

## Reducing mask resistance among White evangelical Christians with value-consistent messages

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Public health experts have advocated for wearing protective face masks to combat the COVID-19 pandemic, yet some populations are resistant. Can certain messages shift attitudes toward masks? We investigate the effect of value-consistent messages within a mask-skeptical population: White evangelicals in the United States. An experiment within a national survey of White evangelicals (n = 1.212) assigned respondents to one of three conditions: One group was given a religious message equating mask use with loving your neighbor, another was given a message by Donald Trump saying mask use is patriotic, and a control group received no message. Those exposed to the religious message were more likely to see mask use as important and were more supportive of mask mandates. Republican evangelicals exposed to the patriotism message had similar responses. These findings show that messages that align with individuals' core values—in this case, religious tenets and patriotism—can shift certain views on mask use and government mask policies to combat COVID-19, even among a comparatively mask-resistant group.

mask use | evangelicals | public opinion | Trump | partisanship

acemasks can reduce COVID-19 transmission (1). Yet, conservative media and prominent Republicans, especially former President Donald Trump, express doubt about the pandemic's severity and mitigation efforts (2, 3). Trump sometimes wears a mask and occasionally advocates for masks. But, he often holds events without masks and ridicules opponents for wearing them. Not surprisingly, pandemic- and mask-skepticism has been pervasive among Trump's base (4, 5).

Can certain messages increase support for masks within mask-skeptical populations? In theory, elite messages can shape opinion; yet, attitudes may be less elastic when they reflect salient political divides (6). To investigate, we considered opinions among White evangelical Christians. White evangelicals report less mask use and lower support for mask mandates (7). This group overwhelmingly supports and gets information from Trump (8–10). In addition, this group is more likely to endorse Christian nationalism and traditional gender roles, which are associated with opposition to pandemic-related restrictions and mask mandates (11, 12).

Messages that align with an individual's values are more likely to move attitudes toward positions an individual would not normally support (13, 14), although this outcome is not guaranteed (15). It also helps if messages come from a trusted source (16). We considered two appeals. The first is a statement made by Trump on masks as patriotic; this reflects research on the relevance of source cues and on how conservatives respond to loyalty (17, 18) and patriotism (19). The second references religious values, given work showing such messages can shape attitudes among religiously oriented people (20, 21).

We tested three hypotheses. Compared to a no-message control group, individuals exposed to a religious message will be more supportive of masks (H1), as will those who are exposed to a patriotism message from Trump (H2). And, the latter effects will be more pronounced among Republicans (H2a).

Given unidirectional hypotheses, we used one-tailed significance

Data are from an August 2020 YouGov survey with a nationally representative sample of 1,500 White "evangelical or born-again Christian" respondents. There was random assignment into three conditions. One was exposure to a religious message that emphasized that wearing a mask is a way to love your neighbor.\* The second was a message from Trump that encouraged mask use as a form of patriotism. The third was a control (no message). Posttreatment questions concerned mask use and mandates.

## **Results**

Masks as Helpful. Respondents placed themselves on a scale where 0 represents the belief that masks are not at all helpful and 10 the belief that they are extremely helpful. Control group opinion was 5.39. The results support H1: Evangelicals in the religious condition were more likely to indicate masks are helpful (P = 0.01) (Table 1). In the full sample, Trump's patriotism message shifted opinion in the expected direction, but the result is just above a cutoff of  $P \le 0.05$ . However, as illustrated in Fig. 1, it did make evangelicals who identify as Republican (or lean Republican) more likely to think masks are useful, supporting H2a ( $P \le 0.05$  for these groups).

Individual Mask Behavior. Respondents who planned to come close to nonhousehold members in the next 2 wk indicated how likely it is that they would wear a mask  $(1 = \text{very unlikely to } 4 = \text{very unlikely unl$ very likely). Control group mean mask intention was 2.83. The treatments did not lead to a significant increase in personal intention to wear a mask (column 2 in Table 1) and there is no differential effect by partisanship.

Mask Behavior by Others. One other-oriented question asked, on a 0 to 10 scale, how important it is for people in the respondent's community to wear masks. Results support H1: The religious message increased perceptions of masks' importance. Mean importance was 5.83 in the control group, and increased by almost half a unit among those exposed to the religious message (P = 0.04)

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The authors declare no competing interest.

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\*While this type of message is linked to moral foundations of care and protection, which liberals value more than conservatives (13), it also is a core religious message for evangelicals because Jesus said to "love your neighbor as yourself" is one of the two greatest commandments (Mark 12:31). While one treatment version had a neutral source, the other was attributed to "some evangelical leaders." We found no difference between them, so we pooled these conditions.

Table 1. Message effects on all measures

	Helpful	Wear	Important	Trump	Logit-mandate
Intercept	5.397**	2.825**	5.831**	0.573**	-0.648**
	(0.219)	(0.071)	(0.218)	(0.018)	(0.121)
Religious	0.616*	0.111	0.446*	0.051*	0.368**
	(0.267)	(0.088)	(0.266)	(0.023)	(0.146)
<b>Patriotism</b>	0.491	0.157	0.267	0.051*	0.298*
	(0.308)	(0.099)	(0.308)	(0.026)	(0.169)
n	1,155	929	1,166	1,209	1,208
$R^2$	0.005	0.003	0.002	0.005	

\*\*P < 0.01; \*P < 0.05; one-tailed P values; SEs in parentheses. Thirty non-White observations were dropped (n = 1,470). An additional 258 nonevangelical observations were weighted to 0 in our analyses (n = 1,212). The control group serves as the baseline. Ordinary least squares was used for the first four models and logit for the last model.

particularly effective among Republicans ( $P \le 0.05$  for all groups) (Fig. 1).

## Discussion

Value-consistent promask messages can shift opinion among mask-skeptical groups. Among White evangelicals, a religious message increased support for masks. A patriotism message by Trump had similar effects among Republican evangelicals, although we cannot isolate the extent to which this effect is driven by the reference to Trump or the value. Messaging was less effective in shifting behavior. We conclude that Trump, evangelicals, and others can help mitigate the pandemic's toll by crafting value-aligned promask messages. Meanwhile, skepticism has emerged among evangelicals regarding vaccines (22). Our research is relevant to this domain: value-consistent messages carry the potential to change attitudes in ways useful to mitigating the toll of the COVID-19 pandemic.

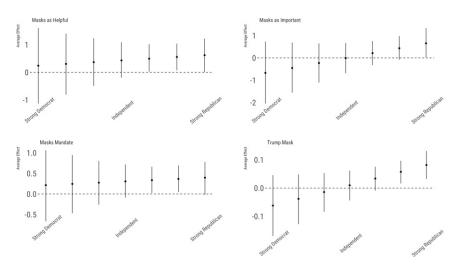


Fig. 1. Patriotism message effects relative to the control group, by partisanship. Marginal effects of the patriotism treatment relative to the control group by the respondent's partisan identification; 90% confidence intervals (two-tailed) are illustrated. The marginal effects are from a set of analyses in which the treatment conditions were interacted with partisan identification. Ordinary least squares was used for Masks as Helpful, Masks as Important, and Trump Mask, while Logit was used for Mask Mandate.

(column 3 in Table 1). The patriotism message was not significant in the full sample, yet strong Republicans exposed to the message rated mask wearing as more important, supporting H2a (P < 0.05) (Fig. 1).

A second other-oriented question asked whether Trump should (0) never, (0.5) sometimes, or (1) always wear a protective mask when meeting with people. The control group mean was 0.57. Results support all three hypotheses: Exposure to the religious message (P = 0.01) and patriotism message (P = 0.02) increased support for Trump wearing a mask (column 4 in Table 1), and the patriotism message only affected Republicans and Republican-leaners (P < 0.08) (Fig. 1).

**Mask Mandates.** Respondents indicated whether it was appropriate for government officials to mandate masks. Control group support was quite low, at 34%. Supporting H1, H2, and H2a, the religious message boosted support to 43% (P=0.00), exposure to the patriotism message increased support to 41% (P=0.04), and the patriotism message was

## **Materials and Methods**

The YouGov survey ran in August 2020, and drew a sample of 1,500 United States adults matched to a national frame according to gender, age, race, education, and "evangelical or born-again Christian" identity. Of the sample, 56% is Republican. See *SI Appendix* for more details and the complete treatment text.

Respondents were evenly distributed across experimental conditions on a host of demographic and political attitude measures. The study contains no deception and was reviewed and deemed exempt by the Institutional Review Board at Vanderbilt University. Data, code, and materials are available in Dataverse.

Data Availability. Anonymized csv file data have been deposited in Dataverse (23).

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<sup>&</sup>lt;sup>†</sup>We also varied the level of government for the mandate and found that individuals were more supportive of state and local mandates compared to the national level; here we pooled the conditions.

<sup>&</sup>lt;sup>†</sup>In regression analyses in which we predicted each dependent variable with treatment dummy variables, church attendance, and an interaction between these two factors, we found the effect of the messages on the belief masks are helpful is largely located among those who attend church less frequently. The same dynamic underlies our finding for believing it is important for others to wear masks. We could speculate that more frequent church attenders may have been preexposed to messages, and thus less affected. Yet the fact that church attendance only moderates the treatment for two of the five dependent variables suggests further research is needed. We credit an anonymous reviewer for pointing out that this avenue is worthy of additional investigation.

- CDC, CDC calls on all Americans to wear masks to prevent COVID-19 spread https:// www.cdc.gov/media/releases/2020/p0714-americans-to-wear-masks.html. Accessed 6 January 2021.
- J. Green, J. Edgerton, D. Naftel, K. Shoub, S. J. Cranmer, Elusive consensus: Polarization in elite communication on the COVID-19 pandemic. Sci. Adv. 6, eabc2717 (2020).
- 3. M. Matta, D. Stecula, C. Farhart, How right-leaning media coverage of COVID-19 facilitated the spread of misinformation in the early stages of the pandemic in the U.S. Can. J. Polit. Sci. 53, 335–342 (2020).
- G. Russonello, Afraid of coronavirus? That might say something about your politics NY Times, 13 March 2020. https://www.nytimes.com/2020/03/13/us/politics/coronavirustrump-polling.html. Accessed 6 January 2021.
- K. Frankovic, How Trump and Biden supporters differ on face masks https://today. yougov.com/topics/politics/articles-reports/2020/10/03/how-trump-and-biden-supportersdiffer-face-masks. Accessed 6 January 2021.
- J. N. Druckman, E. Peterson, R. Slothuus, How elite partisan polarization affects public opinion formation. Am. Polit. Sci. Rev. 107, 57–79 (2013).
- R. P. Burge, White evangelicals' coronavirus concerns are fading faster. https://www. christianitytoday.com/news/2020/june/evangelicals-covid-19-less-worry-social-distancingmasks.html. Accessed 6 January 2021.
- PRRI, Dueling realities: Amid multiple crises, Trump and Biden supporters see different realities and futures for the nation. https://www.prri.org/research/amid-multiple-crises-trump-and-biden-supporters-see-different-realities-and-futures-for-the-nation/. Accessed 7 January 2021.
- M. Margolis, Who wants to make America great again? Understanding evangelical support for Donald Trump. Politics Relig. 13, 89–118 (2020).
- R. P. Burge, Where do White evangelicals get their coronavirus news? The White House. Christianity Today, 14 March 2020. https://www.christianitytoday.com/news/ 2020/may/evangelicals-trump-media-public-health-response-coronavirus.html. Accessed 7 January 2021.0009-5753.

- S. L. Perry, A. L. Whitehead, J. B. Grubbs, Prejudice and pandemic in the promised land: How White Christian nationalism shapes Americans' racist and xenophobic views of COVID-19. Ethn. Racial Stud. 44, 1–14 (2020).
- H. Smothers, R. Burge, P. Djupe, The gendered religious response to state action on the coronavirus pandemic. *Polit. Gend.* 16, 1063–1074 (2020).
- 13. M. Feinberg, R. Willer, From gulf to bridge: When do moral arguments facilitate political influence? *Pers. Soc. Psychol. Bull.* 41, 1665–1681 (2015).
- M. Feinberg, R. Willer, The moral roots of environmental attitudes. Psychol. Sci. 24, 56–62 (2013).
- M. V. Day, S. T. Fiske, E. L. Downing, T. E. Trail, Shifting liberal and conservative attitudes using moral foundations theory. Pers. Soc. Psychol. Bull. 40, 1559–1573 (2014).
- J. N. Druckman, On the limits of framing effects: Who can frame? J. Polit. 63, 1041–1066 (2001).
- I. Bloemraad, F. Silva, K. Voss, Rights, economics, or family? Frame resonance, political ideology, and the immigrant rights movement. Soc. Forces 94, 1647–1674 (2016).
- 18. J. G. Voelkel, M. Feinberg, Morally reframed arguments can affect support for po-
- litical candidates. Soc. Psychol. Personal. Sci. 9, 917–924 (2018).

  19. I. Feygina, J. T. Jost, R. E. Goldsmith, System justification, the denial of global warming, and
- the possibility of "system-sanctioned change". Pers. Soc. Psychol. Bull. 36, 326–338 (2010).
  20. P. A. Djupe, B. R. Calfano, God Talk: Experimenting with the Religious Causes of Public Opinion (Temple University Press, Philadelphia, PA, 2013).
- 21. M. F. Margolis, How far does social group influence reach? Identities, elites, and immigration attitudes. *J. Polit.* **80**, 772–785 (2018).
- A. Blake, The biggest obstacle to a broadly deployed coronavirus vaccine: The GOP base. The Washington Post, 15 September 2020. https://www.washingtonpost.com/ politics/2020/09/15/republicans-are-calling-democrats-coronavirus-anti-vaxxers-their-ownbase-is-most-skeptical/. Accessed 12 January 2021.
- S. L. DeMora, J. L. Merolla, B. Newman, E. J. Zechmeister, Replication data for: Reducing mask resistance with value consistent messages. *Harvard Dataverse*. https://doi.org/10.7910/DVN/WMLLE7. Deposited 30 April 2021.

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