) and (e) are based on Yu (2016), whose study design employed entertainment issues such as food and movies for non-political news items, and a fact-check on food published by Snopes (Evon 2020) and an article on Netflix published by Snopes and AP News (AP News 2019).¹ Item (f) is based on Settle and Carlson (2019), whose experimental design selected Olympics as one of the non-political topics,² and

¹Snopes previously posted a fact-check “Netflix to Lose the Office Gain Seinfeld Starting in 2021” (<https://www.snopes.com/ap/2019/09/16/netflix-to-lose-the-office-gain-seinfeld-starting-in-2021/>, accessed on February 12, 2020), but as of 2023, the link automatically redirects to an article published by AP News.

²Settle and Carlson (2019)’s choice of non-political topics included the 2016 Emmy nominations, celebrities and body-image issues, the 2016 Olympics, Pokémon Go, and app-enabled transportation services like Uber and Lyft.

an article on Tokyo Olympics published by Snopes and AP News (AP News 2020).³ The order of headlines was randomized.

Table S3: List of Headlines on Popular Culture Topics

Item	Topic	Headline
a	Cultural figure	Atlanta’s celebrity groundhog, General Beauregard Lee, claims he predicts weather better than Punxsutawney Phil in Philadelphia – it’s mostly true according to meteorologists
b	Sports	What really causes home field advantage in sports – and why it’s on the decline
c	Cartoon	Claim that Disney’s Goofy character actually is a cow lacks evidence
d	Food	Map of America’s favorite restaurants goes viral – but it’s mostly inaccurate
e	Movie	Which movies and shows is Netflix losing versus gaining this year?
f	Sports	What we know about Tokyo Olympics – it will happen, but when?

Treatment 2: Science Only

In choosing scientific topics, I avoided issues where there exist strong partisan disagreements, such as climate change and fracking (Kahan 2015).⁴ In Table S4, the list covers less partisan scientific issues (Kahan 2015; Funk 2015), and headline wordings were adapted from articles published by sources such as SciCheck at FactCheck.org and Science category at Snopes.⁵ The topics included nanotechnology (a fact-check by Slate, Brogan 2016), use of artificial sweeteners in diet soft drink (a fact-check by Snopes, Kasprak 2018a), radio waves from cell phone (adopted from a fact-check published by Full Fact, Rahman 2019), physics/astronomy (a fact-check by AP News, Borenstein 2019), biology/genetics (a fact-check on the the genefics of dogs by Snopes, Kasprak 2016) and bioengineered artificial organs (a fact-check by Snopes, Kasprak 2018b). The order of headlines was randomized.

³Snopes previously posted a fact-check on “Tokyo Olympics Will Happen but Most Likely in 2021 Not 2020” (<https://www.snopes.com/ap/2020/03/23/tokyo-olympics-will-happen-but-most-likely-in-2021-not-2020/>, accessed on April 5, 2020), but as of 2023, the link automatically redirects to an article published by AP News.

⁴Scheufele and Krause (2019) suggest that people engage in partisan motivated reasoning to a similar extent for political issues and scientific issues surrounded by political disagreements, such as evolution, vaccine mandates, or stem cell research.

⁵A source with scientific fact-checks may resemble outlets such as Climate Central, Death Penalty Information Center, or SciCheck at FactCheck.org.

Table S4: List of Headlines on Scientific Topics

Item	Topic	Headline
a	Nanotechnology	Scientists debunk misunderstandings about nanotechnology
b	Artificial sweeteners	Does drinking one diet soda a day really increase the risk of dementia and strokes?
c	Radiation and mobile phone	Scientific reasons why mobile phone towers don't pose a radiation risk
d	Physics/astronomy	Study says universe is expanding faster and is younger than previously thought
e	Genetics/biology	Are dogs really 99.9% wolf, according to genetic analysis?
f	Bioengineered artificial organs	Study on the prospect of artificial kidneys soon replacing dialysis

Treatment 3: Partisan Politics & Popular Culture

Three headlines on partisan issues (from baseline condition) plus three headlines on popular culture (from Treatment 1) were presented. To ensure that the results do not hinge the specific composition of topics, three out of six popular culture headlines were randomly selected, in addition to one of the three partisan headlines—randomly selected among four sets (A-D) in Figure S1. The purpose of randomization across A-D was to ensure partisan balance in coverage of partisan topics (i.e., one headline challenging Democrats, one challenging Republicans, one interrogative headline without party reference). The order of headlines was randomized.

Figure S1: Randomized Sets of Headlines on Partisan Topics

1-R	What [Republicans] get incorrect about the pregnancy rate among black teenagers	1-D	What [Democrats] get incorrect about the pregnancy rate among black teenagers
2-D	[Democratic] Party off's misleading statistics on gun violence	2-R	[Republican] Party off's misleading statistics on gun violence
3	Are there more jobs in solar than oil in the US?	6	Has US defense spending decreased in recent years?
4-D	What [Democrats] get wrong about the number of abortions over time	4-R	What [Republicans] get wrong about the number of abortions over time
5-R	[Republican] National Committee misrepresents the deportation rate of illegal immigrants	5-D	[Democratic] National Committee misrepresents the deportation rate of illegal immigrants
6	Has US defense spending decreased in recent years?	3	Are there more jobs in solar than oil in the US?

Treatment 4: Partisan Politics & Science

Three headlines on partisan issues (from baseline condition) plus three headlines on scientific issues (from Treatment 3) were presented. Similar to Treatment 3, to ensure that the results do not hinge the specific composition of topics, three out of six scientific headlines were randomly selected, in addition to three partisan headlines—randomly selected among four sets (A-D in Figure S1). The order of headlines was randomized.

1.2 Topical Scope of Fact-checking Sites

Baseline condition (partisan only) reflects the typical coverage tendency of major U.S. fact-checking sites, such as FactCheck.org, PolitiFact, and Washington Post Fact Checker. To understand their topical scope, I collected data from the entire fact-checking articles published by FactCheck.org and Washington Post during the months of October 2016, June 2020, and September 2022 (Tables S5 - ??). This data collection focused on fact-checking articles (“fact-checks”) that provide assessments about claims made by specific entities (e.g., individual, group). Articles that were not typical fact-checks were excluded from the data collection (e.g., articles that explain a topic absent target figure/statement, a summary of previous fact-checks, video that summarizes a previously published fact-check, or quizzes about past fact-checks).

The following article-level information was collected:

- source: the name of the fact-checking site where the article was published
- date: publication date in the format of dd/mm/yy
- headline: title of the article.
- topic: the topic mainly addressed in the article. It can take entries such as, “immigration,” “debate,” “economy,” etc.
- partisan target: a binary variable that takes 1 if the fact-checked target is an individual or organization with partisan affiliation, 0 if otherwise

Table S5: List of Fact-checking Articles by FactCheck.org and Washington Post Fact Checker: October 2016

Source	Date	Headline	Topic	Partisan Target
FactCheck.org	10/03/16	Spinning Trump's Taxes	tax	1
FactCheck.org	10/03/16	Clinton on the Stump	multiple issues	1
FactCheck.org	10/04/16	To Be or Not to Be a Wolf	science	0
FactCheck.org	10/05/16	FactChecking the VP Debate	debate	1
FactCheck.org	10/06/16	Fired Over VA Wait Times	veterans	1
FactCheck.org	10/07/16	Trump Muddies Immigrant Voting Issue	immigration	1
FactCheck.org	10/10/16	FactChecking the Second Presidential Debate	debate	1
FactCheck.org	10/12/16	Trump Twists Facts on WikiLeaks	multiple issues	1
FactCheck.org	10/13/16	Trump's Misguided Debate Bias Claim	debate	1
FactCheck.org	10/14/16	Jolly, Trump Photos Are Fake	abortion	1
FactCheck.org	10/14/16	Trump Twists Facts on Murder Case	crime	1
FactCheck.org	10/14/16	Clinton's Auto Bailout Falsehood	economy	1
FactCheck.org	10/18/16	Pence's Unsupported Haiti Claim	disaster relief	1
FactCheck.org	10/19/16	Trump's Bogus Voter Fraud Claims	voter fraud	1
FactCheck.org	10/19/16	A Deal That Never Happened	Clinton emails	1
FactCheck.org	10/20/16	Clinton's Misleading Debt Claims	economy	1
FactCheck.org	10/20/16	FactChecking the Final Presidential Debate	debate	1
FactCheck.org	10/21/16	More Bogus Trumponomics	economy	1
FactCheck.org	10/24/16	Did the Pope Endorse Trump?	endorsement	0
FactCheck.org	10/24/16	More Bogus Voter Fraud from Trump	voter fraud	1
FactCheck.org	10/25/16	Clinton's Connection to FBI Official	Clinton emails	1
FactCheck.org	10/25/16	A False 'Corruption' Claim	corruption	1
FactCheck.org	10/26/16	Clinton and Nuclear Launch Times	defense	1
FactCheck.org	10/27/16	A False Attack on Toomey	banking	1
FactCheck.org	10/28/16	Democratic Deceptions	endorsement	1
FactCheck.org	10/28/16	Trump Wrong on Murder Rate	crime	1
FactCheck.org	10/28/16	Still Cherry-Picking Premiums	health care	1
FactCheck.org	10/31/16	Spinning the FBI Letter	Clinton emails	1
WaPo Fact Checker	10/03/16	Trump's claim that his hotel in D.C. is 'under budget, ahead of schedule'	economy	1
WaPo Fact Checker	10/04/16	Clinton, Kaine go too far in touting a nuclear deal with Russia	defense	1
WaPo Fact Checker	10/05/16	Fact-checking the vice-presidential debate between Kaine and Pence	debate	1
WaPo Fact Checker	10/06/16	Clinton, Kaine airbrush out inconvenient details about U.S. troop departure from Iraq	defense	1
WaPo Fact Checker	10/07/16	Neither Kaine nor Pence was 'absolutely' correct about Clinton emails and court-martial	debate	1
WaPo Fact Checker	10/09/16	Fact-checking the second Clinton-Trump presidential debate	debate	1
WaPo Fact Checker	10/11/16	Trump's claim about Canadians traveling to the United States for medical care	health care	1
WaPo Fact Checker	10/11/16	The facts about Hillary Clinton and the Kathy Shelton rape case	crime	1
WaPo Fact Checker	10/12/16	Trump's ridiculous claim that he won 'every poll' on the second presidential debate	debate	1
WaPo Fact Checker	10/12/16	'Whole bunch' of facts don't support Obama's claim that many VA bosses were fired over scandal	veterans	1
WaPo Fact Checker	10/13/16	Trump's false claim that Clinton 'lost' \$6 billion at the State Department	budget	1
WaPo Fact Checker	10/14/16	Trump flip-flops on whether women's sexual allegations should be believed	sexual assault	1
WaPo Fact Checker	10/17/16	Trump's claim that a Clinton-backed Haiti factory 'amounted to a massive sweatshop'	disaster relief	1
WaPo Fact Checker	10/18/16	Clinton's bogus claim that Trump didn't want to save the auto industry	economy	1
WaPo Fact Checker	10/19/16	Fact-checking two false claims by Trump alleging widespread voter fraud	voter fraud	1
WaPo Fact Checker	10/19/16	Trump's claim of 'collusion' by the FBI and State to make Hillary Clinton 'look less guilty'	clinton emails	1
WaPo Fact Checker	10/20/16	Fact-checking the third Clinton-Trump presidential debate	debate	1
WaPo Fact Checker	10/21/16	Trump's claim that the Islamic State 'is in 32 countries'	foreign relations	1
WaPo Fact Checker	10/21/16	Trump's claim tying violence at his rallies to the Clinton campaign	violence	1
WaPo Fact Checker	10/24/16	No, Eric Trump, 14 percent of noncitizens are not registered to vote	immigration	1
WaPo Fact Checker	10/24/16	Trump's claim that Clinton 'allowed thousands of criminal aliens to be released'	crime	1
WaPo Fact Checker	10/25/16	Abortion-rights advocates' claim that 'one in three women has had an abortion'	abortion	0
WaPo Fact Checker	10/25/16	Trump's mixed-up version of the latest Hillary Clinton email controversy	Clinton emails	1
WaPo Fact Checker	10/26/16	The facts behind Trump's repeated claim about Hillary Clinton's role in the Russian uranium deal	foreign relations	1
WaPo Fact Checker	10/27/16	Clinton campaign's claim that Trump 'says he'd deport 16 million people'	immigration	1
WaPo Fact Checker	10/28/16	Trump's claim that he predicted that Obamacare 'can't work'	health care	1
WaPo Fact Checker	10/30/16	Trump's bizarre claim that the Clinton email controversy is 'bigger than Watergate'	clinton emails	1

Table S6: List of Fact-checking Articles by FactCheck.org and Washington Post Fact Checker: June 2020

Source	Date	Headline	Topic	Partisan	Target
FactCheck.org	06/03/20	Post on Floyd Protests Uses Old Vandalism Photos	protest		0
FactCheck.org	06/04/20	The Semantics of 'Tear Gas' Versus 'Pepper Spray'	protest		1
FactCheck.org	06/04/20	Viral Posts Share Old, Edited White House Photo in Dark	protest		0
FactCheck.org	06/05/20	Trump Touts Strong Jobs Report, Flubs Some Facts	economy		1
FactCheck.org	06/05/20	Bricks Were Placed for Construction, Not to Incite Protesters	protest		0
FactCheck.org	06/05/20	LEGO Temporarily Halts Marketing, Not Sales, of Police Toy Sets	business		0
FactCheck.org	06/05/20	Meme Misrepresents Fauci's Position on Vaccine Trials	COVID		0
FactCheck.org	06/08/20	The Continuing 'Tear Gas' Debate	science		0
FactCheck.org	06/08/20	Video of Trump's 'Choke' Quote Refers to Political Rivals	violence		0
FactCheck.org	06/08/20	Nuremberg Code Addresses Experimentation, Not Vaccines	COVID		0
FactCheck.org	06/08/20	Does Vitamin D Protect Against COVID-19?	COVID		0
FactCheck.org	06/09/20	Trump Tweets Baseless Claims About Injured Buffalo Protester	protest		1
FactCheck.org	06/09/20	Statue in Lincoln Memorial Was Not Defaced by Protesters	protest		1
FactCheck.org	06/09/20	China Didn't Stop Virus 'Cold' Outside Wuhan	COVID		1
FactCheck.org	06/09/20	Posts Distort Facts on Floyd Pathologist's Role in Past Cases	violence		0
FactCheck.org	06/10/20	Misleading Ad Targets Biden on Fossil Fuels, Fracking	climate change		1
FactCheck.org	06/10/20	Trump's False Claim on Tijuana Coronavirus Cases	COVID		1
FactCheck.org	06/11/20	Trump Wrong on Crime Record	crime		1
FactCheck.org	06/12/20	Trump's Deceptive Ad on Biden and Defunding the Police	police		1
FactCheck.org	06/12/20	Colorado Vaccine Bill Includes Nonmedical Exemptions for Children	public health		1
FactCheck.org	06/12/20	Donations to Black Lives Matter Group Don't Go to DNC	protest		0
FactCheck.org	06/12/20	Unpacking WHO's Asymptomatic COVID-19 Transmission Comments	COVID		0
FactCheck.org	06/12/20	Bogus Claims of 'Crisis Actors' in Death of George Floyd	violence		0
FactCheck.org	06/16/20	Ahead of Trump Rally, Republicans Spin COVID-19 Metrics	COVID		1
FactCheck.org	06/16/20	Sarah Huckabee Sanders Did Not Post Conspiratorial Tweet	conspiracy		0
FactCheck.org	06/17/20	Biden on Economic Growth and Trump's Tax Cuts	tax		1
FactCheck.org	06/17/20	Trump Wrong on Obama-Biden Actions on Policing	violence		1
FactCheck.org	06/17/20	Pence's False Claims About Trump's Handling of Coronavirus	COVID		1
FactCheck.org	06/17/20	Facebook Post Repeats Flawed Claim on Wuhan Lab Funding	COVID		0
FactCheck.org	06/17/20	Meme Spreads Wrong Photo, Details in Floyd Criminal Case	violence		0
FactCheck.org	06/17/20	Conspiracy Theory on Floyd's Death Disproved by Footage	violence		0
FactCheck.org	06/18/20	Azar, Trump Mislead on FDA's Hydroxychloroquine Decision	COVID		1
FactCheck.org	06/19/20	Trump's Absentee vs. Mail-In Ballot Spin	election		1
FactCheck.org	06/19/20	Trump Campaign Didn't Advertise for 'MINORITY Actors' in Tulsa	election		0
FactCheck.org	06/19/20	Gifts of a Folded Flag Isn't 'Only For Fallen Veterans'	politician		0
FactCheck.org	06/22/20	Trump Inherited More Ventilators Than Have Been Distributed	public health		1
FactCheck.org	06/23/20	Viral Photo Misidentified as Trump Tulsa Crowd	politician		1
FactCheck.org	06/23/20	Posts Falsely Claim Wallace Mistook 'Automotive Belt for a Noose'	hate crime		0
FactCheck.org	06/24/20	Trump's Unsupported Claim About Opportunity Zone Investments	economy		1
FactCheck.org	06/24/20	Fake AOC Tweet Politicizes COVID-19 Business Restrictions	COVID		0
FactCheck.org	06/25/20	Trump Falsely Says COVID-19 Surge 'Only' Due to Testing, Misleads on Deaths	COVID		1
FactCheck.org	06/25/20	Trump's Shaky Warning About Counterfeit Mail-In Ballots	election		1
FactCheck.org	06/26/20	Biden Floats Baseless Election Conspiracy	election		1
FactCheck.org	06/26/20	Trump Falsely Claims Obama 'Destroyed' Maine Lobster Industry	economy		1
FactCheck.org	06/29/20	Wearing Face Mask During Pandemic Doesn't Affect Concealed Carry Permit	COVID		0
FactCheck.org	06/30/20	Painting of Children in Masks Isn't a 1994 Airport Mural	COVID		0
FactCheck.org	06/30/20	Meme Misrepresents Florida Surgeon General's Position on Face Masks	COVID		0
WaPo Fact Checker	06/02/20	Mitch McConnell got 'rich' the old-fashioned way	politician		1
WaPo Fact Checker	06/03/20	White House targets protesters with misleading video	protest		1
WaPo Fact Checker	06/03/20	Donald Trump, friend of 'all' peaceful protesters?	protest		1
WaPo Fact Checker	06/04/20	How specific were Biden's recommendations on the coronavirus?	COVID		1
WaPo Fact Checker	06/05/20	Trump's claim that he's done more for black Americans than any president since Lincoln	race		1
WaPo Fact Checker	06/08/20	William Barr's Four-Pinocchio claim that pepper balls are 'not chemical'	protest		1
WaPo Fact Checker	06/09/20	Trump tweets outrageous conspiracy theory about injured Buffalo man	violence		1
WaPo Fact Checker	06/12/20	Joe Biden's shifting recollection on his civil rights activities	civil rights		1
WaPo Fact Checker	06/15/20	Democratic ad misleadingly attacks Susan Collins on the Paycheck Protection Program	economy		1
WaPo Fact Checker	06/16/20	Trump's zombie claim that he has invested \$2 trillion in the military	military		1
WaPo Fact Checker	06/17/20	Trump's false claim that Obama 'never even tried to fix' police brutality	violence		1
WaPo Fact Checker	06/18/20	Video evidence of anti-black discrimination in China over coronavirus fears	foreign country		0
WaPo Fact Checker	06/22/20	Who caused the violence at protests? It wasn't antifa.	protest		1
WaPo Fact Checker	06/24/20	Fact-checking the GOP's 'satirical' vote-by-mail video	election		1
WaPo Fact Checker	06/25/20	Trump keeps saying Obama left him 'no ventilators.' The number is 16,660.	public health		1
WaPo Fact Checker	06/26/20	Michael Flynn, Barack Obama and Trump's claims of 'treason'	national security		1
WaPo Fact Checker	06/29/20	Bottomless Pinocchio: Trump's claim that he will 'always' protect those with preexisting conditions	health care		1

Table S7: List of Fact-checking Articles by FactCheck.org and Washington Post Fact Checker: September 2022

Source	Date	Headline	Topic	Partisan	Target
FactCheck.org	09/02/22	Biden's Campaign-Style Distortions	COVID, health care, violence	1	
FactCheck.org	09/07/22	Trump Distorts Facts in Pennsylvania Rally	election	1	
FactCheck.org	09/07/22	Biden Hasn't Officially Filed for Reelection, Contrary to Social Media Claims	election	1	
FactCheck.org	09/09/22	Crist Ads Misrepresent DeSantis Statements on Abortion and Background Checks on Guns	abortion, gun control	1	
FactCheck.org	09/09/22	Florida GOP Attacks Crist with Misleading Claims About the IRS and Police	crime	1	
FactCheck.org	09/14/22	Herschel Walker Cites Outdated Crime Figures in False Attack on Raphael Warnock	crime	1	
FactCheck.org	09/14/22	Misleading Attack on Murkowski's Gun Vote	gun control	1	
FactCheck.org	09/15/22	Clinical Trials Show Ivermectin Does Not Benefit COVID-19 Patients, Contrary to Social Media Claims	COVID	0	
FactCheck.org	09/16/22	Viral Posts Spin Falsehood Out of Denmark's COVID-19 Booster Drive	foreign country	0	
FactCheck.org	09/19/22	Republican Talking Point Omits Key Details About Stimulus Payments to Inmates	economy	1	
FactCheck.org	09/19/22	GOP Ad Mischaracterizes Michigan Candidate's Response to 2020 Protests	protest	1	
FactCheck.org	09/20/22	Is the Pandemic 'Over'? Biden Says So, But Scientists Say That's Up for Debate	COVID	1	
FactCheck.org	09/22/22	Johnson's False Claim about Barnes' Tax Plan	tax	1	
FactCheck.org	09/22/22	NRSC's Misleading Attack on Warnock	election	1	
FactCheck.org	09/23/22	Q&A on Omicron-Updated COVID-19 Boosters	COVID	0	
FactCheck.org	09/23/22	Biden's Misleading Claims About the Economic Recovery and Unemployment	economy	1	
FactCheck.org	09/23/22	GOP Ads Use Outdated Federal Report to Attack Democrats on 'Higher Taxes'	tax	1	
FactCheck.org	09/26/22	Illinois Law Doesn't 'Eliminate All Restrictions on Abortions,' Contrary to Ad from Advocacy Group	abortion	1	
FactCheck.org	09/26/22	GM, Ford Vehicles Were Donated to Ukraine by Carmakers	economy	0	
FactCheck.org	09/27/22	Video Makes Baseless Claim About Insurance Coverage of Vaccinated Frenchman	COVID	0	
FactCheck.org	09/28/22	Posts Take Biden's Vaccination and Hurricane Prep Comments Out of Context, Again	COVID	1	
FactCheck.org	09/28/22	Everytown's Misleading Ad on Johnson's Votes 'Against Funding for the Police'	gun control	1	
FactCheck.org	09/29/22	COVID-19 Vaccine Opponents Misrepresent CDC Webcast on Causes of Blood Clots	COVID	0	
FactCheck.org	09/29/22	Biden's Misleading Boast on Medicare Premium Drop	health care	1	
FactCheck.org	09/30/22	Fetterman Ad Pushes Back on Crime	election	1	
FactCheck.org	09/30/22	Pro-Dixon Ad Uses 'Joke' About Drag Queens in a Misleading Attack on Whitmer	election	1	
WaPo Fact Checker	09/02/22	Biden's bungled talking point on the muzzle velocity of AR-15s	gun control	1	
WaPo Fact Checker	09/07/22	These Republicans cheered abortion policy going to states. They are also sponsoring a federal ban.	abortion	1	
WaPo Fact Checker	09/08/22	Hillary Clinton's claim that 'zero emails' were marked classified	election	1	
WaPo Fact Checker	09/10/22	The Lincoln Project falsely claims Trump has pocketed 'every dollar' he raised	election	1	
WaPo Fact Checker	09/13/22	Biden's flimsy claim he has the 'strongest' manufacturing jobs record	economy	1	
WaPo Fact Checker	09/22/22	The GOP claim that Democrats support abortion 'up to moment of birth'	abortion	1	
WaPo Fact Checker	09/23/22	Biden's unwarranted bragging about reducing the budget deficit	economy	1	
WaPo Fact Checker	09/27/22	The false claim that Senate Republicans 'plan to end Social Security and Medicare'	social security	1	
WaPo Fact Checker	09/29/22	Stacey Abrams's rhetorical twist on being an election denier	election	1	

In Tables S5-S7, each headline was considered having partisan target(s) if the corresponding fact-checking article covered claims made by individuals or groups with partisan affiliations. Each headline was considered as not having a partisan target if the claim fact-checked in the article was made by individuals or organizations that are not affiliated with either party. S8 presents the percentage of fact-checks with partisan targets out of all fact-checks per month.

Table S8: Count and Proportion of Fact-Checks by Targets: U.S. Fact-checkers

Source	Month/Year	Partisan	Non-partisan	Total	% (Partisan/Total)
FactCheck.org	Oct-16	26	2	28	92.6
	Jun-20	23	24	47	48.9
	Sep-22	20	6	26	76.9
Washington Post Fact Checker	Oct-16	26	1	27	96.3
	Jun-20	16	1	17	94.1
	Sep-22	9	0	9	100

Ferracioli, Kniess and Marques (2022) collected data on fact-checking articles published between 2017-2019 by Lupa (Brazil) and Pagella Politica (Italy). In Appendix E of Ferracioli, Kniess and Marques (2022), Tables 1 and 2 present the number of articles published by each outlet (row “Total”) by the type of fact-check targets. Based on these tables, Table S9 presents the number of fact-checks that target (1) Partisan Government (Incumbent party), (2) Partisan Opposition (Opposition party), or (3) Non-partisan (“Not applicable” in Appendix E of Ferracioli, Kniess and Marques 2022). Percentage of fact-checks with partisan targets is calculated based on the sum of “Partisan Government” and “Partisan Opposition” out of total fact-checks.

Table S9: Count and Proportion of Fact-Checks by Targets: Non-U.S. Fact-checkers

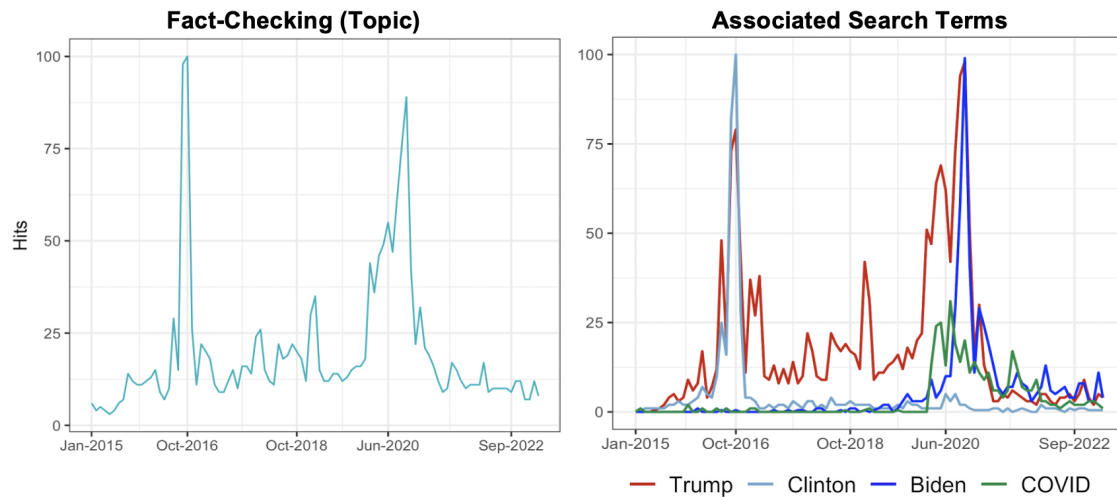
Source	Partisan Government	Partisan Opposition	Non-partisan	Total	%(Partisan/Total)
Lupa	555	959	155	1,669	90.7
Pagella Politica	207	305	67	579	88.4

Source: Ferracioli, Kniess and Marques (2022), Appendix E (Tables 1 and 2).

Figure S2 shows the relative search interest in fact-checking among the U.S. public between January 2015 and March 2023. The Google Trends data were retrieved using the R package ‘gtrendsR.’ The first plot shows the relative search interest in the topic “fact-checking” (encompassing search terms such as ‘fact-check,’ ‘fact checking,’ etc.). The peaks of public interest in fact-checking are found during presidential election periods. The second plot illustrates the relative search interest in the topic of fact-checking by associated search terms: Trump, Clinton, Biden, and COVID. The peaks of search interest in fact-checking associated with the presidential candidates overlap with the respective election seasons (Clinton and

Trump in fall 2016; Biden and Trump in fall 2020). Public search interest in fact-checking associated with COVID peaked in 2020, yet the relative degree of fact-checking interest in COVID was lower compared to fact-checking interest in presidential candidates. These trends imply that people strongly associate fact-checking with partisan figures and topics.

Figure S2: Search Interest in Fact-checking as a Topic and by Associated Search Terms



1.3 Manipulation Check

To assess how well participants perceived the key differences across experimental conditions, the following question was presented at the end of the survey:

“Thinking back to the headlines you were shown, which of the following topics did the headlines cover? (Choose all that apply)”

- Political topics (e.g., immigration, gun control) (1)
- Sports, entertainment, and lifestyle topics (2)
- Science and health topics (3)
- *The order of response choices was randomized.*

Following Hauser, Ellsworth and Gonzalez (2018), manipulation check was not placed between the treatment and outcome variables, in order to prevent unintended influence on observed outcomes. Instead, it was presented at the end of the survey. In analyzing the results, I did not drop respondents who failed manipulation check, because excluding them can bias the results, as Aronow, Baron and Pinson (2019) suggested.

Table S10 indicates that the key experimental manipulation in this study—topical scope of coverage—was effective. In all conditions, a majority of responses were consistent with the purpose of study design. In the baseline condition (partisan topics only), 68.3% of the

Table S10: Responses to Manipulation Check by Experimental Conditions

	Treatment Conditions					Total
	Partisan only (baseline)	Popular culture only	Science only	Partisan & Popular culture	Partisan & Science	
Politics	68.3	1.0	1.0	9.5	6.0	17.1
Pop Culture	0.5	76.0	0.5	5.0	0.0	16.4
Science	1.0	0.5	90.0	1.0	11.5	20.8
Pol, Pop	1.0	1.0	0.0	45.8	0.0	9.6
Pol, Sci	26.1	1.0	1.5	6.0	74.5	21.8
Pop, Sci	0.0	18.5	5.5	3.0	0.5	5.5
Pol, Pop, Sci	3.0	1.5	1.5	29.9	7.5	8.7
N/A	0.0	0.5	0.0	0.0	0.0	0.1
N	199	200	200	201	200	1,000

Note: Entries are the percentage of each response per experimental condition, except for the final row (“N”) that indicates the number of respondents. *Pol* = political topics; *Pop* = popular culture topics; *Sci* = scientific topics; Multiple responses were allowed.

respondents said they were given headlines on political topics. In Treatment 1 (popular culture topics only), 76.0% of respondents recalled they were given headlines on topics such as sports, entertainment, and lifestyle. Among those assigned to Treatment 2 (scientific topics only), 90.0% recalled that they were given headlines on topics such as science and health. In Treatment 3 (mixed coverage of partisan and popular culture topics), 75.7% chose a set of responses that included ‘partisan’ and ‘popular culture’ topics. In Treatment 4 (mixed coverage of partisan and scientific topics), 82.0% chose a set of responses that included ‘partisan’ and ‘scientific’ topics.

2 Distribution of Demographics across Experimental Conditions

Table S11: Distribution of Demographics by Experimental Conditions

	Experimental Conditions					Total (%)
	Partisan only (baseline)	Pop culture only	Science only	Partisan & Pop culture	Partisan & Science	
Age						
18-24	26.1	25.5	23.0	21.4	18.0	22.8
25-34	32.2	35.5	31.5	29.9	36.0	33.0
35-44	17.6	14.0	17.5	17.4	19.0	17.1
45-54	7.5	13.0	11.0	15.4	13.0	12.0
55-64	10.6	7.5	11.5	11.4	9.0	10.0
65-	6.0	4.5	5.5	4.5	5.0	5.1
Gender						
Female	53.8	54.8	52.0	53.7	50.5	53.0
Male	44.2	44.2	47.5	45.3	49.0	46.0
Self-identify	2.0	1.0	0.5	1.0	0.5	1.0
Education						
No college	42.2	40.5	38.5	40.8	34.5	39.3
College	57.8	59.5	61.5	59.2	65.5	60.7
Partisanship						
Democrat	49.7	50.5	50.0	50.2	49.5	50.0
Republican	50.3	49.5	50.0	49.8	50.5	50.0
N	199	200	200	201	200	1,000

Note: The entries are in percentage (%), except for the final row (“N”) that indicates the number of respondents.

3 Key Results in Tabular Form

Table S12: Treatment Effects of Topical Scope (Pooled Model)

Treatment (Base: Partisan only)	Perceived news credibility	Perceived shared interest	Perceived expertise
Rep	-0.06** (0.03)	-0.10*** (0.04)	-0.01 (0.03)
PopCul	-0.04 (0.03)	-0.13*** (0.03)	-0.12*** (0.03)
Science	0.09*** (0.03)	-0.01 (0.03)	0.03 (0.03)
Par/Pop	-0.05* (0.03)	-0.10*** (0.03)	-0.08*** (0.03)
Par/Sci	-0.02 (0.03)	-0.06* (0.03)	-0.02 (0.03)
PopCul x Rep	0.05 (0.04)	0.07 (0.05)	0.005 (0.05)
Science x Rep	-0.03 (0.04)	0.04 (0.05)	-0.03 (0.05)
Par/Pop x Rep	0.04 (0.04)	0.05 (0.05)	-0.002 (0.04)
Par/Sci x Rep	0.03 (0.04)	0.08 (0.05)	0.01 (0.04)
Constant	0.43*** (0.02)	0.48*** (0.02)	0.48*** (0.02)
N	1,000	1,000	1,000
Adjusted R ²	.04	.03	.04

Note: Entries are the ordinary least squares (OLS) regression coefficients with robust standard errors in parentheses. *Rep* = 1 if Republican, 0 if Democrat. *PopCul* = 1 if Treatment 1 (popular culture only), 0 otherwise. *Science* = 1 if Treatment 2 (science only), 0 otherwise. *Par/Pop* = 1 if Treatment 3 (partisan + popular culture), 0 otherwise. *Par/Sci* = 1 if Treatment 4 (partisan + science), 0 otherwise. All variables were coded to range from 0 to 1. * $p < .10$; ** $p < .05$; *** $p < .01$.

Table S13: Conditional Treatment Effects of Topical Scope by Partisan Identity

Treatment (Base: Partisan only)	Perceived news credibility		Perceived shared interest		Perceived expertise	
	Democrat	Republican	Democrat	Republican	Democrat	Republican
PopCul	-0.04 (0.03)	0.01 (0.03)	-0.13*** (0.03)	-0.06* (0.04)	-0.12*** (0.03)	-0.12*** (0.04)
Science	0.09*** (0.03)	0.06* (0.03)	-0.01 (0.03)	0.03 (0.04)	0.03 (0.03)	0.004 (0.03)
Par/Pop	-0.05* (0.03)	-0.01 (0.03)	-0.10*** (0.03)	-0.05 (0.04)	-0.08*** (0.03)	-0.08** (0.03)
Par/Sci	-0.02 (0.03)	0.01 (0.03)	-0.06* (0.03)	0.02 (0.04)	-0.02 (0.03)	-0.01 (0.03)
Constant	0.43*** (0.02)	0.37*** (0.02)	0.47*** (0.02)	0.38*** (0.03)	0.48*** (0.02)	0.47*** (0.03)
N	500	500	500	500	500	500
Adjusted R ²	.05	.01	.03	.01	.05	.03

Note: Entries are the ordinary least squares (OLS) regression coefficients with robust standard errors in parentheses. *Popcul* = 1 if Treatment 1 (popular culture only), 0 otherwise. *Science* = 1 if Treatment 2 (science only), 0 otherwise. *Par/Pop* = 1 if Treatment 3 (partisan + popular culture), 0 otherwise. *Par/Sci* = 1 if Treatment 4 (partisan + science), 0 otherwise. All variables were coded to range from 0 to 1. * $p < .10$; ** $p < .05$; *** $p < .01$.

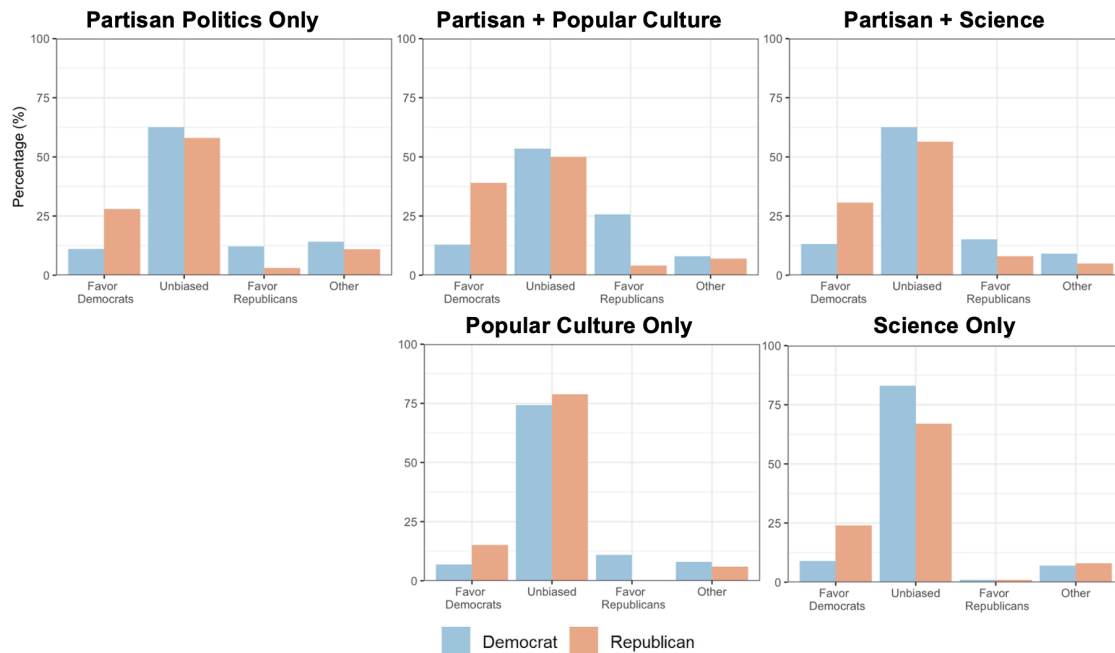
4 Additional Analyses

4.1 Perception of Source Bias

Source bias perception has been suggested as a potential third dimension of source credibility (Wallace, Wegener and Petty 2020). Thus, I additionally measured perceived source bias in the following way. Participants were asked to indicate whether they thought the website tended to be unbiased or biased when presenting information, using the following response options: “it is not biased,” “it is biased in favor of Republicans,” “it is biased in favor of Democrats,” and “other” (open-ended response).

In Figure S3, there are two interesting patterns. First, more people find a news source unbiased when it specializes in either popular culture or scientific topics (plots in the second row: “Popular Culture Only,” “Science only”), compared to when the coverage includes partisan topics (plots in the first row: “Partisan Politics Only,” “Partisan + Popular Culture,” “Partisan + Science”). When a source covers only popular culture topics, 74% of Democrats and 79% of Republicans assess it to be unbiased. When a source covers only scientific topics, 83% of Democrats and 67% of Republicans find it to be unbiased. In contrast, when the coverage included partisan topics, 53-63% Democrats and 50-58% of Republicans found the source to be unbiased. Among three topical scopes that include partisan topics, the mixed coverage of partisan and popular culture topics was least likely to be considered as unbiased.

Figure S3: Perceptions of Source Bias by Experimental Conditions



A second pattern is that the hostile media effect, the tendency to perceive balanced coverage or source to be biased in favor of the opposing party (Vallone, Ross and Lepper 1985), is likely to be stronger among Republicans than Democrats. In all three conditions with partisan topics (plots in the first row), respondents were presented with balanced coverage with the same number of headlines challenging each party. Still, greater proportions of Republicans (28-39%) perceived the source to be biased in favor of Democrats, compared to Democrats (12-26%) who perceived the source to be biased in favor of Republicans. Among three conditions with partisan topics, hostile media tendency was strongest for mixed coverage of partisan and popular culture topics.

4.2 Internal Reliability of Source Credibility Measures

As suggested in the preregistration, the items used to measure source credibility perceptions were analyzed for internal reliability. The scree plot analysis suggested three underlying factors (Figure S4; Cattell 1966). As shown in Table S14, the results of EFA indicate that the three factors explain 37%, 19% and 14% of the variance respectively. Each item loaded on theoretically relevant factors with strong loadings ($> .40$; Worthington and Whittaker 2006).

Figure S4: Scree Plot for Source Credibility Items

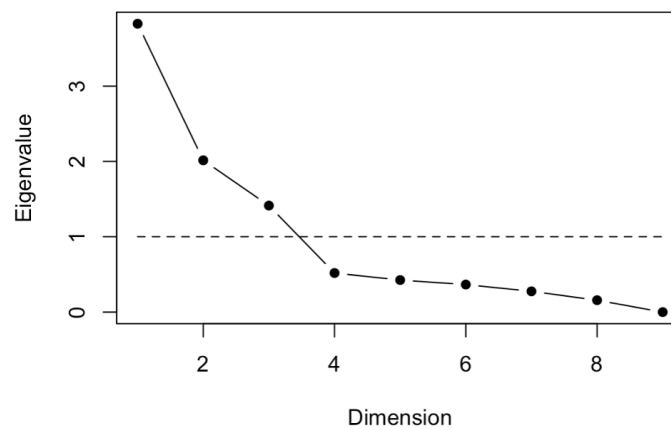


Table S14: Exploratory Factor Analysis of Source Credibility Items

Items	Factors		
	News credibility	Expertise	Shared interest
fair	0.87		
accurate	0.84		
unbiased	0.72		
tells the whole story	0.84		
can be trusted	0.78		
concerned about the public interest			1.04
watch out for your interests			0.41
well trained		0.90	
experienced		0.89	
Proportion variance explained	.37	.19	.14
Cronbach's α	.91	.90	.85

Note: Entries are non-standardized factor loadings. Factor loadings smaller than .40 are not displayed.

As shown in Table S15, confirmatory factor analysis indicates that the three-dimensional solution has acceptable model fit: RMSEA = .066, SRMR = .021, CFI = .985, TLI = .977

(recommended criteria for adequate fit are RMSEA and SRMR $\leq .08$, and CFI and TLI $\geq .90$; Bentler 1990; Brown 2015). All individual items meaningfully loaded on the relevant latent factor as well, with factor loadings ranging between .69 and .91.

Table S15: Confirmatory Factor Analysis of Source Credibility Items

		Factor loadings
News credibility		
	fair	0.85
	accurate	0.88
	unbiased	0.69
	tells the whole story	0.85
	can be trusted	0.88
Shared interest		
	concerned about the public interest	0.85
	watch out for your interests	0.87
Expertise		
	well trained	0.91
	experienced	0.90
CFA fit statistics		
	CFI	.985
	TLI	.977
	SRMR	.021
	RMSEA	.066
	$\chi^2(df)$	129.95 (24)
	N	1,000

Note: Factor loading entries are standardized loadings.

4.3 Within-Party Heterogeneous Treatment Effects

Studies suggest that parties are becoming internally divided (Groenendyk, Sances and Zhirkov 2020) and that the Make America Great Again (MAGA) Republicans hold distinct political opinions from old-school Republicans (Cooper et al. 2024). Considering that conservative politicians have criticized the integrity of the news media and fact-checking (e.g., Meeks 2020; Shepherd 2021), there is a chance that heterogeneous treatment effects may exist within partisan groups.

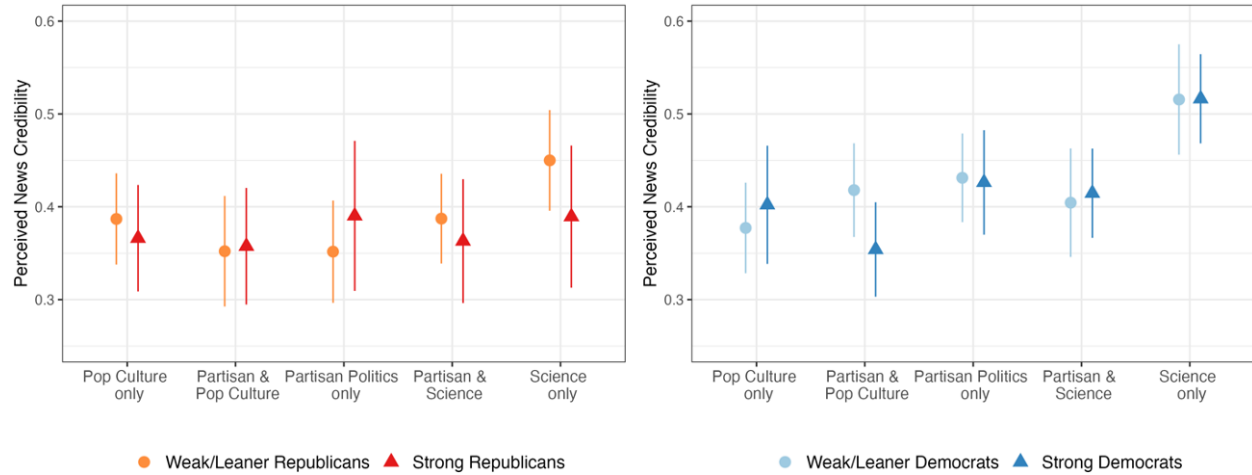
As a proxy of intraparty divisions,⁶ I used partisanship strength to identify strong Republicans ($n = 203$) versus weak or leaner Republicans ($n = 297$). I also subdivided Democrats into strong Democrats ($n = 287$) and weak or leaner Democrats ($n = 213$).

Figure S5 shows the levels of perceived news credibility by the strength of partisan identity. When the magnitude of treatment effects (baseline condition: Partisan Politics only)

⁶This study lacked a measure that can identify MAGA Republicans from old-school Republicans.

are compared, there was no statistically significant difference between strong and weaker (i.e., weak & leaner) partisans for all treatment conditions. When the levels of perceived news credibility are compared by partisanship strength, there was no statistically significant difference between strong and weaker partisans. The only exception was Democrats under the Partisan Politics & Popular Culture condition. Under this condition, weaker Democrats indicated a higher level of perceived news credibility than strong Democrats, with a statistically significant difference ($t = 1.75, p = .08$). Yet, even in this case, the difference in treatment effects between strong and weaker Democrats was not statistically significant ($t = -1.13, p = .26$). Overall, the current data suggest minimal differences in how strong and weaker partisans react to news sources that cover different topical scopes.

Figure S5: Perceived News Credibility by the Strength of Partisan Identity



Note: Means and 95% confidence intervals by experimental conditions. Perceived news credibility was coded to range from 0 to 1.

Yet, it should be noted that the subgroup analyses above lack statistical power (33-65 observations per cell, Table S16). Future research should employ a larger sample to draw more reliable inferences about heterogeneous treatment effects within partisan groups.

Table S16: Number of Observations by Experimental Conditions and Partisanship Strength

Experimental Condition	Republicans		Democrats	
	Weak/Leaner	Strong	Weak/Leaner	Strong
Partisan politics only	59	41	40	59
Pop culture only	65	34	55	46
Science only	67	33	45	55
Partisan + Pop culture	47	53	39	62
Partisan + Science	59	42	34	65
Total	297	203	213	287

5 Survey Recruitment and Questionnaire

5.1 Power Analysis

I conducted power analysis for the difference in means between two independent groups using the software G*Power (Faul et al. 2007; Perugini, Gallucci and Costantini 2018). To identify a sample size that will ensure enough power for treatment effects, I conducted power analysis based on an experiment conducted in a similar context—source credibility assessments based on news coverage (i.e., a list of headlines). The reference study estimated the effects of two different treatments (ingroup-adverse and outgroup-adverse asymmetric coverage), compared to baseline condition (symmetric coverage), among Democrats and Republicans respectively.

When calculating effect sizes (cohen's d) on the basis of my prior experiment, the sample sizes of control and treatment conditions were expected to be roughly the same ($N1 = N2$). Because there was little reason to believe that standard deviation (SD) would significantly differ across conditions, SDs for control and treatment conditions were assumed to be same as the pooled standard deviation of those conditions. The effect sizes ranged from .25 to .85. Assuming two-tailed t-tests, $\alpha = .05$, power $(1 - \beta) = .8$, and allocation ratio $N2/N1 = 1$, the sample size per condition was calculated as shown in Table S17.

Table S17: Sample size per condition from power analysis

Partisan identity	Treatment	Effect size (d)	Sample size per condition
Republicans	Ingroup-adverse asymmetry	• Effect size $d = .512$	61
		• Control mean (group 1) = 0.432	
	Outgroup-adverse asymmetry	• Treatment mean (group 2) = 0.306	70
		• SD1 = SD2 = 0.246	
Democrats	Ingroup-adverse asymmetry	• Effect size $d = .479$	23
		• Control mean (group 1) = 0.432	
	Outgroup-adverse asymmetry	• Treatment mean (group 2) = 0.328	253
		• SD1 = SD2 = 0.217	
	Ingroup-adverse asymmetry	• Effect size $d = .845$	23
		• Control mean (group 1) = 0.384	
	Outgroup-adverse asymmetry	• Treatment mean (group 2) = 0.209	253
		• SD1 = SD2 = 0.207	
	Ingroup-adverse asymmetry	• Effect size $d = .250$	253
		• Control mean (group 1) = 0.384	
	Outgroup-adverse asymmetry	• Treatment mean (group 2) = 0.330	253
		• SD1 = SD2 = 0.216	

To ensure enough power in all treatment effects of interest, my preregistration indicated that I would recruit 100 subjects per condition, with a total sample size of 1,000 (100 subjects per condition x 5 experimental conditions x 2 partisan groups). The fourth case in Table S17, outgroup-adverse asymmetry, was found to have heterogeneous effects by two different randomized contents, which reduced the overall effect size. Because I did not expect

heterogeneous treatment effects across randomized contents of each treatment in this study, I reasoned that 100 subjects per condition would ensure sufficient power based on three other treatment conditions.

5.2 Survey Administration

The study materials, data, and code are available at: <https://osf.io/nx3t6/>. At the beginning of the study, participants were given a consent form that described the study instrument (evaluating online news outlets, reading a set of headlines), ensured that their responses will be kept anonymous and that the study involved minimal risks. After the study, participants were told that the set of headlines they read did not appear on a single real website. Participants were paid \$1.3 for an 8-min survey, which was set to be higher than the minimum hourly wage at the time of the study. Out of three attention checks, 98.8% of Democrats (494 out of 500) and 99.2% of Republicans (496 out of 500) passed all three attention checks, implying that both groups were highly attentive to the survey. Following Berinsky, Margolis and Sances (2014), I included all respondents in the analyses.

5.3 Experimental Treatment

[Instructions]

Now, we'd like to show you some **headlines** from an online news outlet.

After reading the headlines, we will ask you some questions about how you **evaluate the website** that reported these news stories. We'd especially like to know how interesting and credible you find the news from this site.

* Once headlines are loaded and ready to display, **an arrow** (→) will appear below. Please click it to proceed.

[page break]

The headlines from the website are listed below. Please take a moment to read the entire list carefully.

When reading the headlines, please think about how you would **evaluate the website**:

- How **credible** (informative, accurate, etc.) does the website seem to you?
- How **interested** would you be in visiting this website and reading more about news stories like these?

Example screenshot of Baseline Condition:

What Republicans get incorrect about the pregnancy rate among black teenagers

Democratic Party offers misleading statistics on gun violence

Are there more jobs in solar than oil in the US?

What Democrats get wrong about the number of abortions over time

Republican National Committee misrepresents the deportation rate of illegal immigrants

Has US defense spending decreased in recent years?

* *PLEASE NOTE:* You **won't be able to refer back** to the headlines once you reach the next screen. So make sure to read the headlines carefully and think about your reactions to the website before you move on to the next screen.

5.4 Post-treatment Questions

[Perceived News Credibility] How well do you think each of the following describes the website?

The website...	Not at all (1)	A little (2)	Moderately (3)	Very (4)	Extremely (5)
Is fair (1)					
Is accurate (2)					
Is unbiased (3)					
Tells the whole story (4)					
Can be trusted (5)					

Note: The order of items was randomized across respondents.

[**Perceptions of Shared Interest / Expertise**] Based on the headlines you read, how well do you think each of the following describes **the reporters⁷ of the website?**

The reporters of the website...

	Not at all (1)	A little (2)	Moderately (3)	Very (4)	Extremely (5)
Are concerned about the public interest (1)					
Watch out for your interests (2)					
Are well trained (3)					
Are experienced (4)					

Note: The order of items was randomized across respondents.

[**Perceived source bias**] Do you think the website tends to be unbiased or biased when presenting information?

- It is not biased (1)
- It is biased in favor of Republicans (2)
- It is biased in favor of Democrats (3)
- Other (4) -----
- *The order between the second and third choices was randomized.*

[page break]

[**Manipulation Check**] Thinking back to the headlines you were shown, which of the following topics did the headlines cover? (Choose all that apply)

- Political topics (e.g., immigration, gun control) (1)
- Sports, entertainment, and lifestyle topics (2)
- Science and health topics (3)
- *The order of response choices was randomized.*

⁷This question pertains to reporters. Because a website is an inanimate object, it may be less reasonable to assess a website on the given items. Journalists are the ones who select topics and facts to report, are responsible for reporting the information accurately, and offer their assessment of the issue—thus consisting key components of news trust, according to Kohring and Matthes (2007).

6 Preregistration



CONFIDENTIAL - FOR PEER-REVIEW ONLY **Topic Scope and Source Credibility (February 2021) (#59501)**

Created: 02/26/2021 07:32 PM (PT)

This is an anonymized copy (without author names) of the pre-registration. It was created by the author(s) to use during peer-review.
A non-anonymized version (containing author names) should be made available by the authors when the work it supports is made public.

1) Have any data been collected for this study already?

No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?

This study examines how the scope of topics covered by a news source affects source credibility perceptions.

- 1) Mixing coverage of apolitical issues into the coverage of partisan issues will increase source credibility perceptions compared to when the source covers only partisan issues.
- 2) An exclusive coverage of apolitical issues will increase source credibility perceptions compared to mixed coverage of partisan and apolitical issues.
- 3) The extent to which the coverage of apolitical issues increases source credibility perceptions will be greater among Republicans than Democrats.
- 4) Mixing coverage of scientific issues into the coverage of partisan issues will increase source credibility perceptions compared to when the source covers only partisan issues.
- 5) An exclusive coverage of scientific issues will increase source credibility perceptions compared to mixed coverage of partisan and scientific issues.
- 6) The extent to which the coverage of scientific issues increases source credibility perceptions will be greater among Democrats than Republicans.

3) Describe the key dependent variable(s) specifying how they will be measured.

Source credibility perception will be measured by asking participants to indicate the degree to which they think the website [is fair / is accurate / is unbiased / tells the whole story / can be trusted] (1=not at all ~ 5=extremely). The primary measure of source credibility will be a composite measure of the items that load together in factor analysis.

4) How many and which conditions will participants be assigned to?

Participants will be randomly assigned to one of five conditions in which they are given a set of news headlines purported to come from a new source. The content of headlines will vary as follows:

- Condition 1: 6 items on partisan issues (2 Democrat-challenging, 2 Republican-challenging, 2 no party reference)
 Condition 2: 3 items on partisan issues (1 D-challenging, 1 R-challenging, 1 no party reference), 3 items on apolitical issues
 Condition 3: 6 items on apolitical issues
 Condition 4: 3 items on partisan issues (1 D-challenging, 1 R-challenging, 1 no party reference), 3 items on scientific issues
 Condition 5: 6 items on scientific issues

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.

The main analysis will examine the effects of topic scope in news coverage on perceived source credibility. The results will be analyzed by using the ordinary least squares (OLS) with robust standard errors, with the following model specification: Outcome = [constant] + dem + Cond_2 + Cond_3 + Cond_4 + Cond_5 + Cond2*dem + Cond3*dem + Cond4*dem + Cond5*dem (dem = 1 if Democrat, =0 if Republican; Cond_n = 1 if the subject is assigned to Condition n, =0 otherwise). For expositional clarity, I may present treatment effects estimated on different subsets of the data (e.g., Conditions 1, 2, 3 or Conditions 1, 4, 5).

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

Participants who do not identify themselves as either a Republican or a Democrat (e.g., pure independents) will be excluded.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.

The target sample size is 1000. Equal numbers of Republicans and Democrats will be recruited using the survey platform's prescreening data.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

This study will explore whether perceived source credibility is greater when a source specializes in science than in apolitical issues, and whether the coverage of non-partisan issues increases perceptions of shared interest and expertise, reduces source bias perceptions, and increases interest in reading articles and visiting the source. Other exploratory questions are whether the treatment effect of apolitical news coverage is greater than that of scientific news coverage, and whether the coverage of non-partisan news decreases unfavorable feelings toward journalists and out-party hostility. In conducting analyses, the results will be verified for robustness using GLM estimators when appropriate (e.g., ordered logit). To explore the latent structure and traits of source credibility, factor analysis will be used on the source credibility scale items and the items for perceived shared interest and expertise, which will be analyzed both individually and as composite scales based on factor analysis. For exploratory purposes, prior to the experimental stimuli, there will be questionnaires on the perceptions of news media and fact-checking websites and vote decision for the 2020 presidential election.

Version of AsPredicted Questions: 2.00

Available at https://aspredicted.org/MLL_499

Note: Public version of the preregistration is available at: <https://aspredicted.org/pk8h5.pdf>.

References

- AP News. 2019. “Yada Yada Yada: Netflix to Air ‘Seinfeld’ Starting in 2021.” *AP News*. <https://apnews.com/article/7dc2688300154d1ebe91de9f2ef2413d>.
- AP News. 2020. “Tokyo Olympics Seem Sure to Happen – But In 2021, Not 2020.” *AP News*. <https://apnews.com/article/health-ap-top-news-olympic-games-tokyo-virus-outbreak-b7b71576eddb82422929f19d7fb32f44>.
- Aronow, Peter M., Jonathon Baron and Lauren Pinson. 2019. “A Note on Dropping Experimental Subjects who Fail a Manipulation Check.” *Political Analysis* 27(4):572–589.
- Bentler, P. M. 1990. “Comparative Fit Indexes in Structural Models.” *Psychological Bulletin* 107(2):238–246.
- Berinsky, Adam J, Michele F Margolis and Michael W Sances. 2014. “Separating the shirkers from the workers? Making sure respondents pay attention on self-administered surveys.” *American journal of political science* 58(3):739–753.
- Borenstein, Seth. 2019. “New Study Says Universe Expanding Faster and Is Younger.” *AP News*. <https://apnews.com/article/fac50d45a19f4239848b1712cfd22c36>.
- Brogan, Jacob. 2016. “Small Misunderstandings.” *Slate*. <https://slate.com/technology/2016/09/six-myths-about-nanotechnology-debunked.html>.
- Brown, Timothy A. 2015. *Confirmatory Factor Analysis for Ppplied Research*. Methodology in the social sciences second edition. ed. New York: Guilford Publications.
- Cattell, Raymond B. 1966. “The Scree Test For The Number Of Factors.” *Multivariate Behavioral Research* 1(2):245–276.
- Cooper, Christopher A, Scott H Huffmon, H Gibbs Knotts and Seth C McKee. 2024. “Intraparty Republican Factionalism as Identity in the Modern American South.” *American Politics Research* 52(1):30–40.
- Evon, Dan. 2019. “Is Disney’s Goofy Character Actually a Cow?” *Snopes*. <https://www.snopes.com/fact-check/goofy-cow-or-dog/>.
- Evon, Dan. 2020. “Are These America’s Favorite Fast Food Restaurants?” *Snopes*. <https://www.snopes.com/fact-check/americas-favorite-fast-food/>.
- Faul, Franz, Edgar Erdfelder, Albert-Georg Lang and Axel Buchner. 2007. “G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences.” *Behavior research methods* 39(2):175–191.
- Ferracioli, Paulo, Andressa Buttire Kniess and Francisco Paulo Jamil Marques. 2022. “The Watchdog Role of Fact-Checkers in Different Media Systems.” *Digital Journalism* 10(5):717–737.

- Funk, Cary. 2015. "Chapter 1: Patterns Underlying Public Views About Science." *Pew Research Center Science & Society*. <https://www.pewresearch.org/science/2015/07/01/chapter-1-patterns-underlying-public-views-about-science/>.
- Graves, Lucas. 2016. *Deciding What's True The Rise of Political Fact-Checking in American Journalism*. New York, NY: Columbia University Press.
- Groenendyk, Eric, Michael W Sances and Kirill Zhirkov. 2020. "Intra party polarization in American politics." *The Journal of Politics* 82(4):1616–1620.
- Hauser, David J., Phoebe C. Ellsworth and Richard Gonzalez. 2018. "Are Manipulation Checks Necessary?" *Frontiers in Psychology* 9:1–10.
- Kahan, Dan M. 2015. "Climate-Science Communication and the Measurement Problem." *Political Psychology* 36(S1):1–43.
- Kasprak, Alex. 2016. "Are Dogs Really 99.9% Wolf?" *Snopes*. <https://www.snopes.com/fact-check/dogs-99-percent-wolf/>.
- Kasprak, Alex. 2018a. "Can Drinking One Diet Drink a Day Triple the Risk of Dementia and Strokes?" *Snopes*. <https://www.snopes.com/fact-check/one-diet-drink-risks/>.
- Kasprak, Alex. 2018b. "Will Bionic Kidneys Replace Dialysis by 2020?" *Snopes*. <https://www.snopes.com/news/2018/03/16/will-bionic-kidneys-replace-dialysis-by-2020/>.
- Kohring, Matthias and Jörg Matthes. 2007. "Trust in News Media: Development and Validation of a Multidimensional Scale." *Communication Research* 34(2):231–252.
- LaMarre, Heather L., Kristen D. Landreville, Dannagal Young and Nathan Gilkerson. 2014. "Humor Works in Funny Ways: Examining Satirical Tone as a Key Determinant in Political Humor Message Processing." *Mass Communication and Society* 17(3):400–423.
- Mariano, Willoughby. 2011. "Metro Atlanta Groundhog Boasts More Accuracy than Punxsutawney Phil." *PolitiFact*. <https://www.politifact.com/factchecks/2011/feb/04/general-beauregard-beau-lee/metro-atlanta-groundhog-boasts-more-accuracy-punxs/>.
- Meeks, Lindsey. 2020. "Defining the enemy: How Donald Trump frames the news media." *Journalism & Mass Communication Quarterly* 97(1):211–234.
- Mutz, Diana C. 2007. "Effects of "In-Your-Face" Television Discourse on Perceptions of a Legitimate Opposition." *American Political Science Review* 101(4):621–635.
- Perugini, Marco, Marcello Gallucci and Giulio Costantini. 2018. "A Practical Primer to Power Analysis for Simple Experimental Designs." *International Review of Social Psychology* 31(1).
- Rahman, Grace. 2019. "Mobile Phone Base Stations Like This Do Not Pose a Radiation Risk." *Full Fact*. <https://fullfact.org/online/5g-sign-not-official/>.

- Scheufele, Dietram A and Nicole M Krause. 2019. "Science Audiences, Misinformation, and Fake News." *Proceedings of the National Academy of Sciences* 116(16):7662–7669.
- Settle, Jaime E. and Taylor N. Carlson. 2019. "Opting Out of Political Discussions." *Political Communication* 36(3):476–496.
- Shepherd, Katie. 2021. "After Spreading False Claims, Michigan Republican Wants to Register, Fine Fact-checkers: 'You Better Be Right'." <https://www.washingtonpost.com/nation/2021/05/12/michigan-matt-maddock-fact-checkers/> (Accessed on March 29, 2022).
- Snopes. 2019. "What Really Causes Home Field Advantage – And Why It's on the Decline." *Snopes*. <https://www.snopes.com/news/2019/11/01/what-really-causes-home-field-advantage-and-why-its-on-the-decline/>.
- Vallone, Robert P., Lee Ross and Mark R. Lepper. 1985. "The Hostile Media Phenomenon: Biased Perception and Perceptions of Media Bias in Coverage of the Beirut Massacre." *Journal of Personality and Social Psychology* 49(3):577–585.
- Wallace, Laura E., Duane T. Wegener and Richard E. Petty. 2020. "When Sources Honestly Provide Their Biased Opinion: Bias as a Distinct Source Perception With Independent Effects on Credibility and Persuasion." *Personality and Social Psychology Bulletin* 46(3):439–453.
- Wood, Thomas and Ethan Porter. 2019. "The Elusive Backfire Effect: Mass Attitudes' Steadfast Factual Adherence." *Political Behavior* 41(1):135–163.
- Worthington, Roger L. and Tiffany A. Whittaker. 2006. "Scale Development Research: A Content Analysis and Recommendations for Best Practices." *The Counseling Psychologist* 34(6):806–838.
- Yu, Rebecca Ping. 2016. "The Relationship between Passive and Active Non-political Social Media Use and Political Expression on Facebook and Twitter." *Computers in Human Behavior* 58:413–420.