The effects of partisan framing on COVID-19 attitudes: Experimental evidence from early and late pandemic

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Abstract
Political polarization has dominated news coverage of Americans’ responses to the COVID-19 pandemic. In this research note, we report findings from two experimental studies, in which we present respondents with news stories about COVID-19 mitigation measures that emphasize partisan difference or accord. The stories present the same numeric facts about public opinion, but highlight either the partisan gap that existed at the time of the study, or the fact that large majorities of both Republicans and Democrats supported the measures at the time. Results from our first study, conducted late April 2020, show that a media frame drawing attention to shared concern across party lines produced a less polarized response to social-distancing restrictions than a frame that drew attention to partisan difference. Our findings suggest that the extensive media coverage about the red-blue divide in COVID-19 opinions reinforced partisan polarization. These results, however, did not replicate in a second study conducted much later in the pandemic. Qualitative data collected across the two studies demonstrate the degree to which polarization had rapidly become a dominant narrative in Americans’ thinking about COVID-19.

Keywords
Partisan polarization, COVID-19, public opinion, experiments

Partisan polarization has become a public health issue in the United States. Reactions to the COVID-19 pandemic are sharply divided along party lines. Gadarian et al. (2021) collected data on 38 indicators in March 2020, including health behaviors, attitudes, and policy views; they found partisan differences were “almost always substantively larger than those associated with salient differences in education and income” (7), and could not be explained by potential confounding factors like local variation in COVID-19 policy responses or death rates, or by news consumption. Cell phone data from March 2020 confirmed that Democrats were more likely to comply with Governors’ orders for state residents to stay at home during the early stage of the pandemic (Grossman et al., 2020). These patterns continued as the pandemic progressed, with studies repeatedly finding Democrats to be more concerned about COVID-19 and compliant with public health measures to combat it. In one large study of the mobility and social distancing behaviors of over 1.1 million Americans from April 2020 to September 2021, Clinton et al. (2021) find the data “point to an unequivocal conclusion: Partisanship is a far more important determinant of an individual’s response to the COVID-19 pandemic than the impact of COVID-19 in that individual’s local community” (6). These partisan divides have hampered the national effort to control the

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virus (Brunell and Maxwell 2020), and have had serious consequences for the health of Republicans (Gollwitzer et al., 2020).

Mass media picked up on pandemic polarization early and integrated it into an already dominant narrative of a divided America. Analyzing U.S. newspaper and televised network news from March to May 2020, Hart et al. found that by May 2020, “levels of politicization and polarization in newspaper coverage of COVID-19 meet or exceed levels found in coverage of global warming, which is one of the most polarizing issues in the public eye” (2020, 691).

Whether or not this media coverage exacerbated partisan differences is an open question. Coverage of polarization was already on the rise when the pandemic hit. Levendusky and Malhotra (2016) conducted a content analysis of newspapers in the early 2000s, finding that “mass media depict polarization as widespread, occurring across many issues, and accompanied by incivility and dislike of the opposition, not simply issue-based disagreement” (p. 286). The authors argue that people respond to this coverage by viewing the nation as more polarized and becoming more affectively polarized (disliking and distrusting the opposing party). Research conducted during the pandemic has shown that affective polarization leads individuals to politicize otherwise nonpartisan issues, viewing the national COVID-19 response through a partisan lens (Druckman et al., 2020).

Levendusky and Malhotra test the effect of a media polarization narrative. Their experimental stimulus is a news article that presents the electorate as divided, uncivil, and uncompromising, similar to the media election coverage they found in their content analysis. This affective polarization intervention increases affective polarization in their experiment, though it does not, in itself, polarize issue opinion. To the contrary, they find that it causes individuals to moderate their positions on issues such as immigration in an effort to distance themselves from incivility. Studies that focus on issue divides rather than incivility produce mixed results. For example, Ahler (2014) finds that attitudes become less polarized when people are informed that there is more cross-party agreement on an issue than they previously believed. Robison and Mullinix (2016) find no opinion change among partisans when news stories criticize polarization. In the face of this limited research and the emerging issues surrounding the pandemic, it is unknown whether media coverage about partisanship and COVID-19 contributed to the rapid polarization of opinion.

Context

At the time of our study, 36 states had implemented mandatory stay-at-home orders, but several of these orders were set to expire at the beginning of May (Moreland et al., 2020). Debates about when to reopen the economy were also making national news headlines. Over 6 million Americans applied for unemployment benefits in the last week of March, the highest number of initial claims since the previous record (695,000) in 1982. By the end of April, the nation’s unemployment rate had reached 14.7%, the largest month-to-month increase since the U.S. Bureau of Labor Statistics first began tracking unemployment data (January 1948). Trump’s promise to reopen fully by Easter was not met, but at an April 14th press briefing, he predicted that some states would be able to lift their restrictions by the end of the month. Dr. Fauci countered Trump’s pronouncement the next day, noting that a May 1 target was “a bit overly optimistic” for some parts of the country and that easing restrictions too soon could create new outbreaks.

Although there were partisan gaps in opinion about COVID-19 mitigation measures, compared to other major cleavages in American public opinion, the divides were actually relatively modest, with large majorities of Republicans and Democrats expressing support. The month prior to our study, Democrats were about 10 points more likely to favor school closures and limits on mass gatherings, but over 80% of Republicans also expressed support for these measures. In early April, a Fox News poll found that 86% of Democrats and 76% of Republicans favored a “national stay-in-place order for everyone except essential workers.” A poll conducted by YahooNews-YouGov on April 20th about support for social-distancing showed a 29-point gap between Republicans and Democrats, but even here the majority of Republicans (56%) said they were more worried about lifting restrictions too soon than about the economic impact. Media and academic attention tended to focus on the gaps rather than the agreement.

Data and design

We recruited subjects in late April 2020 through Amazon’s Mechanical Turk (MTurk) Marketplace. A total of 406 subjects completed the survey. We excluded 31 pure Independents (did not lean toward either party). Our analytical sample includes 375 self-identified Republicans (151) and Democrats (224). After they answered a short demographic questionnaire, we blocked respondents on partisanship and assigned them with equal probability to one of two conditions in which they read a short news vignette about partisan opinion on COVID-19, which either emphasized partisan agreement or polarization (reflected in brackets below). Importantly, both versions of the vignette reference partisan identity, and both quote the same, accurate numeric
information about opinion. At this point, early in the pandemic, partisan gaps were relatively small, but media coverage often emphasized the gap itself rather than its small size. The “facts” communicated in the story are the same; only the framing varies:

“[Concern over coronavirus in the U.S. reflects significant partisan differences./There is substantial concern about coronavirus in the U.S. across party lines.] In one recent poll, 88% of Republicans said they were concerned or very concerned about the coronavirus outbreak. [In contrast, / ] 98% of Democrats said they were concerned or very concerned about the outbreak.”

Post-treatment, subjects reported how concerned they were about a coronavirus outbreak in the United States (very concerned, somewhat concerned, not very concerned, not concerned at all), and whether they thought the decision to close schools and businesses, and to restrict the size of public gatherings was an appropriate response or harmful overreaction (appropriate response/overreaction). At the very end of the survey, we asked an open-ended question: “What would you say worries you the most about the coronavirus outbreak in the United States at this time?”

Results

Table 1 reports the results for both outcomes. Generic concern about the pandemic was unaffected. We find no statistically significant difference between conditions (Partisan/Bipartisan frame) on the partisan gap in concern about COVID-19 (columns 1 and 2). At this point in the pandemic, over 96% of Democrats in both conditions said they were “concerned” or “very concerned” about an outbreak; 91% of Republicans in the study said the same, but as with Democrats, the level of concern did not differ by treatment assignment. Public opinion surveys conducted around the same time as our study found that majorities of both Republicans and Democrats saw COVID-19 as a significant crisis. With concern relatively high for both partisan groups early in the pandemic, this null result could reflect a ceiling effect.

Table 1. Effect of media frames on partisan gap in COVID-19 opinions.

|                    | Concern about COVID-19 | Closures overreaction |
|--------------------|------------------------|-----------------------|
|                    | (1)                    | (2)                   | (3)               | (4)               |
| Partisan frame     | −0.169                 | −0.194                | −1.118*            | −1.160*           |
|                    | (0.276)                | (0.279)               | (0.594)           | (0.597)           |
| Republican         | −0.932***              | −0.915***             | 0.373             | 0.340             |
|                    | (0.295)                | (0.299)               | (0.446)           | (0.452)           |
| Partisan frame x Republican | 0.170                 | 0.172                 | 1.423*            | 1.465***          |
|                    | (0.419)                | (0.423)               | (0.739)           | (0.743)           |
| Age                | 0.012                  | 0.012                 | 0.007             |                   |
|                    | (0.010)                | (0.010)               |                   |                   |
| Non-Hispanic white | 0.183                  | 0.183                 | −0.112            |                   |
|                    | (0.224)                | (0.224)               |                   |                   |
| Female             | 0.243                  | 0.243                 | −0.045            |                   |
|                    | (0.227)                | (0.227)               |                   |                   |
| College graduate   | −0.104                 | −0.104                | 0.196             |                   |
|                    | (0.252)                | (0.252)               |                   |                   |
| Income             | −0.016                 | −0.016                | −0.047            |                   |
|                    | (0.033)                | (0.033)               |                   |                   |
| Constant           | −4.814***              | −4.400***             | −2.150***         | −2.091***         |
|                    | (0.486)                | (0.681)               | (0.305)           | (0.828)           |
| Cutpoint 1         | −3.324***              | −2.911***             |                   |                   |
|                    | (0.288)                | (0.558)               |                   |                   |
| Cutpoint 3         | −0.682***              | −0.250                |                   |                   |
|                    | (0.195)                | (0.520)               |                   |                   |
| N                  | 375                    | 375                   | 375               | 375               |

Note: ***p<.01, **p<.05, *p<.10. Because concern is an ordinal measure and overreaction is binary, estimates are for an ordered logit in columns 1–2 and logit in columns 3–4.
However, we do observe a large and statistically significant difference between conditions in partisan support for measures to mitigate the spread of COVID-19: school and business closures and limits on mass gatherings. The interaction between treatment assignment and partisanship is positive and statistically significant (columns 3 and 4 of Table 1). Compared to those assigned to the vignette that emphasized polarization, Democrats shown the vignette that emphasized partisan similarity became less supportive of these measures, while Republicans became more supportive, effectively closing the partisan gap.

Figure 1 visualizes the partisan gap by treatment condition. Democrats in the partisan condition were about 7 percentage points less likely than Democrats in the bipartisan condition to say these measures are an overreaction ($p < .05$). Republicans in the partisan condition were about 4 percentage points more likely than Republicans in the bipartisan condition to say these measures are an overreaction, though with a smaller number of Republicans in our sample, this difference is not statistically significant. These findings suggest that early media narratives focusing on partisan differences about COVID-19 may have helped reinforce polarization and may have even contributed to its increase. Indeed, Republicans and Democrats expressed nearly identical support for mitigation measures in the media frame condition emphasizing partisan agreement. We note that some of that reduction comes from Democrats expressing more skepticism about mitigation measures, not only from Republicans growing more supportive.

Study 2

This first study was fielded soon after the outbreak of the pandemic in the United States. It did not include a control condition, and thus we are unable to test whether the polarization frame widened the partisan gap in COVID-19 opinions or if the media frame that emphasized partisan agreement decreased it. We conducted a second study in September 2021 to address this concern, and to test whether additional polarization media frames would continue to affect opinion in the late pandemic, once polarization had become one of the dominant narratives associated with COVID-19. Our second study included a control group. This study’s desired sample size, hypotheses, and planned analyses were preregistered (https://aspredicted.org/R7J_5N8) prior to any data being collected. Although it was our intent to replicate our first experiment as closely as possible, real-world conditions had changed dramatically in the 17 months since our first study. Partisan gaps in opinion on the coronavirus pandemic had widened into a chasm. As the Pew Research Center noted in April 2021: “the biggest takeaway about U.S. public opinion in the first year of the coronavirus outbreak may be the extent to which the decidedly nonpartisan virus met with an increasingly partisan response.”

Real-world conditions necessitated other changes to our design as the country was no longer considering lockdowns, but mask requirements and vaccine mandates. Given deep polarization about COVID-19 at the time of our second study, we were unable to find any pandemic-related government policy decisions on which we could credibly claim there was partisan agreement. We return to this concern in the discussion. We eventually selected support for college and university vaccine requirements. While there was a partisan gap, majorities of both Republicans and Democrats supported the right of higher education institutions to mandate vaccines.

We recruited 567 participants on MTurk and block randomized partisans (397 Democrats and 170 Republicans) with equal probability to one of three conditions. Those in the control group answered post-treatment questions only. Subjects in the other two conditions read a short vignette emphasizing partisan difference or similarity in support of college vaccination mandates (full text in the Supplemental appendix).

Unlike our first study, there were no statistically significant differences across treatment conditions. Although the partisan gap was largest in the polarization condition (about one standard deviation), it was not significantly different from the partisan gap in either the control or bipartisan conditions (means and standard errors provided in the supplemental appendix). There are several possible explanations for this null result, but based on national public opinion data in the late pandemic and qualitative data from both of our experiments, we think it is likely that opinion on the pandemic had become firmly polarized by the second
Discussion

Early in the pandemic, we observed a single, simple media framing treatment affecting the size of the partisan gap in public opinion. By September 2021, we no longer observed this effect. The qualitative data we collected across two studies, from early and late in the COVID-19 pandemic demonstrates the degree to which polarization had rapidly become a dominant narrative in Americans’ thinking about COVID-19. In both studies, we asked subjects to write about their biggest worries about the coronavirus outbreak. We observe stark differences between our first and second studies. In our first study, subjects focused nearly universally on death, safety, and the economy, and only one subject (who was assigned to the treatment condition emphasizing the partisan divide) mentioned political division in their open-ended response. In this first study, 8% expressed disagreement with how other Americans responded to the pandemic within their answers, primarily others’ non-compliance with stay-at-home orders.

In contrast, by September 2021, political polarization was widespread and highly salient. In the replication study, 5% of subjects assigned to the control group cited political division and polarization as their primary concern about the pandemic, with comments such as, “what worries me most is the wedge this has driven in between the people of America. We hate each other’s views so much right now and it is only getting worse.” Others expressed worries “about the division that the disease is causing between the people of the United States,” and, “the way it seems to divide people and make people mean to each other.” Rather than death and economic security, one in five subjects in the control group cited other people with whom they disagreed as their primary concern about the pandemic, with often politically charged responses such as, “the idiots who think their personal freedom trumps the safety of others,” and “that people will never allow us to get back to normal and that they are overly scared of something that’s been blown out of proportion.” One subject simply wrote that the primary concern about the pandemic was, “Republicans.”

Our results, taken together, indicate that in the face of an emerging, as yet unpolarized issue, media narratives focused on partisan difference about COVID-19 reinforce the divide and may cause it to grow. But when news emphasizes partisan accord, opinion follows, and grows less polarized. Once polarization has taken hold, these media narratives may have less of an effect (see also Druckman et al., 2013). This study contributes to the small but growing academic literature on effects of media polarization frames; in this case, they do induce opinion change under certain conditions. Hart et al., in the conclusion to their recent article on the growth and timing of media polarization on the pandemic, write that, “it is likely that media coverage is contributing to the polarization of public attitudes, although experimental work examining how varying exposure to politicized and polarized COVID-19 news coverage influences public views is needed to confirm this” (2020, 692). Our research takes advantage of the fleeting window of unpolarized opinion at the start of the pandemic to contribute to this effort.

In terms of the national response to the pandemic, partisan divides in the US are large and consequential, but as new concerns and choices emerge, there are often moments of partisan agreement. The Biden administration’s recent efforts to elicit a “rally around the flag” response to the pandemic and stress bipartisan support for school openings may be an effective tactic for reducing polarization. And although there are strong incentives for the news media to emphasize conflict over consensus, we do observe coverage that lessens the focus on polarization. Indeed, majorities of Republicans and Democrats in the United have received at least one dose of a COVID-19 vaccine (Kirzinger et al., 2021) and public health efforts may be better directed at addressing the low levels of institutional trust that underpin vaccine hesitancy across groups (Sreedhar and Gopal 2021). Other research finds that hesitancy falls among unvaccinated Republicans who hear Republican elites endorse the vaccine (Pink et al., 2021) and that COVID-19 policies are more popular when they are proposed by nonpartisan experts and bipartisan coalitions than partisan elites (Flores et al., 2022). Politicized and polarized news coverage likely undermines these strategies.

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Consent to participate

This study received approval from the Marquette University Human Subjects Committee under IRB protocol no. HR-2760.

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Supplemental Material

Supplemental material for this article is available online.

Notes

1. See https://www.bls.gov/opub/ted/2020/unemployment-rate-rises-to-record-high-14-point-7-percent-in-april-2020.htm [Last accessed 17 May 2021].
2. See https://apnews.com/article/virus-outbreak-donald-trump-app-top-news-infectious-diseases-politics-46ee40035d500c41904-89aee0ab126b [Last accessed 17 May 2021].

3. See https://www.politifact.com/article/2020/apr/22/large-majorities-americans-support-keeping-stay-ho/ [Last accessed 17 May 2021].

4. MTurk samples differ in composition from national probability samples; however, replication of the Levendusky and Malhotra (2016) experiment by Coppock (2019) demonstrates that these differences do not interact meaningfully with the sort of experimental stimuli we employ. Results from similar studies of polarization frames and attitude change replicate well, leaving us confident in the validity of our results.

5. To control the quality of the sample, we discarded duplicate IP addresses and accepted US residents with acceptance rates of 95% or higher. We analyzed the open-ended responses as an attention check. They gave us confidence in the attention and quality of the sample; 96% of the sample wrote detailed answers about health, financial, and personal worries; four percent wrote one-word responses like “no” “NA” or “ok; “ only two respondents typed nonsense.

6. We provide balance tests and descriptive statistics in the supplemental appendix.

7. https://www.pewresearch.org/2021/03/05/a-year-of-u-s-public-opinion-on-the-coronavirus-pandemic/

8. https://www.pewresearch.org/2021/03/05/a-year-of-u-s-public-opinion-on-the-coronavirus-pandemic/

9. See https://www.ipsos.com/sites/default/files/ct/news/documents/2021-08/Topline%20USA%20Today%20Covid%20common%20good%20poll%20081821.pdf [Last accessed 3 December 2021].

10. As before, we exclude duplicate IP addresses. We provide balance statistics in the supplemental appendix; there were no statistically significant partisan or demographic differences in assignment to treatment.

11. For example, in the midst of the fourth wave of the pandemic driven by the Delta variant, USA Today ran the headline: “No vaccination? Americans back tough rules and mask mandates to protect the common good.” https://www.usatoday.com/story/news/nation/2021/08/22/americans-back-mask-covid-vaccine-mandate-protect-common-good/8134392002/ [Last accessed 3 December 2021].

Coppock A (2019) Generalizing from survey experiments conducted on mechanical turk: A replication approach. *Political Science Research and Methods* 7(3): 613–628.

Druckman JN, Peterson E and Slothuus R (2013) How elite partisan polarization affects public opinion formation. *American Political Science Review* 107(1): 57–79.

Druckman JN, Klar S, Kruptnikov Y, et al. (2020) How affective polarization shapes Americans’ political beliefs: A study of response to the COVID-19 pandemic. *Journal of Experimental Political Science* 8(3): 223–234.

Flores A, Cole JC, Dickert S, et al. (2022) Politicians polarize and experts depolarize public support for COVID-19 management policies across countries. *Proceedings of the National Academy of Sciences* 119(3): e2117543119.

Gadarian SK, Goodman SW and Pepinsky TB (2021) Partisanship, health behavior, and policy attitudes in the early stages of the COVID-19 pandemic. *Plos One* 16(4): e0249596.

Gollwitzer A, Martel C, Brady WJ, et al. (2020) Partisan differences in physical distancing are linked to health outcomes during the COVID-19 pandemic. *Nature Human Behaviour* 4(11): 1186–1197.

Grossman G, Kim S, Reger JM, et al. (2020) Political partisanship influences behavioral responses to governors’ recommendations for COVID-19 prevention in the United States. *Proceedings of the National Academy of Sciences* 117(39): 24144–24153.

Hart PS, Chinn S and Soroka S (2020) Polarization and polarization in COVID-19 news coverage. *Science Communication* 42(5): 679–697.

Kirzinger A, Aydrey K, Hamel L, et al. (2021) “KFF COVID-19 Vaccine Monitor: The Increasing Importance of Partisanship in Predicting COVID-19 Vaccination Status.” Oakland, CL: KFF. https://www.kff.org/coronavirus-covid-19/poll-finding/importance-of-partisanship-predicting-vaccination-status/ (accessed on 3 December 2021).

Levendusky M and Malhotra N (2016) Does media coverage of partisan polarization affect political attitudes? *Political Communication* 33(2): 283–301.

Moreland A, Herlihy C, Tynan MA, et al. (2020) Timing of state and territorial COVID-19 stay-at-home orders and changes in population movement—United States, March 1–May 31, 2020. *Morbidity and Mortality Weekly Report* 69(35): 1198.

Pink SL, Chu J, Druckman JN, et al. (2021) Elite party cues increase vaccination intentions among Republicans. *Proceedings of the National Academy of Sciences* 118(32): e2106559118. DOI: 10.1073/pnas.2106559118.

Robison J and Mullinix KJ (2016) Elite polarization and public opinion: How polarization is communicated and its effects. *Political Communication* 33(2): 261–282.

Sreedhar A and Gopal A (2021) *Behind low vaccination rates lurks a more profound social weakness*. New York, NY: New York Times. [December 3] https://www.nytimes.com/2021/12/03/opinion/vaccine-hesitancy-covid.html

**References**

Ahler DJ (2014) Self-fulfilling misperceptions of public polarization. *The Journal of Politics* 76(3): 607–620.

Brunell TL and Maxwells SP (2020) How partisanship affected public reaction to potential treatments for COVID-19. *World Medical & Health Policy* 12(4): 482–486.

Clinton J, Cohen J, Lapinski J, et al. (2021) Partisan pandemic: How partisanship and public health concerns affect individuals’ social mobility during COVID-19. *Science Advances* 7(2): eabd7204.