Research Article

Partisan polarization and resistance to elite messages: Results from survey experiments on social distancing

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Abstract: COVID-19 compelled government officials in the U.S. and elsewhere to institute social distancing policies, shuttering much of the economy. At a time of low trust and high polarization, Americans may only support such disruptive policies when recommended by same-party politicians. A related concern is that some may resist advice from "elite" sources such as government officials or public health experts. We test these possibilities using novel data from two online surveys with embedded experiments conducted with approximately 2,000 Pennsylvania residents each, in spring 2020 (Study 1 in April and Study 2 in May-June). We uncover partisan differences in views on several coronavirus-related policies, which grew larger between surveys. Yet overall, Study 1 respondents report strong support for social distancing policies and high trust in medical experts. Moreover, an experiment in Study 1 finds no evidence of reduced support for social distancing policies when advocated by elites, broadly defined. A second experiment in Study 2 finds no backlash for a policy described as being backed by public health experts, but a cross-party decline in support for the same policy when backed by government officials. This suggests that, in polarized times, public health experts might be better advocates for collectively beneficial public policies during public health crises than government officials.

Keywords: Public opinion, Polarization, Elite messaging, Survey experiment, COVID-19

Supplements: Open data

T he spread of COVID-19 compelled American elected officials to close schools and businesses and issue "stay-at-home" orders across much of the country. U.S. jurisdictions have not implemented such policies at this scale in many decades, and their enactment represents a dramatic expansion of governmental authority. Ultimately, the effectiveness of such disruptive policies hinges on the extent to which the American public supports and complies with them.

Such support is by no means a given. In recent decades, social scientists have documented declining trust in government, public authorities, and the news media (Putnam, 2000; Hetherington et al., 2005; Ladd, 2012; Citrin & Stoker, 2018), which may reduce citizens' willingness to comply with intrusive new policies. The American public is also currently characterized by high levels of political sorting and polarization (Levendusky, 2009; Mason, 2018; Iyengar, Lelkes, Levendusky, Malhotra, & Westwood, 2019), potentially eroding support for policies advocated by officials from the opposite political party (see esp. Lerman, Sadin, & Trachtman, 2017; Gollust, Nagler, & Franklin Fowler, 2020).

By mid-April 2020, slightly more than one month after the widespread recognition of COVID-19's community transmission within the U.S., observers could point to significant evidence of polarization–differing reactions by citizens' partisan identities. For example, that month saw politically-framed protests against stay-

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at-home orders and business closures in state capitals including Lansing, Michigan and Harrisburg, Pennsylvania. Furthermore, multiple studies found that individuals in more Democratic areas were more likely to engage in social distancing, even accounting for demographic factors such as population density (Allcott, Boxell, Conway, Gentzkow, Thaler, & Yang, 2020; Barrios & Hochberg, 2020; see also Gadarian, Goodman, & Pepinsky, 2020b; Grossman, Kim, Rexer, & Thirumurthy, 2020; Bursztyn, Rao, Roth, & Yanagizawa-Drott, 2020).

There is also the related prospect that in the current political climate, resistance to social distancing guidelines may be driven partly by antipathy towards "elite" institutions and individuals, including public health experts, government officials, and/or the media. There are multiple concepts in the social sciences that might drive such resistance. First, the human tendency to respond to perceived constraints on freedoms by pushing back against them, known in psychology as "reactance" (Brehm, 1966), might be an acute motivator, especially when the constraints are perceived to come from members of a political out-group. In the policy realm, evidence of backlashes against messaging have been demonstrated in many domains, including sweetened beverage taxes (Dillard, Kim, & Li, 2018), climate change (Ma, Dixon, & Hmielowski, 2019), and vaccination (Betsch & Bohm, 2016). If present in reaction to COVID-19, this resistance to guidelines specifically because they are promoted by elites[1] would be especially challenging for policymakers, as the nature of the pandemic requires that public health expertise guide behavior.

A second potential driver of resistance to elite messaging is anti-intellectualism, which has long been cited as an important force in American politics (Shogan, 2007). Indeed, recent research suggests that Republicans in particular are increasingly skeptical of political and intellectual elites (Gauchat, 2012; Motta, 2018), a group that could include public health officials during COVID-19. Motta (2018), for example, finds that the 2017 "March for Science" heightened political polarization in views of scientists, suggesting that Americans may view scientists and their messaging through a partisan lens. Another related possibility is that there may be a partisan divide in reactions to scientific messaging (Ma et al., 2019), especially if citizens receive differing cues from the two major parties (Slothuus & De Vreese, 2010; Gollust et al., 2020).[2]

Still, polling in March and April 2020 found widespread support for a range of restrictions among Republicans as well as Democrats, including social distancing (Pew Research Center, 2020; Sides, 2020).[3] Gadarian, Goodman and Pepinsky (2020a) find that providing respondents with political primes related to COVID-19 does not change their political trust or policy attitudes. In addition, recent evidence suggests that backlash effects in general—in which people shift away from an advocated viewpoint—might be limited (Guess & Coppock, 2018; Wood & Porter, 2019). Moreover, more credible sources have long been thought to be more influential (Hovland & Weiss, 1951; Druckman, 2001), generating the alternative hypothesis that invoking elites may heighten the impact of pandemic-related messaging.[4] A related prospect is that the local or national severity of the illness might provide a concrete grounding for attitudes, and so might limit motivated reasoning (e.g. Festinger, 1957; Kunda, 1990; Redlawsk, Civettini, & Emmerson, 2010).

Here, we present descriptive and experimental evidence drawn primarily from an early-April 2020 survey (Study 1) on these questions. The survey was conducted online with residents from the pivotal swing state of Pennsylvania, enabling us to evaluate how a politically engaged population in a state with a high but regionally variable COVID-19 burden endorses related policies and messages. The descriptive results enable us to characterize levels of political polarization on COVID-19-related policies, which are notable but exist in the context of bipartisan support for several policies and high levels of trust in medical experts. We then present evidence from a well-powered experiment in which some respondents read that "public health experts, government officials, and the media have urged people in Pennsylvania" to stay at home and keep businesses closed while others read that it was merely "one proposal" for responding to the pandemic. We find that, if anything, the invocation of elites increased support slightly for such stay-at-home orders, and more markedly among those 65 and older. Therefore, we conclude that, approximately one month into the crisis, invoking elite authority did nothing to diminish support for key pandemic control policies across the political spectrum.

A follow-up survey in late May and early June (Study 2) illustrates that while attitudes grew more polarized over time, Pennsylvania respondents continued to not penalize policies when they were described as supported by public health experts in particular. This stood in contrast to more negative views on the same policies when they were presented as supported by government officials. Such results indicate that not all elite groups generate the same responses. They also bolster a view that public health experts, and not government officials, are better positioned to advocate for collectively beneficial public policies during public health crises.

Data and Descriptive Statistics

To examine reactions to COVID-19-related restrictions, and resistance to elites in particular, we partnered with the survey firm Civiqs to field a 20-question survey between April 4th and April 8th, 2020. We surveyed 1,912 respondents who had been previously recruited to take online surveys via web advertisements.[5] Pennsylvania is an especially relevant state to study: it is a key swing state and its demographics closely mirror those of the nation as a whole (Hill, Hopkins, & Huber, 2019). As of April 4th, Pennsylvania had 10,109 confirmed coronavirus cases, giving it the ninth-most cases in the country (New York Times, 2020).

Note that at the time of the survey, there were some minor disagreements between the state's Democratic Governor and its Republican-controlled legislature over the COVID-19 response, but our review of COVID-19-related statements by state political leaders finds no evidence of public dissent toward Governor Wolf's policies as of April 4th. However, partisan disagreements later became much more pronounced. This was driven partly by a high-profile visit to the state by President Trump in mid-May, and a subsequent effort by the GOP-controlled legislature to revoke the Governor's coronavirus emergency order in June (Pontz, 2020). Politico summarized the shift nationally by writing in June 2020, "President Donald Trump has been the reluctant warrior against the disease who took some major steps early on but soon grew impatient of the stay-at-home restrictions, the masks, and–most of all–the economic calamity that might jeopardize his re-election" (Lizza & Rayasam, 2020). For a more detailed timeline, see Appendix A.

In Table 1, we summarize the key independent variables as well as our primary dependent variable and our measure of trust in medical experts. As with other opt-in samples, our respondents are more heavily white, educated, and politically engaged than Pennsylvania residents overall (Hill et al., 2007). However, there are sizable numbers of both Republicans and Democrats in our sample, allowing us to compellingly test for political polarization and differential resistance to advice from various elites.

Table 1: Descriptive Statistics for Key Variables.

	Min	Max	Mean	SD	Percent Missing
Income	12	250	79.169	61.794	0.175
Education (in years)	10	19	14.995	2.311	0.006
Age (in years)	18	89	53.098	15.181	0.039
Female	0	1	49.5%		0.001
Asian American	0	1	0.2%		0.000
Black	0	1	7.1%		0.000
Hispanic	0	1	2.6%		0.000
White	0	1	87.0%		0.000
No Religion/Atheist	0	1	22.3%		0.000
Catholic	0	1	22.6%		0.000
Protestant	0	1	26.6%		0.000
Jewish	0	1	2.4%		0.000
Republican	0	1	31.8%		0.000
Democrat	0	1	39.8%		0.000
Independent	0	1	23.6%		0.000
Trust in Medical Experts	1	4	3.514	0.665	0.041
Support Staying at Home	0	3	2.199	1.043	0.033

Notes: N=1,912.

Appendix D summarizes several other policy attitudes. Overall, our respondents express support for stay-at-home policies. For example, when asked about prioritizing reopening "the economy as soon as possible, even if more people will get sick" versus continuing to stay home "for as long as necessary, even if the economy suffers," 61% of our overall sample opts for staying home, while 26% back reopening the economy. But while just 4% of Democrats and 29% of independents prioritize re-opening the economy, 49% of Republicans do.

Appendix E expands upon these results by reporting regressions of six measures of coronavirus-related policy attitudes on basic demographic measures including partisanship.[6] As the Table illustrates, partisanship is a substantively robust predictor of all six of the coronavirus-related policy attitudes, indicating that as early as the first days in April 2020, political partisanship already structured Americans' reactions to the crisis. For example, Democrats were a sizable 1.01 (SE=0.05) scale points more likely to support stay-at-home policies than Republicans (the reference category), on a 1-4 scale, a difference which is almost exactly one standard deviation of the dependent variable. Also noteworthy is the coefficient of 0.51 scale points (on a 1-4 scale) for Democrats' trust of medical experts, indicating that Democrats' trust of such experts is significantly higher than Republicans'. Still, it is worth noting that levels of trust in medical experts are generally quite high, with 88% of Republicans reporting that they trust information from medical experts at least "a good amount."

Experiment on Resistance to Elite Advice (Study 1: April 2020)

To test the impact of messaging explicitly from elites, our survey embedded a randomized experiment.[7] Specifically, we presented a question about support for stay-at-home policies in one of two ways. Half of our subjects (n=993) were asked if they supported stay-at-home policies and business closures that "public health experts, government officials, and the media" have "urged" people to follow. The other half (n=919) were asked the same question, but these policies were neutrally presented as "one proposal" being considered without mention of who backed it. In every other respect, the questions were identical. Appendix B details the exact question wording.

This set-up allowed us to test both the possibility that support would be lower when distancing policies were framed as approved by "elites," and also to explore any differences across framing conditions by subgroup (most notably by partisan identification). Importantly, this design intentionally does not distinguish between advice from different types of elites, instead combining them into a single treatment. This was done both to improve statistical power in the design by limiting the number of treatment conditions, but also to provide an upper bound on the "elite" effect on reactions to proposed policy initiatives. That is, our interest was in exploring how people respond to elite guidance, broadly defined, and our design was intended to capture this by invoking several groups of elites in the treatment. This was done to ensure the message about elite advice was received amongst our diverse subject pool.

Figure 1 displays our results. There is no evidence that elite framing reduced support for stay-at-home policies; if anything, the point estimates suggest that framing these policies as having elite support made people more likely to back them. The mean level of support for social distancing on a 0-3 scale is 2.24 in the treatment group as compared to 2.15 in the control group (p=0.06, two-sided T-test). This treatment effect of 0.09 scale points is substantively rather small, however (9% of the outcome's standard deviation).

These results also prove consistent across the three moderating variables we chose ex ante. The first is partisanship, which is known to moderate responsiveness to many political cues (Bullock, 2011; Bechtel, Hainmueller, Hangartner, & Helbling, 2015). Yet as Appendix F illustrates, the results are quite consistent across Democrats, Republicans, and independents, with treatment effects varying between 0.08 and 0.12 scale points. Likewise, Appendix G illustrates that the results are not notably different for respondents with or without a college degree, a commonly employed moderator thought to measure political knowledge and cognitive sophistication (Zaller, 1992).

Given that COVID-19 cases are more likely to be severe among older people, we also analyzed the results separately for respondents ages 18-44, 45-64, and 65 and older. As Appendix H shows, there is some evidence of differential responsiveness by age. There is essentially no difference between the treatment and control groups for those under 45, and there is only a modest, statistically insignificant difference for those aged 45-64. However, for those 65 and older, there is a treatment effect of 0.19 scale points, which amounts to 19% of the outcome's standard deviation. In other words, respondents in the age group most susceptible to COVID-19 are also the most responsive to invoking elites when promoting policy. Nevertheless, these results should be viewed as suggestive, given that the p-value for this difference is above traditional significance thresholds when adjusting for multiple comparisons (the p-value of 0.04 is above the adjusted 0.05/4=0.0125 threshold when using the conservative Bonferroni correction for four total comparisons, for example).

Figure 1: Impact of Elite Urging on Support for Social Distancing, Full Sample
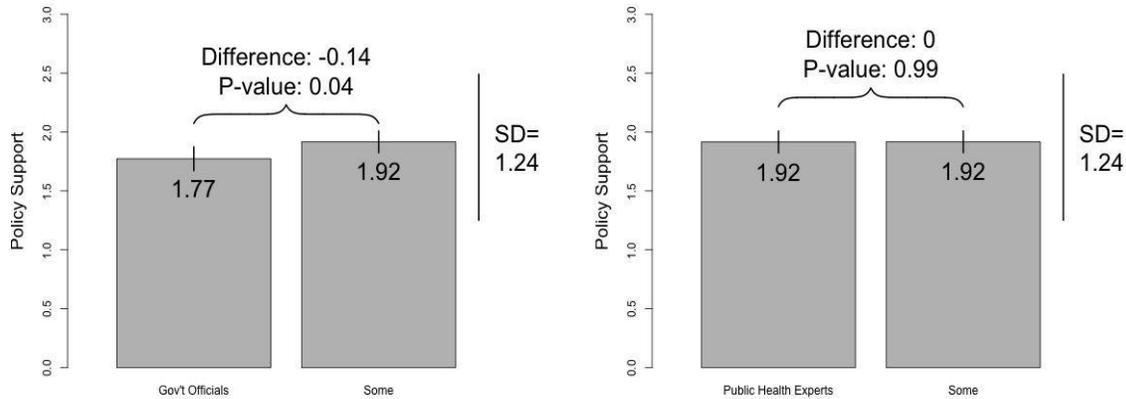**(Study 1: April 2020)**
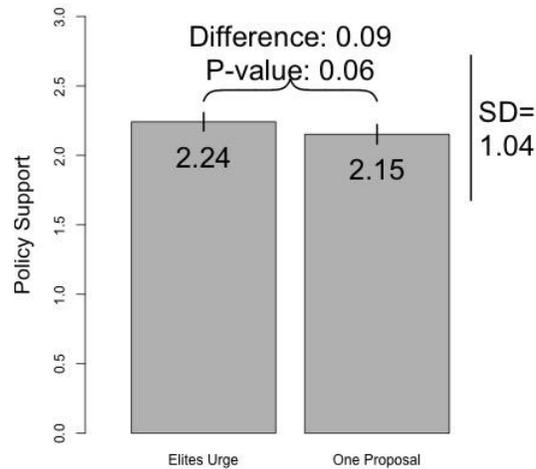
Notes: This figure presents the results of an experiment in which some respondents read that "public health experts, government officials, and the media" urge the adoption of stay-at-home policies while a control group read that such policies are simply "one proposal." The p-value is from a two-sample t-test (two-sided). The line on the right indicates the outcome's standard deviation. N=1,912.

Follow-up Experiment (Study 2: May-June 2020)

Our first survey experiment left outstanding questions. First, because it bundled different elite groups (combining "public health experts, government officials, and the media" into a single treatment), it is unclear whether reactions to specific elite groups vary. The first experiment also lacked a manipulation check. To address those limitations, we conducted a second experiment as part of a separate survey fielded by Civiqs from May 30th to June 2nd, 2020 with a sample of 2,045 Pennsylvania residents, 1,432 of whom participated in the first survey. In this experiment, respondents were randomly assigned to read that: "[t]o prevent the spread of coronavirus, ["government officials"/ "public health experts"/ "some"] have proposed reopening only after counties meet strict benchmarks (for example, a low and declining number of new cases)." The question about adhering to strict guidelines was an active policy question in Pennsylvania at the time of the survey. Respondents were then asked whether they supported this approach. The proposer was randomly varied to be "government officials" (n=654), "public health experts" (n=695), or a control condition which simply said "some" (n=696), allowing us to disentangle the effects of cues from different elite groups.[8] Note that descriptively, polarization on COVID-19-related policies grew between surveys, with partisanship becoming more predictive of attitudes.[9]

As one of its final questions, the survey also included a manipulation check asking respondents if they happened "to remember who proposed those benchmarks," with the options including the actual treatments as well as "journalists," "university-based researchers," and "not sure." All three treatments induced significant increases in the fraction naming the correct source, although the substantive magnitude varies. Those who saw "public health experts" cite them as the source 53% of the time, versus 44% for other experimental groups (p < 0.01); those who read "government officials" identified them 42% of the time, versus 36% who read otherwise (p=0.01).[10] Therefore, at least some respondents were sufficiently aware of the treatment as to be able to identify the correct group later in the survey.

Figure 2. The Impact of Attributing Policy Using Benchmarks to "Government Officials," "Public Health Experts," or "Some." (Study 2: May-June 2020)

Notes: This figure presents the results of an experiment in which some respondents read that "["government officials"/"public health experts"] have proposed reopening only after counties meet strict benchmarks" while a control group read that "some" have proposed the same. This figure illustrates the effects of the two treatments, relative to the "some" condition. The p-values are from two-sample t-tests (two-sided). The lines at right indicate the outcomes' standard deviations. N=1,350 for the left panel and N=1,391 for the right panel.

The left side of Figure 2 illustrates the difference between attributing the strict benchmarking policy to government officials versus a more generic alternative. Here, attributing the policy to government officials actually reduces support by 0.14 (p=0.04) relative to the control condition. This backlash effect is similar for Democrats, Republicans, and independents.[11] By contrast, attributing the policy to public health experts has virtually no effect on levels of support (p=0.98).[12] Even months into the COVID-19 crisis, we observe no evidence of a backlash against public health expertise, although there is a cross-party backlash against proposals from government officials.

Discussion and Conclusion

In democracies battling COVID-19, elected officials will have to make difficult decisions about the duration and severity of social distancing policies. Their decisions will likely be shaped by their perceptions of the feasibility of these policies, given public opinion. Accordingly, it is critical to characterize public opinion, as well as how partisanship and other individual factors condition opinion and responses to different messages and messengers.

In recent years, elite institutions like academia, the government, and the media have been the targets of sustained political criticism (Motta, 2018), giving rise to the possibility that some Americans (or perhaps Republicans specifically) might reject policies advocated by representatives of those elite institutions. To assess that possibility, we surveyed a sample of 1,912 Pennsylvania residents to understand how partisanship shapes attitudes toward coronavirus-related policies as well as the public's potential response to policies advocated by elites. Certainly, Pennsylvania is just one state in a diverse country, so research from other states or nationwide panels is surely valuable as well. But Pennsylvania closely mirrors the country at large in its racial demographics as well as its partisan breakdown, and also showed significant variability in COVID-19 rates across its regions in spring 2020. In a nationalized political moment (Hopkins, 2018), it provides a valuable starting point.

As in other studies with national samples (Gadarian et al., 2020b), we find significant differences by political party in overall attitudes toward various coronavirus-related policies. Our experiment, however, does not

find any evidence of backlash to policies that are specifically favored by elite groups. If anything, informing respondents that elites advocate a policy may increase support for that policy, especially among older respondents at highest risk from COVID-19. To some degree, such results echo the longstanding finding in public opinion research that while baseline views often differ by partisanship, people commonly respond to rhetoric and events in parallel ways (Page & Shapiro, 1992).

Importantly, our results also show overall high levels of support and endorsement for social distancing measures and business closures that are central to an effective COVID-19 response. But, it will be critical to continue surveying the public and conducting survey experiments as the pandemic unfolds, to assess partisan gaps in support for and adherence to recommendations from public health experts and government officials. As states begin the difficult work of re-opening, guidance from experts who are perceived as elites by many in the population will become increasingly important. For now, it is reassuring that expected partisan gaps in policy support do not necessarily imply differential partisan responses to elite cues.

Finally, an important finding from our May-June survey experiment is that invoking government officials as advocates of strict policies around COVID-19 reduces enthusiasm for these policies amongst citizens of both parties. This implies that as COVID-19 spread, the public grew increasingly skeptical of government officials. However, the fact that we do not observe this result when the same policies are presented as backed by public health experts offers some crucial insights. Notably, the public's deference to public health expertise did not wane even as the political environment became more polarized. More generally, these results suggest that in the future, policy makers responding to public health crises might find it more effective to have public health officials play the role of policy advocates, rather than step in front of the camera and advocate for policies themselves.

Notes

1. Here, we follow research in political science by defining "elites" as those with the requisite public visibility to be capable of conveying messages or viewpoints to the mass public.
2. Note that the research in this domain is inconclusive, with some work (i.e. Van der Linden, Maibach, & Leiserowitz, 2019) suggesting that the partisan divide in response to scientific messaging may not be as sizable as some other studies suggest.
3. For related evidence from Canada, see Merkley et al. (2020); for Denmark, see Olsen and Hjorth (2020).
4. Note, however, that some recent research suggests that framing effects may differ depending on who the messenger is; notably, Deslatte (2020) finds that framing effects from economic versus public health messaging are larger when the messenger is a federal government entity (the CDC or the President) than when the messenger is an academic expert.
5. Please see Appendix B for question wordings.
6. Note that our regressions include indicator variables for the experimental treatment only for items asked after the treatment.
7. When we regress treatment status on the demographics listed in Table 1, we recover an F-statistic of 1.33 (p=0.19), suggesting that the randomization produced a distribution of the treatment that was not strongly related to key covariates. With respect to power, our control group sample size of 919 allows us to detect an effect of D=0.13 at the 0.05 significance level 80% of the time.
8. We conducted randomization checks by modeling the two treatment indicators as a function of the independent variables in Table 1. The F-statistics are 1.3 and insignificant (p > 0.19) in both cases. The minimum sample size in any condition of 654 allows us to detect an effect of D=0.155 80% of the time at the 0.05 significance level.
9. Study 2 re-asked the question about whether respondents prioritize re-opening the economy or maintaining the lockdown. As we see in Appendix Table E, the difference between Republicans and Democrats on this item in Study 1 was 1.01 on a 1-3 scale. In Study 2, it grew to 1.40.
10. There is significant measurement error in using this to measure compliance, since the treatment may influence even those who report that the source was not government officials. As a consequence, any Complier Average Causal Effect may be overstated and is best thought of as an upper bound. Still, when doing so, we estimate the CACE for the "government officials" treatment to be -3.5 (SE=2.5).

11. The effects are also statistically indistinguishable for those 65 and older when compared to younger respondents, a difference from Study 1.
12. For the 1,347 respondents to the Study 2 survey who also participated in Study 1, we analyzed the experimental results separately for those who reported trusting medical experts "a great deal" or not, and did not find evidence of heterogeneous treatment effects.
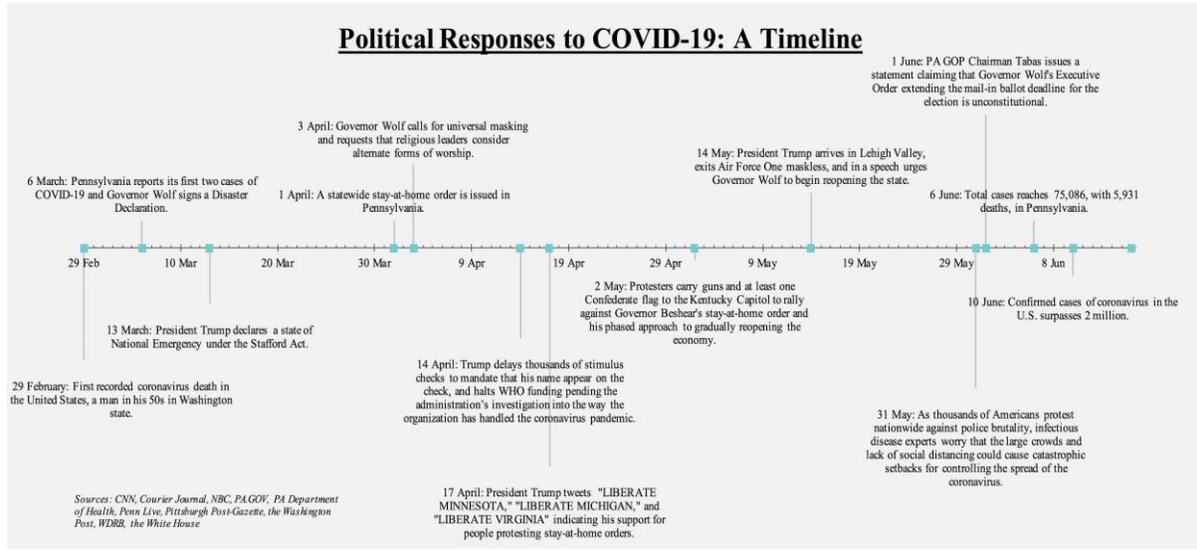
Acknowledgments

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Appendix

Appendix A. Political Responses to COVID-19 Timeline

Political Responses to COVID-19: A Timeline

6 March: Pennsylvania reports its first two cases of COVID-19 and Governor Wolf signs a Disaster Declaration.

3 April: Governor Wolf calls for universal masking and requests that religious leaders consider alternate forms of worship.

1 April: A statewide stay-at-home order is issued in Pennsylvania.

14 May: President Trump arrives in Lehigh Valley, exits Air Force One maskless, and in a speech urges Governor Wolf to begin reopening the state.

1 June: PA GOP Chairman Tabas issues a statement claiming that Governor Wolf's Executive Order extending the mail-in ballot deadline for the election is unconstitutional.

6 June: Total cases reaches 75,086, with 5,931 deaths, in Pennsylvania.

13 March: President Trump declares a state of National Emergency under the Stafford Act.

2 May: Protesters carry guns and at least one Confederate flag to the Kentucky Capitol to rally against Governor Beshear's stay-at-home order and his phased approach to gradually reopening the economy.

10 June: Confirmed cases of coronavirus in the U.S. surpasses 2 million.

29 February: First recorded coronavirus death in the United States, a man in his 50s in Washington state.

14 April: Trump delays thousands of stimulus checks to mandate that his name appear on the check, and halts WHO funding pending the administration's investigation into the way the organization has handled the coronavirus pandemic.

31 May: As thousands of Americans protest nationwide against police brutality, infectious disease experts worry that the large crowds and lack of social distancing could cause catastrophic setbacks for controlling the spread of the coronavirus.

Sources: CNN, Courier Journal, NBC, PA.GOV, PA Department of Health, Penn Live, Pittsburgh Post-Gazette, the Washington Post, WDRB, the White House

17 April: President Trump tweets "LIBERATE MINNESOTA," "LIBERATE MICHIGAN," and "LIBERATE VIRGINIA" indicating his support for people protesting stay-at-home orders.

Timeline axis: 29 Feb | 10 Mar | 20 Mar | 30 Mar | 9 Apr | 19 Apr | 29 Apr | 9 May | 19 May | 29 May | 8 Jun

Appendix B. Question Wording

[ASKED IN STUDY 1 SURVEY: APRIL 2020]
How worried, if at all, are you that you or someone in your family will get sick from coronavirus?
• Very worried
• Somewhat worried
• Not too worried
• Not worried at all
[ASKED IN STUDY 1 SURVEY (APRIL 2020) AND STUDY 2 SURVEY (MAY-JUNE 2020)]
Some have argued that it's vital to reopen the U.S. economy as soon as possible, even if it means that more people will get sick from coronavirus. Which is closer to your view?
•We must reopen the economy as soon as possible, even if more people will get sick.
• We must continue to stay home for as long as necessary, even if the economy suffers.
•Not sure
[ASKED IN STUDY 1 SURVEY: APRIL 2020]
Which of the following is closer to your view?
• Older people and people with serious health conditions are the most at risk from coronavirus, so it's especially important that they stay at home and avoid close contact with others.
• Anyone can spread coronavirus, so everyone needs to stay home and avoid close contact with others.
• Not sure
[ASKED IN STUDY 1 SURVEY: APRIL 2020]
Do you support or oppose your community barring people from other localities in the U.S. from entering in order to prevent the spread of coronavirus?
• Strongly support
• Somewhat support
• Somewhat oppose
• Strongly oppose
• Not sure
[ASKED IN STUDY 1 SURVEY: APRIL 2020]
Some people argue the government should use people's cell phone data to make sure they comply with quarantine orders. Others argue that the government should not use cell phone data to enforce quarantine orders because it would violate people's privacy.
• Strongly support using cell phone data to enforce quarantines
• Somewhat support using cell phone data to enforce quarantines
• Somewhat oppose using cell phone data to enforce quarantines
• Strongly oppose using cell phone data to enforce quarantines
• Not sure
[ASKED IN STUDY 1 SURVEY (APRIL 2020) AND STUDY 2 SURVEY (MAY-JUNE 2020]
How much do you trust the information you hear about coronavirus from medical experts?
• A great deal
• A good amount
• Not very much
• Not at all
• I haven't heard much from medical experts
[ASKED IN STUDY 2 SURVEY: MAY-JUNE 2020]
Earlier, the survey mentioned proposed benchmarks for reopening Pennsylvania. Do you happen to remember who proposed those benchmarks?
• Public health experts
• Government officials
• University-based researchers
• Journalists
• Some people
• Not sure

Appendix C. Experimental Conditions

[STUDY 1: APRIL 2020]
TREATMENT: "To prevent the spread of coronavirus, public health experts, government officials, and the media have urged people in Pennsylvania to stay at home whenever possible and to keep non-essential businesses closed indefinitely."
CONTROL: "To prevent the spread of coronavirus, one proposal is to ask Pennsylvania residents to stay at home whenever possible and to keep non-essential businesses closed indefinitely."
Do you support or oppose a policy requiring Pennsylvania residents to stay home whenever possible and keep non-essential businesses closed indefinitely?
• Strongly support this policy
• Somewhat support this policy
• Somewhat oppose this policy
• Strongly oppose this policy

[STUDY 2: MAY-JUNE 2020]
TREATMENT 1: To prevent the spread of coronavirus, **public health experts** have proposed reopening only after counties meet strict benchmarks (for example, a low and declining number of new cases).
TREATMENT 2: To prevent the spread of coronavirus, **government officials** have proposed reopening only after counties meet strict benchmarks (for example, a low and declining number of new cases).
CONTROL: To prevent the spread of coronavirus, **some** have proposed reopening counties only after they meet strict benchmarks (for example, a low and declining number of new cases).
Do you support or oppose this policy to use strict benchmarks to guide reopening Pennsylvania counties?
- Strongly support this policy
- Somewhat support this policy
- Somewhat oppose this policy
- Strongly oppose this policy
- Not sure

Additional Results

Appendix D. Descriptive Statistics for Outcomes Employed in Regression Analyses
(Study 1: April 2020)

|	Min	Max	Mean	SD	Pct. Missing
Prioritize economy	1	3	1.647	0.861	0.010
Personally concerned	1	4	3.106	0.879	0.005
Special steps for elderly	0	1	0.308	0.462	0.052
Support barring those from elsewhere	1	4	3.052	0.952	0.016
Support stay at home home policies	0	3	2.199	1.043	0.033
Support cell phone monitoring	1	4	1.670	0.946	0.040

Appendix E. Regression Results (Study 1: April 2020)

|	Re-open econ.	Worried personally	Older people	Support staying home	Use cell phones	Trust experts
Intercept	1.830*	3.032*	0.312*	2.35 *	2.162*	3.411 *
	(0.168)	(0.185)	(0.106)	(0.221)	(0.220)	(0.149)
Democrat	−1.009*	0.683*	−0.416*	1.034*	0.448*	0.508*
	(0.040)	(0.046)	(0.024)	(0.052)	(0.052)	(0.035)
Independent	−0.462*	0.226*	−0.196*	0.486 *	0.142*	0.209*
	(0.046)	(0.052)	(0.027)	(0.059)	(0.059)	(0.040)
Age (rescaled)	0.009	0.052*	0.013	0.043	0.081*	−0.013
	(0.018)	(0.021)	(0.011)	(0.024)	(0.024)	(0.016)
Black	−0.020	−0.119	−0.009	0.066	−0.032	−0.045
	(0.067)	(0.075)	(0.039)	(0.086)	(0.086)	(0.058)
Hispanic	0.058	0.059	0.107	-0.111	0.215	−0.103
	(0.109)	(0.122)	(0.064)	(0.142)	(0.142)	(0.096)
Asian American	0.093	0.533	0.019	0.362	0.424	0.083
	(0.359)	(0.407)	(0.208)	(0.458)	(0.457)	(0.309)
HS Degree	0.406*	−0.347	0.253*	−0.452	−0.837*	-0.266
	(0.169)	(0.187)	(0.106)	(0.222)	(0.222)	(0.149)
Some College	0.362*	−0.272	0.276*	−0.434 *	−0.794*	−0.201
	(0.167)	(0.184)	(0.105)	(0.219)	(0.218)	(0.147)
College Degree	0.380*	−0.350	0.270*	-0.379	−0.800*	−0.156
	(0.168)	(0.186)	(0.106)	(0.220)	(0.220)	(0.148)
Post-Grad	0.292	−0.266	0.217*	−0.257	−0.678*	−0.077
	(0.170)	(0.187)	(0.106)	(0.222)	(0.222)	(0.150)
Female	−0.178*	0.165*	−0.133*	0.257*	0.146*	0.101*
	(0.034)	(0.038)	(0.020)	(0.044)	(0.044)	(0.030)
Catholic	0.108*	0.024	0.036	−0.063	0.014	−0.024
	(0.044)	(0.049)	(0.026)	(0.057)	(0.057)	(0.038)
Protestant	0.119*	−0.106*	0.061*	−0.141*	−0.076	−0.018
	(0.043)	(0.048)	(0.025)	(0.055)	(0.055)	(0.037)
"Elites" Treatment				0.075	0.006	-0.013
				(0.044)	(0.044)	(0.030)
R^2	0.310	0.147	0.204	0.238	0.074	0.141
Num. obs.	1807	1817	1731	1768	1757	1755

$^*p < 0.05$

Notes: This table details the distribution of each dependent variable. The omitted/baseline categories are Republican, male, white, and lacking a high school degree. We include an indicator for the "elites" treatment only for items asked after the treatment.

Appendix F. Impact of Elite Urging on Support for Social Distancing by Political Partisanship (Study 1: April 2020)
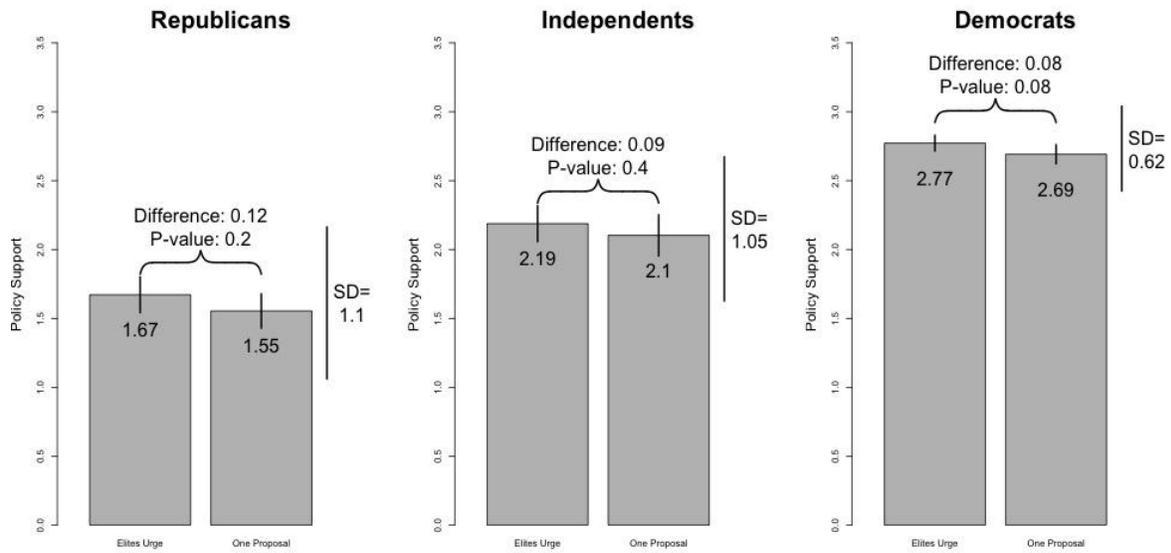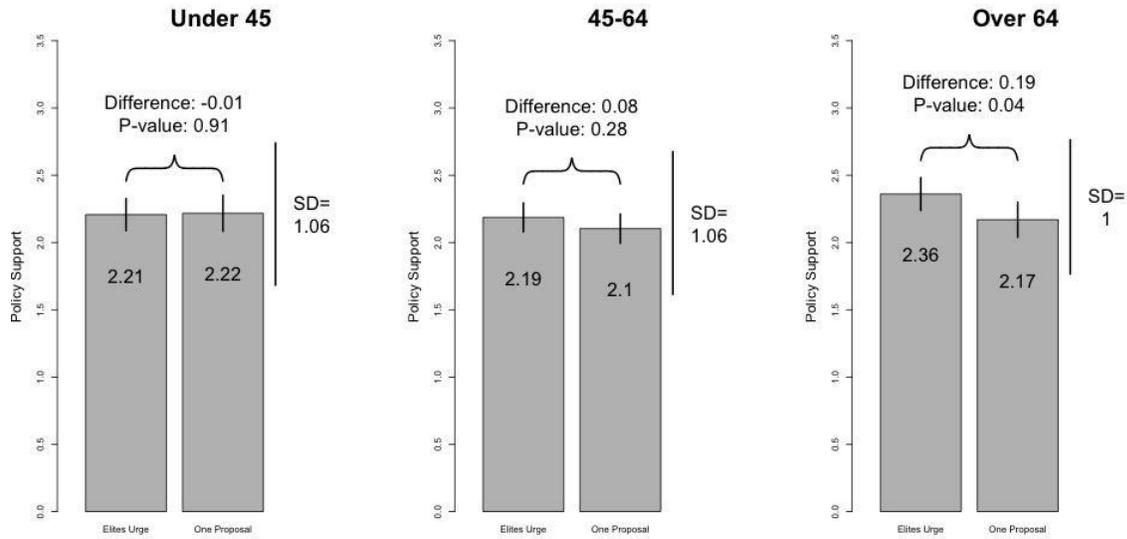

Notes: This figure illustrates the effects of the "elites urge" treatment, relative to the "one proposal" treatment, separately for respondents who identify as Republicans (n=608), independents (n=452), and Democrats (n=761). The p-values are from two-sample t-tests (two-sided). The lines at right indicate the outcomes' standard deviations.

**Appendix G. Impact of Elite Urging on Support for Social Distancing by Educational Attainment
(Study 1: April 2020)**
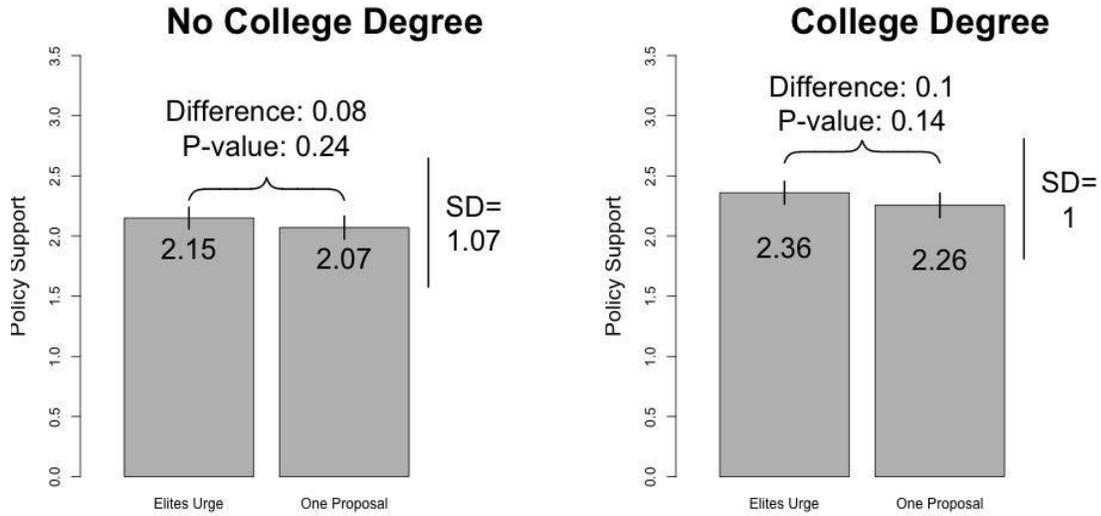
Notes: This figure illustrates the effects of the "elites urge" treatment, relative to the "one proposal" treatment, separately for respondents with at least a college degree (n=831) or not (n=1,070). The p-values are from two-sample t-tests (two-sided). The lines at right indicate the outcomes' standard deviations.

Appendix H. Impact of Elite Urging on Support for Social Distancing by Age Category (Study 1: April 2020)

Notes: This figure illustrates the effects of the "elites urge" treatment, relative to the "one proposal" treatment, separately for respondents 18-44 (n=576), 45-64 (n=769), and over 64 (n=492). The p-values are from two-sample t-tests (two-sided). The lines at right indicate the outcomes' standard deviations.