

How populism and conservative media fuel conspiracy beliefs about COVID-19 and what it means for COVID-19 behaviors

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Dominik A. Stecula¹  and Mark Pickup²

Abstract

Research examining attitudes and behaviors of Americans during the COVID-19 pandemic has largely focused on partisanship as a lens through which many Americans see the coronavirus. Given the importance of partisan affiliation and the degree of partisan polarization in the American society, that is certainly an important driver of public opinion, and a necessary one to understand. But an overlooked set of predispositions might also shape COVID beliefs and attitudes: populism. It is a worldview that pits average citizens against “the elites” and, importantly in the context of a pandemic, it includes anti-intellectual attitudes such as distrust of experts (including scientists). We find that populism is correlated with conspiracy beliefs about COVID-19, *above and beyond* partisanship. Furthermore, we find that conservative media consumption tends to be a stronger predictor of conspiracy belief among those high in populism than among those low in populism. We also show that these beliefs have consequences: those who believe the conspiracy theories about COVID-19 are less likely to adapt behaviors recommended by public health officials.

Keywords

Populism, COVID-19, conspiracy theories, misinformation, conservative media

The global coronavirus pandemic has spurred much research on the political determinants of COVID-19 related attitudes and behaviors. This quickly growing body of work has focused extensively on partisanship and conservative news media as drivers of such attitudes and behaviors, including endorsement of conspiracy beliefs and denial of expert accounts of events (see, for example Motta et al., 2020; Pickup et al., 2020; Uscinski et al., 2020). What these works overlook is another predisposition that cuts across partisan affiliation: populism.

In this paper, we examine the relationship between populism and belief in two COVID-19 conspiracy theories. First, we show that populist attitudes are evident among both Democrats and Republicans, and that populists in both camps consume some conservative media. Second, we show that populism is a strong predictor of belief in COVID conspiracy theories above and beyond partisanship. Third, we show that it is populists who consume conservative news media that are most likely to believe in COVID-19 conspiracies. Finally, we show that those who believe COVID conspiracies are less likely to adapt behaviors recommended by public health officials.

Previous work shows that populism correlates with conspiratorial thinking generally (Oliver and Rahn, 2016) and conspiratorial thinking predicts belief in COVID-19 conspiracies (Uscinski et al., 2020) but the direct effect of populism on belief in COVID-19 conspiracies has not been tested. This is important because populism is a more explicitly political manifestation of conspiratorial thinking and distrust in experts. Moreover, as Fenster (2008) notes, conspiratorial thinking is a non-necessary subset of populism. Which is to say that while conspiratorial thinking is common to populism, not all populist attitudes require an individual to embrace conspiracies.

Demonstrating that populism specifically is a predictor of belief in COVID-19 conspiracies is our first contribution. Further, previous work shows conservative news media is

¹Colorado State University, Fort Collins, CO, USA

²Simon Fraser University, Burnaby, BC, Canada

Corresponding author:

Dominik A. Stecula, Colorado State University, B350 Clark Building, Fort Collins, CO 80523, USA.

Email: dominik.stecula@colostate.edu



more likely than mainstream news media to spread COVID-related conspiracy theories (Motta et al., 2020) but there has been no comparison of the effect of conservative news media on belief in COVID-19 conspiracies between those that do and do not exhibit populist sentiment. Demonstrating that the effect of conservative news media is primarily amongst those with populist attitudes is our second contribution. This is important because, as we show, populist attitudes are not confined to those on the right and it is not just Republicans that watch conservative news media, and once we control for populism and media consumption, partisanship and ideology are no longer consistent predictors of belief in these conspiracies.

Populism, conspiracy beliefs, and news media consumption

In the following, we outline our empirical expectations derived from the current understanding of populism, conspiracy beliefs, and news media consumption. Populism is a worldview that pits average citizens, “the people,” against “the elites,” who are viewed as corrupt and morally inferior, in a conflict that is both political and economic (Kazin, 1995; Mudde and Kaltwasser, 2017; Müller, 2017). This “ordinary people versus the corrupt elite” is the ideational definition of populism but Oliver and Rahn (2016) find that populism today in the US contains a second “distrust of experts” dimension.¹

We already know that partisanship plays an important role in COVID-19 beliefs and behaviors (Gadarian et al., 2020; Pickup et al., 2020). When political actors inject themselves into the public debate about a scientific issue, public opinion on that issue polarizes along party lines (Merkley and Stecula, 2020). That happens because, at a time of high partisan animus, when political identities are strong, messages from trusted political actors have an outsized role in shaping public opinion (Mason, 2018; Lenz, 2012). We argue it is necessary to go beyond partisanship to understand COVID-related beliefs and behaviors because populist attitudes need not be restricted to just the left or the right of the political spectrum. As Freedman (2003), Mudde and Kaltwasser (2017), Stanley (2008), and others state, populism is a “thin-centered ideology,” meaning that it attaches itself to other ideological elements, because on its own, populism does not offer comprehensive answers to all political questions (Müller, 2017). This does not mean that populism is without meaning. Populism is clear on the fact that politics is a clash between the elite and non-elite and conveys a clear distrust of experts, intellectuals, and existing forms of representation (Meijers and Zaslove, 2021), but it leaves unanswered questions such as how institutions in the political, cultural, and economic realm relate to each other.² As a result, populism is in practice combined with other (typically more complex) ideologies and can thrive

on both ideological right and left. In the United States, populism has historically been associated with egalitarian left-wing politics, as exemplified by the “progressive” movement at the turn of the 20th century (Müller, 2017), but has more recently become associated with the political right. Hence, our *first expectation* is that populist attitudes can be found among both Democrats and Republicans.

The linkage between populism and conspiracy beliefs *in general* has been demonstrated in previous work (Van Prooijen, 2018). Oliver and Rahn (2016) find that the belief in a conflict between the elite and average citizens correlates strongly with conspiratorial thinking. They note that “conspiracy theories seem to function as a form of populist discourse.” The distrust of experts and intellectuals aspect of populism has also been found to correlate with belief in conspiracy theories (Merkley, 2020; Oliver and Rahn, 2016). This is likely because in both traditional and social media, appeals to expert opinion are frequently used to debunk conspiracy theories and this is ineffective amongst those that do not trust such experts and may even interpret such appeals as evidence of the truth of the conspiracies. Our *second expectation* is that, controlling for partisanship and ideology, populism is correlated with belief in COVID-19 related conspiracies.

We also know that conservative news media is much more likely than mainstream news media to spread COVID-related misinformation and conspiracy theories (Motta et al., 2020), suggesting consumption of conservative news media may play an important role in the relationship between populism and COVID conspiracy theory beliefs.³ Further, there is evidence that it is not only Republicans who consume these sources of information, but also many Democrats (Guess et al., 2018; Mitchell et al., 2014). Therefore, the effects of conservative media on COVID-related conspiracy theories need not be limited to Republicans but may apply to a much broader group of Americans. As a result, our *third expectation* is that, controlling for partisanship and ideology, it is populists who consume conservative news media that are most likely to believe in COVID-19 conspiracies.

The relationship between populism and COVID-19 conspiracy beliefs above and beyond partisanship has important consequences. As the scope of the coronavirus pandemic has become clear, and politicians take action to address this massive public health crisis, a common worry is that the voices of trusted experts, such as Dr Anthony Fauci, have become drowned out in the public debate by politicians who inadvertently polarize Americans. It has been suggested that the strong presence of non-partisan, trusted experts in the news media might mitigate the problems created by partisanship (Merkley and Stecula, 2020). To the extent that COVID-19 beliefs and behaviors are related to populism, rather than partisanship, this may not be enough. This is because Americans who distrust experts

might simply reject any messaging that they are promoting. This has potential consequences for public health with respect to COVID-19. Existing research has shown, for example, that the rise of populism has been associated with concrete health attitudes, such as an increase in vaccine hesitancy (Kennedy, 2019). Our *fourth expectation* is therefore that belief in COVID-19 conspiracy theories is related to engaging in fewer behaviors aimed at preventing the spread of the coronavirus as recommended by public health experts, such as social distancing, avoiding crowds, or washing hands more often.

Data and methods

Our data come from an original survey of 1009 adult Americans conducted using Lucid on March 31, 2020. The data reflect the US population due to demographic (age, gender, ethnicity, and region) quotas that Lucid employs in its data collection process. Previous work has shown that Lucid is a high-quality source of public opinion data (Coppock and McClellan, 2019). To further ensure our sample is reflective of the general American public, we generated weights, using the iterative proportional fitting algorithm (raking), based on race, ethnicity, and educational attainment benchmarked to the US Census's Current Population Survey from February 2018.

We measure COVID-19 conspiracy beliefs, our dependent variables, as respondent agreement with two statements: (a) The Chinese government developed the coronavirus as a bioweapon; (b) There is a vaccine for the coronavirus that national governments and pharmaceutical companies won't release. The response options were a four-point scale: strongly agree to strongly disagree. This was dichotomized into "agree" and "disagree."

Populism is operationalized by two indices. These indices are the product of a principal factor analysis of agreement with five statements on a scale of strongly disagree, somewhat disagree, somewhat agree, and strongly agree.

1. The United States is divided between ordinary people and the corrupt elites who exploit them.
2. The will of the people should be the highest principle in this country's politics.
3. It doesn't really matter who you vote for because the rich control both political parties.
4. I'd rather put my trust in the wisdom of ordinary people than the opinions of experts and intellectuals.
5. When it comes to really important questions, scientific facts don't help that much.

The statements are designed to capture what we believe to be two core aspects of populism: conflict between average citizens and elites, and distrust of experts and intellectuals. We include the first three statements to capture the

anti-elite aspect. The first two statements were developed by scholars working at the YouGov-Cambridge Globalism Project designed to measure populism across the globe,⁴ while the third statement came from previous work by Oliver and Rahn (2016). To capture the *distrust of experts* aspect of populism, we rely on the fourth and fifth statements, derived from previous survey measures of populism (Oliver and Rahn, 2016). Note that an individual could agree with the statements without exhibiting conspiratorial thinking, with the possible exception of the third statement.

The factor analysis suggested a two-factor (dimension) solution. After an orthogonal rotation, the *distrust of experts* statements load most heavily on one dimension and the three *anti-elite* statements load most heavily on the other dimension (see Supplementary Materials). Interestingly, the most conspiratorial item (the third item) loads least on either dimension. The two populism indices were created by standardizing the factor scores for each dimension.

News media consumption was calculated using self-reported measures of usage of various news media outlets and combined into simple additive indices. Mainstream news index includes outlets like National Public Radio (NPR), *Wall Street Journal*, and broadcast and local television news, as well as local and regional newspapers ($\alpha=0.79$). We call these mainstream news because, based on countless survey work by the Pew Research Center, these outlets are consumed by the majority of Americans. Conservative news index includes outlets like Fox News, Rush Limbaugh, and Breitbart ($\alpha=0.76$). We label these as conservative because of their explicit ideological slant. Exact wording of these questions is provided in the Supplementary Materials.

Our control variables include common socioeconomic indicators, including race, ethnicity, education, gender, age, and household income. We also account for partisan affiliation and ideology, and trust in the Centers for Disease Control and Prevention (CDC) because it has been shown to correlate strongly with health misinformation (Stecula et al., 2020).

One important caveat is that we do not have a measure of conspiratorial thinking as a control in our analysis. We concede that it is a notable omission, in light of the prominence of this measure in recent work (e.g. Uscinski et al., 2020) on COVID-19 conspiracies. Undoubtedly, conspiratorial thinking correlates with populist attitudes in the US (Oliver and Rahn, 2016). The difficulty is that there is no agreement on the causal order of populist attitudes and conspiratorial thinking. Oliver and Rahn's description of conspiracies as part of populist discourse (2016) suggests that populist attitudes come before conspiratorial thinking. Similarly, Zavala and Keenan (2020) suggests conspiracy theories fill a need in populist thinking driven by collective narcissism. However, it is also possible that conspiratorial thinking makes one more likely to adopt

populist attitudes. To the extent that populist attitudes come before conspiratorial thinking, including conspiratorial thinking as a control in our analysis would bias our results.⁵ To the extent that conspiratorial thinking comes before populist attitudes, excluding it as a control means that our estimated effect of populism may pick up some of the effects of general conspiratorial thinking. A third possibility is that populist attitudes share many of the same psychological, economic, and social origins as conspiratorial thinking (Douglas et al., 2019). From this perspective, populist attitudes are a more overtly political manifestation of conspiratorial thinking. We personally adopt the view of Fenster (2008; 84) that

conspiracy theory is populist in its evocation of an unwitting and unwilling populace in thrall to the secretive machinations of power, and conspiracy theory indeed serves as a non-necessary element of populist ideology—which is to say that all conspiracy theory is by definition populist, but not all populist movements rely upon or even use conspiracy theories to build support.

As such, our measures of populism include agreement with statements that do not necessarily require conspiratorial thinking but certainly could be the product of conspiratorial thinking. We believe that our paper is ultimately about the relationship between populism, including any conspiratorial elements it might contain, and belief in particular conspiracy theories. We therefore do not want to control for the conspiratorial elements of populism, as would be the case if we included conspiratorial thinking as a control in our analysis.

To test the effect of belief in COVID-19 conspiracies on health behaviors, we measure COVID-19 health behaviors by asking respondents: “What changes, if any, have you made to your normal routine in response to the COVID-19 pandemic? Select all that apply.” We listed 22 specific behaviors (listed in the Supplementary Materials) recommended by public health experts, ranging from social distancing to avoiding crowded places and washing hands more often. Our measure of behaviors is the number of behaviors selected by each respondent.

Findings

To start with, we find that a very high number of Americans endorse conspiracy beliefs about COVID-19. Nearly half of Americans (48%) either somewhat or strongly agree that COVID-19 is a Chinese bioweapon. A smaller, but still considerable 38% of Americans believe that a coronavirus vaccine already exists but is withheld from the public by national governments and pharmaceutical companies. These numbers are very high, and likely at the higher end of estimates, but not unprecedented.⁶ Previous work found comparably high support for some conspiracy theories, and the current circumstances are truly unprecedented (Oliver

and Wood, 2014). Given the salience of the global pandemic, the uncertainty of the COVID-19 origin, the increasingly negative view of China among Americans, and the prominence of conspiracy theories in the news media coverage, it is understandable that such a high proportion of Americans endorse these beliefs.

Before we establish the role of populism in conspiracy beliefs, we demonstrate that, consistent with our first theoretical expectation, populist attitudes are found on both the political left and right. As Figure 1 shows, populist attitudes are distributed fairly evenly among both Republicans and Democrats. Republicans tend to score higher on the *distrust of experts* dimension of populism and Democrats on the *anti-elite* dimension. This is consistent with recent work in the US. During the 2016 presidential election, attitudes of supporters of one of the Democratic candidates, Bernie Sanders, were very strong in *anti-elite* sentiment—more so than supporters of the Republican candidate, Trump (Oliver and Rahn, 2016). Trump supporters, on the other hand, exhibited a stronger *distrust of experts* compared to Sanders supporters. The distribution of populism amongst Republicans and Democrats suggests that populism as a concept is not merely a reflection of one’s partisan affiliation, and therefore can have an independent impact on conspiracy beliefs.

Next, we use probit regression models with and without interactive effects between populist attitudes and conservative news consumption to explore the predictors of COVID-19 conspiracy beliefs. The models without interactions show that, consistent with our second expectation, both dimensions of populist attitudes are independently strong predictors of believing that COVID is a Chinese bioweapon and that a vaccine already exists, even with the controls (Figures 2 and 3, top panels).⁷ It is also important to point out that partisanship and ideology, with the controls, are inconsistent predictors of belief in these conspiracies. This suggests that focusing only on the partisan angle might obscure the reasons behind these conspiratorial beliefs.

We also find an interactive relationship between populist attitudes and conservative news consumption (Figures 2 and 3, bottom panels). It is worth highlighting that conservative news media consumption is not limited to Republicans and mainstream media is not limited to Democrats. In our sample, 27% of Democrats consume more than the median (for the entire sample) amount of conservative news. Similarly, 41% of Republicans consume more than the median amount of mainstream news.⁸ Importantly, the consumption of conservative news is particularly prevalent among Democrats who are high on populist attitudes (defined here as being above sample median on each dimension of populism). Specifically, we find that among Democrats high on the *distrust of experts* dimension, 39% consume more than the median amount of conservative news. Among Democrats high on the *anti-elite* dimension, that number increases to 53%.

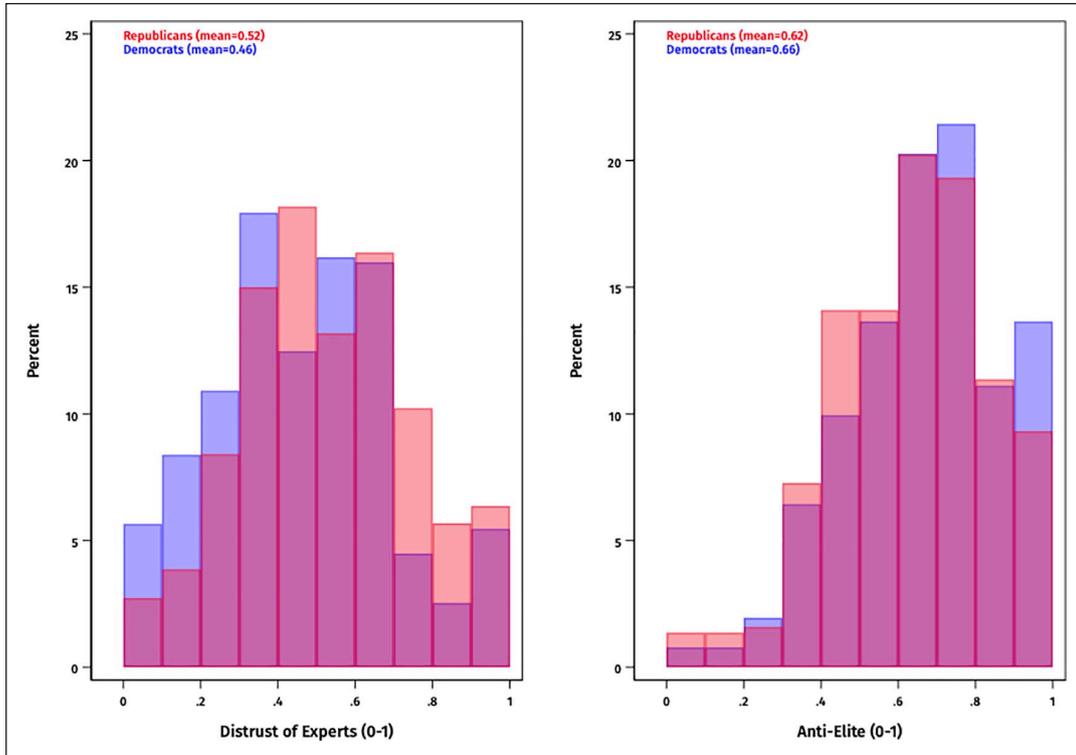


Figure 1. Distribution of populism across party lines.

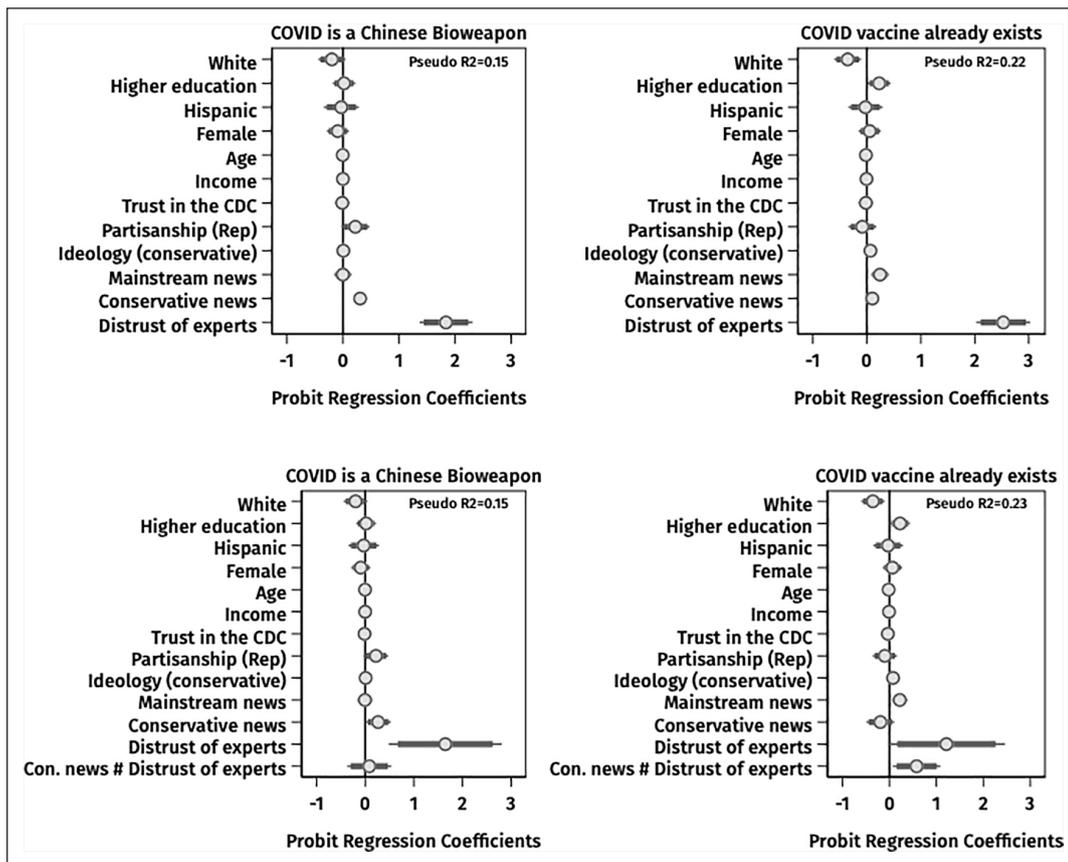


Figure 2. Probit regression coefficient plots with 90% (thick line) and 95% (thin line) confidence intervals. Results are weighted.

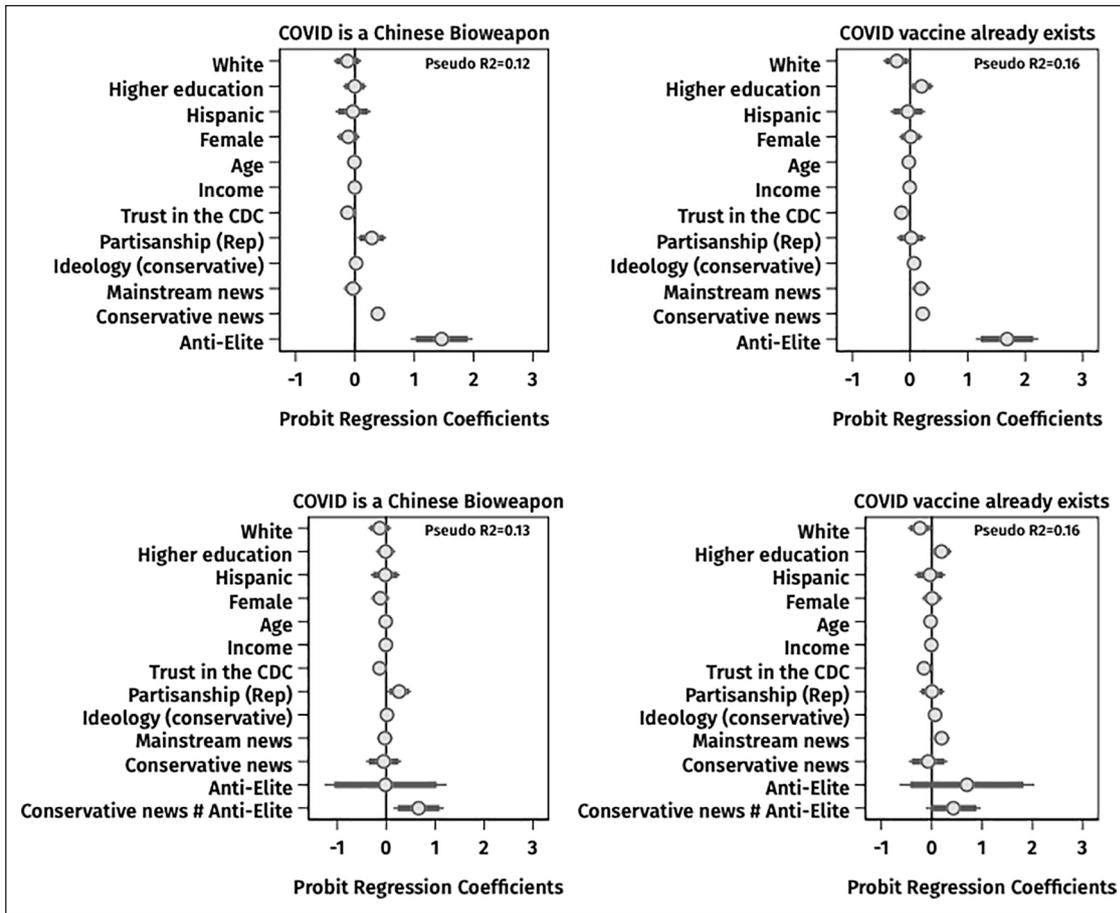


Figure 3. Probit regression coefficient plots with 90% (thick line) and 95% (thin line) confidence intervals. Results are weighted.

Common claims among pundits is that most Americans occupy ideological echo chambers, with those on the political right consuming primarily conservative content, such as Fox News or Breitbart. These people, of course, do exist, but there is a considerable number of Democrats consuming conservative news. As a result, the influence of conservative media is not necessarily limited to Republicans alone.

We find that those that score high on distrust of experts and consume conservative media are significantly more likely to endorse the vaccine conspiracy than non-populists, and those that score high on anti-elite sentiment and consume conservative media are significantly more likely to endorse the bioweapon conspiracy.⁹ These statistically significant interactive relationships are plotted in Figure 4.

Previous work documented that conservative news consumption is related to conspiracy beliefs about COVID-19 (Jamieson and Albarracín, 2020; Motta et al., 2020). Our results show that conservative news content is particularly impactful on those scoring high in populist attitudes (our third expectation). Figure 4 demonstrates that, for those who frequently consume conservative media, the predicted probability of believing that COVID

is a Chinese bioweapon is 62% for those low on the populism index (25th percentile on the second dimension of populism), but 84% for those high on the index (75th percentile). For frequent consumers of conservative news, the probability of believing the vaccine conspiracy is 25% for those low on the populism index (25th percentile of the first populism dimension), but 62% for those high on the index (75th percentile).

Lastly, we find that these conspiracy beliefs have concrete, real-world consequences on COVID-19 related behaviors (our fourth expectation). Accounting for relevant controls,¹⁰ those who believe that a COVID-19 vaccine already exists adapt, on average, 1.4 fewer public health expert recommended behaviors than those who do not believe in that conspiracy theory. There is no statistically significant relationship between those who believe that COVID-19 is a Chinese bioweapon and the number of behaviors they adapt. That could be a result of the fact that the two conspiracy theories are very different in nature and likely trigger different considerations about the danger posed by the virus. A belief that COVID is a bioweapon means that it poses a very real and serious threat, while belief that Big Pharma is hiding a vaccine reflects a broader

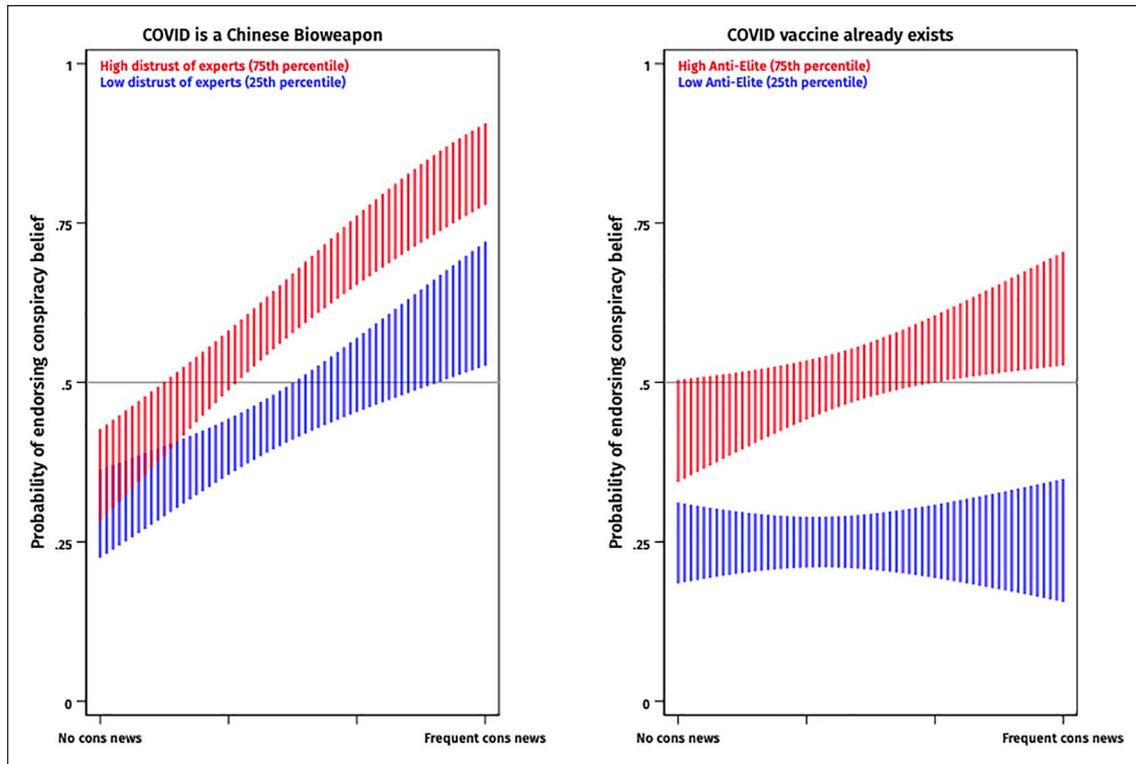


Figure 4. Predicted probabilities, with 95% confidence intervals, of endorsing each conspiracy belief, by level of populism and conservative news consumption. The plots show predicted probabilities of believing in each conspiracy theory controlling for demographics, trust in the CDC, partisan affiliation, ideology, and mainstream media consumption (based on the probit regression models in Figures 2 and 3).

distrust of the medical establishment, which might be associated with less willingness to adapt their prescribed behaviors (Imhoff and Lamberty, 2020).

Discussion

Our findings offer three prescriptions to the public discussion about COVID-19. First, we suggest that top-down messaging from those perceived to be from among the elite, or the expert community, is unlikely to work. Populist rhetoric primes anti-intellectual sentiment and makes messages from health experts unlikely to stick (Merkley, 2020). Instead, bottom-up messaging from fellow populists might. Although a sizeable majority of Americans trust experts and listen to their advice, there exists a proportion of Americans who are weary of their prescriptions, and to reach these people, different messengers are needed: people whom they know and trust. That is not to say that experts should disappear from the news. On the contrary, it is important to maintain their strong presence in COVID-19 media coverage, because they remain trusted by most Americans across party lines (Stecula, 2020). But to reach those skeptical of elites, different messengers are needed, people trusted in their community.

Secondly, and relatedly, our findings imply that corrections to misinformation and conspiracy theories might not work for those with populist attitudes. There has been a major increase in fact-checking journalism in recent years, and that trend has potentially only increased during the pandemic, when an unprecedentedly large proportion of the population has tuned in to the news (Graves, 2016; Stecula, 2020). Unfortunately, corrections about COVID-19 conspiracies and misinformation coming primarily from experts might backfire among those high in populist attitudes. The rejection of conspiracies by elites might cause populists to believe more strongly in the conspiracies. This effect has been documented among populists regarding several scientific issues (Merkley, 2020). The solution, again, suggests careful selection of messengers and more careful consideration of how to reach these people.

Finally, our findings highlight that messages and appeals designed to combat conspiracy theories need to be targeted to both sides of the left–right political spectrum. The underlying assumption of many commentators is that these COVID-19 conspiracy theories are driven by Americans on the far right. We show that it is also driven by populists independent of ideology or partisanship. Policymakers, journalists, and public health experts cannot forget about

left-wing populists as a demographic when they tailor their corrective messages.

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ORCID iD

Dominik A. Stecula  <https://orcid.org/0000-0001-6724-7559>

Supplementary materials

The replication files are available at: <http://thedata.harvard.edu/dvn/dv/researchandpolitics>

Notes

1. Oliver and Rahn (2016) also identified a national affiliation dimension but it does not correlate strongly with conspiracism.
2. In general, the hostility on the left towards the elite is currently rooted in concerns about economic inequality, wealth, and privilege of the economic elites, while on the right, it manifests itself as hostility towards excessive power and size of the government (Merkley, 2020).
3. The tenor of the conservative media coverage changed after President Trump declared the pandemic a national emergency on March 13, 2020, but conspiracies and misinformation have not stopped. In fact, as discussion of a COVID-19 vaccine accelerates, new conspiracy theories have emerged, and the anti-vaccine minority has joined forces with stay-at-home order protesters (Orr, 2020).
4. Details are available at: <https://yougov.co.uk/topics/international/articles-reports/2019/05/01/about-yougov-cambridge-globalism-project>
5. Including a mediator causes a bias similar to posttreatment bias in experiments.
6. A recent poll (Garrison, 2020) found that 44% of Americans believe that COVID was made in a lab and 29% believe that a coronavirus vaccine exists and is being withheld. Our numbers are higher than these, which might be an artifact of the exact question wording and response option choices (our absence of an explicit "don't know" option), as well as other design decisions. See Sutton and Douglas (2020) for a more thorough discussion of these points.
7. Significance is based on a two-sided test, using a 95% confidence level.

8. These findings are consistent with surveys conducted by the Pew Research Center (Jurkowitz et al., 2020) showing that nearly a quarter of Democrats get their news regularly from Fox News, while many Republicans get their news regularly from outlets such as ABC, CBS, and NBC News.
9. The p-values are 0.01 for the bioweapon conspiracy and 0.02 for the vaccine conspiracy, respectively.
10. Including demographics, trust in the CDC, partisan affiliation, ideology, and conservative and mainstream news consumption indices.

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