Do Populists Really Reject Expert Judgment?: Expert Consensus and Support for Clean Water Act Protections

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Abstract

Recent work on voting behavior and political attitudes has established the relevance of anti-intellectual, anti-science and anti-expertise attitudes in politics. However, the increasing relevance of anti-expertise attitudes raises a paradox, as one of the most well-established claims of the persuasion literature concerns the influence of expert sources on attitudes. The current paper explores the influence of messages based on public and expert consensus, as well as the interaction of these messages with expressed mistrust of experts relative to the public. The issue we explore concerns environmental regulations relating to water, an issue on which partisan elites are divided, but one that has not played a highly salient role in recent political discourse. We find that mistrust of experts is negatively related to support for these regulations, as expected, but that, contrary to prior research, increases in mistrust of experts in fact enhanced the impact of the expert message. We discuss potential explanations for why this pattern of results differs from prior work.

Introduction

Recent work on voting behavior and political attitudes has established the relevance of anti-intellectual (Merkley, 2020; Motta, 2018a), anti-science (Mede & Schafer, 2020; Rekker, 2021) and anti-expertise (Brewer, 2016; Oliver & Rahn, 2016) attitudes in politics. According to some conceptualizations, anti-expert attitudes are an important component of populist attitudes (Oliver & Rahn, 2016) and are related to salient beliefs and attitudes, including attitudes about climate change and the environment (Merkley, 2020; Motta, 2018a). However, the increasing relevance of anti-expertise attitudes raises a paradox, as one of the most well-established claims of the persuasion literature concerns the influence of expert sources on attitudes (O'Keefe, 2016; Pornpitakpan, 2004).

The current note explores the influence of messages based on public and expert consensus on support for environmental regulations relating to water, an issue on which partisan elites in the United States are divided. The U.S. Clean Water Act provisions for protection of small streams and wetlands were weakened under the Trump administration in 2020 and reinstated by a court ruling in 2021 at the request of the Biden administration. We focus on the Great Lakes region in the U.S. because of the importance of the potential impact of changes to the Clean Water Act on these lakes. The Great Lakes are home to 84% of North America's surface fresh-water and the primary source of drinking water for more than 30 million people in the United States and

Canada (Environmental Protection Agency [EPA], n.d.). The Great Lakes region is a geographically, historically, and culturally unique region and policies to protect the Great Lakes watershed exist at state, federal, and international jurisdictions. Our study results show that watershed protection messages framed around expert consensus are influential, and that, contrary to expectations, populist attitudes—specifically, mistrust of experts—do not diminish their influence.

Literature Review

The U.S. presidential election in 2016 renewed scholarly interest in the role of populism in U.S. politics. While there is considerable scholarly debate about the nature of populism (Bonikowski & Gidron 2016; Elchardus & Spruyt, 2016; Mudde & Kaltwasser, 2017; Stanley, 2008), scholars agree that the core element of populism consists of appealing to a homogenous public—"the people" - against an untrustworthy or malicious power elite (Canovan, 1999; Jagers & Walgrave, 2007; Mudde, 2004). More recent work has distinguished attitudes toward experts -such as scientists and university faculty—from other political elites (Mede, Schäfer, & Füchslin, 2021; Merkley, 2020; Motta, 2018b). Populists see mainstream experts as part of a corrupt elite biased by political or financial interests (Barker, Detamble, & Marietta, 2021; Eberl, Huber, & Greussing, 2021; Elchardus & Spruyt, 2016;

Mietzner, 2020; Ylä-Anttila, 2018). Anti-expert attitudes are particularly important for attitudes and beliefs relating to a number of political controversies where science plays an important role (Merkley, 2020; Motta, 2018a; Motta et al., 2018; Stecula & Pickup, 2021).

Research showing that anti-expert attitudes are highly salient to large subsets of the population is paradoxical to years of research on the persuasive power of expertise. A key finding of the persuasion literature is that source credibility, judgments made about the extent to which a communicator is a source of correct and valid assertions, can function as a powerful persuasive cue (Pornpitakpan, 2004). Source credibility typically comprises at least two dimensions: perceived expertise and trustworthiness (Besley, Lee, & Pressgrove, 2021; Metzger, Flanagin, Eyal, Lemus, & Mccann, 2003).[1] Highly credible sources are often more persuasive than less credible sources, but in some cases, the opposite is true (see O'Keefe, 2016 for a review). In particular, if a topic is pro-attitudinal, credible sources enhance the persuasiveness of messages, but if a topic is counter-attitudinal and contains weak arguments, a low-credibility source is more persuasive than a high credibility source (Clark & Evans, 2014); if a topic is highly personally relevant, source cues, like credibility, appear to be less impactful (c.f. research on the elaboration likelihood and heuristic systematic model in O'Keefe, 2016). Studies have shown that scientific consensus cues—or messages conveying expert agreement about contentious issues—can influence public attitudes (van der Linden, Leiserowitz, Feinberg, & Maibach, 2015; van der Linden, Leiserowitz, & Maibach, 2019). Yet, their effects have been shown to be conditional on factors such as existing attitudes, source perception, and political ideology (Dixon, 2016; Dixon & Hubner, 2016). Populism may be an additional potential moderator of the effects of expert consensus on attitudes or beliefs, as some conceptualizations of populism include experts as members of a distrusted elite (Barker et al., 2021; Eberl et al., 2021; Elchardus & Spruyt, 2016; Mietzner, 2020; Ylä-Anttila, 2018).

One feature of populism that has not been explored in depth is that populists express low levels of trust in experts *relative to* the public. This may mean that, in addition to weakening responses to expert consensus, populism may increase receptivity to messages about public consensus. Social norms, particularly information about other people's support for policies, ideas, or behaviors, can influence what people think and do (Lapinski & Rimal, 2005; DixonYamin, Fei, Lahlou, 2019). Information about what is normative may be especially influential for people who embrace populist attitudes, as populists claim to value the judgment of "the people" more than that of experts and other elites.

Are populists immune to the persuasive power of experts, and are they especially receptive to messages involving public support? It may be the case that prior work on persuasion masked heterogeneity in the public, and that the influence of expertise is limited—or can even backfire—with those who have populist orientations. On the other hand, expressions of mistrust of experts need not be taken literally. They instead could be interpreted as expressions of policy attitudes, identity, or values rather than rejection of expertise. This interpretation is reasonable if the public tends to associate certain policies or identities—such as support for environmental regulations or environmentalists—with experts or expert judgment.

Hypotheses

Messages about social norms have been found in a variety of contexts to influence attitudes, beliefs, and behaviors (Chung & Rimal, 2016; Rhodes et al., 2020). In particular, providing information about public support and describing the source of the information showing the support can serve as *prima facie* evidence about the quality of the proposal (e.g. serving an informational function, Jones & Gerard, 1967) or could provide social pressure to support it (Asch, 1956). We predict that public consensus messages in support of water regulations will increase support for those regulations:

> H1: People exposed to public consensus messages will have higher levels of support for environmental regulations than members of the control group.

Expert support has also been shown to influence attitudes in the climate communication literature (Ding, Maibach, Zhao, Roser-Renouf, & Leiserowitz, 2011) and other areas (Chinn, Lane, & Hart, 2018; Dixon, 2016; Kerr & Wilson, 2018; Kobayashi, 2018; Kuru et al., 2021). We predict that messages which focus on expert consensus in support of an issue will increase support for regulations:

> H2: People exposed to expert consensus messages will have higher levels of support for environmental regulations than members of the control group.

A variety of studies have shown that populism is correlated with opposition to environmental regulations (Huber et al, 2020) and attitudes about other political issues (Merkley, 2020; Motta, 2018a; Motta et al, 2018; Stecula & Pickup, 2021). As such, the third prediction is consistent with prior research findings:

> H3: There will be a negative relationship between anti-expert populism and support for environmental regulations.

Anti-expert populism concerns attitudes toward the judgments of experts relative to those of the public (Oliver & Rahn, 2016). Populist attitudes should therefore enhance the influence of public consensus messages and diminish the impact of expert consensus messages relative to a control:

> H4: The effect of public consensus messages on support for environmental regulations increases with anti-expert populism.

> H5: The effect of expert consensus messages on support for environmental regulations decreases with anti-expert populism.

A final research question concerns the joint impact of the treatments and anti-expert populism on seeking out additional information, included as a behavioral outcome in the study. Seeing that the public or experts support a measure may prompt curiosity about additional information about the experts' reasons for support. However, as perceived trustworthiness (Wang, Shi, & Kong, 2021) and political attitudes (Peterson & Iyengar, 2021) are predictors of information

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[1] Importantly, most experimental studies do not separate these two dimensions of source credibility (O'Keefe, 2016) and reviews suggest the effects of each dimension may be different (Pornpitakpan, 2004).

seeking, anti-expert populism may increase the impact of public treatments and decrease the impact of expert treatments on information seeking:

RQ: How will expert messages, public messages, and anti-expert populism influence information seeking?

Method

An online survey of adults from the U.S. Great Lakes region (Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, Wisconsin) was conducted via Dynata (https://www.dynata.com/) in spring 2021. This region was chosen as the study site because of the critical importance of this region as the source of drinking water for millions of people in North America and because of the unique role that lakes play for people living in this region (EPA, n.d.). Researchers collected a sample size of N = 992 completed surveys. Table 1 presents descriptive statistics.[2]

Procedure

All respondents read a brief description of a rule relating to the protections of smaller streams and wetlands under the Clean Water Act. The description was balanced in providing arguments in favor of and against the rule. The treatment statements appeared after the description of supporting arguments and before descriptions of arguments against the rule. Respondents were randomly assigned to the *public treatment*: "Among members of the public surveyed in a public opinion poll, over 80 percent expressed support for the rule"; the *expert treatment*: "Among experts who provided comments on the rule, over

Table 1. *Descriptive Statistics*

Variable name	N (%)
Experts Msg	341 (34%)
Public Msg	325 (33%)
Control	325 (33%)
Expert information seeking	714 (72%)
Public information seeking	718 (73%)
"Own" Great Lakes	710 (72%)
African American	60 (6.1%)
Latinx	29 (2.9%)
Asian American	38 (3.8%)
Female	462 (46.6%)
	M(SD)
Support for water protections	.00 (.93)
Anti-expert populism	.00 (.65)
Age	58.0 (17.4)
Income (9 pt)	5.9 (2.2)
Education (7 pt)	3.4 (1.6)
Follow News (4 pt)	2.1 (.81)
Republican (7 pt)	3.7 (2.3)

[2] An Appendix table compares statistics from the sample to available Census measures (U.S. Census Bureau, n.d.).

80 percent expressed support for the rule"; or to a *control group* receiving neither statement. The treatment statistics were based on actual data on support for the rule (League of Conservation Voters, 2017). The stimulus takes advantage of the fact that the level of support among experts and the public was comparable, removing a potential confounding variable of level of support. The complete stimulus materials are provided in an Appendix.

As a manipulation check[3], respondents were asked: "[a]ccording to the passage you read earlier in this survey about a ruling that smaller streams and wetlands are protected under the Clean Water Act, which of the following is true (check all that apply)." One-way between subjects ANOVA confirms that the manipulation worked as intended: 57% in the expert treatment group versus 47% in the public treatment and 36% in the control group perceived that the message mentioned that experts support the measure (F(2, 988) = 15.0, $p < .001$), 43% in the public treatment perceived that the public supports the measure versus 32% in the expert treatment and 22% in the control group (F (2,988) = 16.7, $p < .001$), and 44% in the control group responded that there was no mention of public or expert support versus 21% in the expert treatment group and 19% in the public treatment group (F (2, 988) = 33.9, $p < .001$).[4]

Measures

Respondents reported their level of support for the rule on two 5-point items ("Do you support or oppose providing the same protections to smaller streams and wetlands as we do for bigger rivers and lakes?"; "Do you support or oppose the Clean Water Act?"; *strongly support—strongly oppose*), reversed and averaged into a standardized scale (α = .85) measuring *support for water protections*.[5]

To measure involvement with the Great Lakes, respondents were asked, "[w]ould you say that one of the Great Lakes is 'your own'? If so, which one?" Respondents could indicate which of the Great Lakes they consider their own or select "[n]one of the Great Lakes," (EPA, 1994). A variable for ownership was coded 1 if they selected one of the Great Lakes, and 0 otherwise.

Anti-expert populism was measured with four Likert-type items derived by Oliver & Rahn (2016) and the American National Election Studies (https://electionstudies.org/); e.g. "I would rather put my trust in the wisdom of ordinary people than the opinions of experts.") To increase the reliability of the scale, two additional 5-point items on trust in "Colleges and universities" and "Scientific research" ("Below is a list of institutions in American society. Please indicate how much confidence, if any, you have in each one?" *complete trust-no trust*). The six items were combined into a standardized, additive *anti-expert populism* scale

[3] The manipulation check followed the items on "ownership" of the Great Lakes, described below. The remaining items described in this section appeared in the survey in the same order they are described in this section.

[4] Based on a reviewer's suggestion, a supplemental Appendix includes analyses using only respondents who passed the manipulation check. The reported results are substantively similar to those presented below.

[5] Support for water protections was high (see the distribution of scores in the Appendix), consistent with recent evidence on rural populations (e.g. Diamond, 2021), although there was variation among respondents; only about one third of respondents had the highest possible score, leaving room for most respondents to increase their support.

Table 2. *Regression Models for Expert and Public Support Messages, Anti-expert Populism, and Support for Water Regulations*

	Support for water regulations (Standardized)					
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
Experts Msg	.11 (.07)	.13+ (.07)			.08 (.06)	.09 (.06)
Public Msg	.06 (.07)	.04 (.07)			.05 (.06)	.04 (.06)
Anti-expert populism			−.69* (.04)	−.59* (.05)	−.80* (.08)	−.69* (.08)
Expert X Populism					.23* (.11)	.23* (.11)
Public X Populism					.05 (.06)	.05 (.11)
"Own" Great Lakes		.28* (.06)		.22* (.06)		.23* (.06)
Republican (7pt)		−.10* (,01)		−.04* (.01)		−.04* (.01)
Follow News		.19* (.04)		.14* (.04)		.14* (.04)
Female		.14* (.06)		.09+ (.05)		.08 (.05)
Age		−.002 (.002)		−.005* (.002)		−.005* (.001)
Income		.013 (.015)		.007 (.014)		.006 (.014)
Education		.04+ (.02)		.02 (.02)		.02 (.02)
African American		−.40* (.14)		−.34* (.15)		−.35* (.15)
Latinx		−.07 (.19)		−.04 (.18)		−.06 (.18)
Asian American		.13 (.16)		−.05 (.15)		−.05 (.15)
Constant	−.06 (.05)	−.40 (.20)	.00 (.03)	−.12 (.18)	−.04 (.04)	−.14 (.19)
N	990	982	990	982	990	982
R^2	.00	.15	.23	.29	.23	.29

Notes: +$p < .10$, *$p < .05$, two-tailed. Unstandardized ordinary least squares estimates with robust SEs in parentheses.

(α = .73) with greater scores indicating lower levels of trust in experts.[6]

After responding to these items, respondents were asked if they would like to see what residents of the Great Lakes states and experts "are saying about the ruling on the Clean Water Act?" The order of these items was randomized. These items were dummy coded (1 = "Yes", 0 = "No") as indicators of *information seeking* about the public and experts, respectively.

Analysis

Dependent variables were regressed on indicators for the two treatment variables. Additional models included interaction terms for *public treatment X anti-expert populism* and *expert treatment X anti-expert populism*.[7] Hypotheses were assessed with two-tailed tests of coefficients (α = .05).[8] Regressions were run with and without a full battery of control variables. Control variables included indicators for *female* gender, *African-American* race, *Asian-American* identity, *Latinx* ethnicity, a seven-point scale measuring *Republican* party identification (strong Democrat—strong Republican), *education* category, *income* category, and *attention to news* about politics.

[6] A correlation matrix of selected variables is included in a supplemental Appendix. Although the treatments could potentially prime anti-intellectual attitudes (see Lunz-Trujillo, 2022), a one-way between subjects ANOVA of the anti-expert populism scale by treatment condition confirmed that anti-expert populism was not affected by the treatments (F (2, 987) = .41, p = .66).

[7] Additional models testing the effects of public/expert treatment X populism X involvement in the Great Lakes on support and information-seeking were predicted and tested. This test is excluded for brevity but available from the first author upon request.

[8] Due to the presence of heteroskedasticity (Breusch-Pagan/ Cook-Weisberg test for heteroskedasticity for Model 2 in Table 2: χ^2 = 39.39, p < .001), robust standard errors were calculated.

Results

The first set of results (Models 1 and 2) concerns the main effects of the treatment variables and relationship between anti-expert populism and support for the rule. The coefficient for the *public treatment* is small and not statistically significant at conventional levels in either Model 1 or adding controls in Model 2. The data are not consistent with H1. However, the coefficient for the *expert treatment* is positive and approaches statistical significance at conventional levels in Model 1 (B = .11, two-tailed *t*-test, p = .12, 95% CI [−.03,.25]) and with the addition of controls in Model 2 (B = .13, two-tailed *t*-test, p = .06, 95% CI [.00,.27]). The data provide some evidence consistent with H2, offering tentative evidence that being informed about expert consensus may slightly increase support for water protections, although the results are not consistently statistically significant.

The coefficient for *anti-expert populism* on attitudes is large, negative, and statistically significant in Model 3 (B = −.69, two-tailed *t*-test, p < .001, 95% CI [−.77, −.60]) and in Model 4 (B = −.59, two-tailed *t*-test, p < .001, 95% CI [−.68, −.50]). According to the estimates, each one-standard increase in the standardized anti-expert populism scale decreases the standardized scale of support for the water rule by approximately two-thirds of a standard deviation. The results support H3.

Models 5 and 6 add interaction terms for the treatments and anti-expert populism. The coefficient for the interaction term for the *public treatment X anti-expert populism* is small and not significant in Model 5 or Model 6; the results suggest that anti-expert populism does not affect the influence of the public treatment. The results do not support H4.

The coefficient for the interaction term for the *expert treatment X anti-expert populism* is positive and statistically significant. This is the opposite of the prediction in H5: anti-expert populism in fact increases the influence of the expert treatment,

such that stronger endorsement of anti-expert populism in fact increases the influence of expert messages on support for water protections This relationship is statistically significant for both Models 5 ($B = .23$, two-tailed t-test, $p = .04$, 95% CI [.02,.45]) and 6 ($B = .23$, two-tailed t-test, $p = .03$, 95% CI [.01,.44]). The results from Model 6 are displayed in Figure 1.

Models 7 and 8 in Table 3 explore the relationship between the treatments, anti-expert populism, and information seeking (*RQ*). Anti-expert populism has a negative relationship with seeking either source of information, but there is no evidence of an interaction effect with either of the two treatments.

Discussion

This note demonstrates that anti-expert populism has a strong negative relationship with attitudes toward environmental regulation even after accounting for other variables. This makes sense insofar as environmental (and many other) regulations are developed by and supported by experts. However, in expressing mistrust for experts, the results suggest that people are not expressing a meaningful preference for or responsiveness to cues about public support versus expert opinion. Expressed distrust in experts may instead reflect values and policy attitudes that conflict with what the respondent perceives as expert judgment. Indeed, it may be the case that attitudes toward experts may serve a value-expressive function (Anderson, Lapinski, Turner Peng, & Schmälzle, 2021; Katz, 1960) such that expressions of anti-expert populism functions to align people with similar others, yet information emanating from experts is nonetheless used in decision-making. This finding bears additional exploration in future research.

There are a number of possible reasons why the current results conflict with prior work on the relationship between anti-intellectual or anti-expert attitudes and expert messages (Merkley, 2020). First, although political elites in the United States, who are not necessarily expert, differ on their positions on water protections, elite positions on the issue were not focal in public discourse at the time of the study and may therefore not be known or salient to respondents, making populists less likely to counterargue against expert opinion.

Second, those low in anti-expert populism had high support for water protections and similar environmental regulations coming into the study: for each of the (reversed) five-point
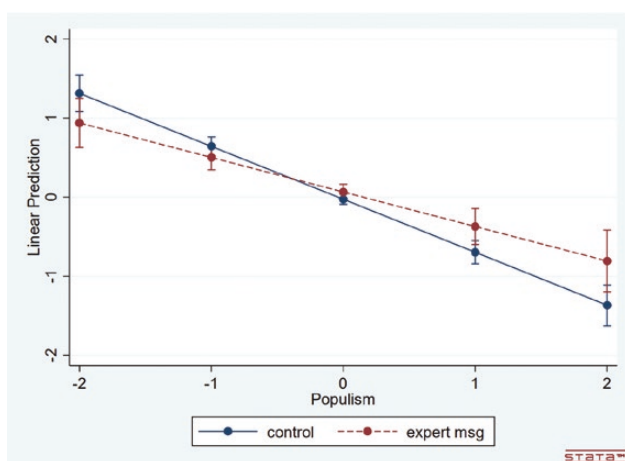
Figure 1. Support for water protections by expert treatment and anti-expert populism.

Table 3. *Expert and Public Support Messages, Anti-expert Populism, and Information Seeking*

	View public	*View experts*
	Model 7	Model 8
Experts Msg	.00 (.03)	.02 (.03)
Public Msg	.01 (.03)	.03 (.03)
Anti-expert populism	−.09* (.04)	−.15* (.04)
Expert X populism	.00 (.05)	.00 (.05)
Public X populism	.03 (.05)	.05 (.05)
Constant	.46 (.09)	.54 (.09)
N	980	981
R^2	.11	.14

Notes: $+p < .10$, $*p < .05$, two-tailed. Unstandardized ordinary least squares estimates with robust SEs in parentheses.

scales, mean support was 4.0 on the first and 4.1 on the second support items for those in the control group, with higher scores for people low in anti-expert populism, leaving little room for an increase in support.

Third, the issue of water protections may pose a specific domain where populist attitudes may be less likely to result in the rejection of expert attitudes. The sample of residents of the Great Lakes region were chosen for this study because of the importance of this region as a source of freshwater for the United States and Canada, and because of our interest in understanding what shapes attitudes toward water policies among people who are geographically and psychologically tied to a water system. However, our sample may be unique in that the utility of forming accurate judgments and the lack of ambiguity about the end goal of clean water (Carpenter, 2019) may limit counterarguing against expert messages. The results therefore may differ from contexts in which the utility of accurate judgments is lower or if there is greater ambiguity surrounding the relevant policy.

Conclusion

The current study suggests that although anti-expert populism is related to environmental attitudes and information seeking, people who express high levels of mistrust in experts are responsive to expert consensus. Anti-expert populism in fact enhances the impact of expert opinion on support for water protections, at least in the context of Great Lakes watershed protections. Public consensus messages were not effective on average and contrary to expectations, were not particularly effective with populists. The current study is consistent with decades of prior work on persuasion, showing that expert cues are persuasive—even among those who claim to have anti-expert attitudes.

The study results, contrasting with research on anti-expertise attitudes and other politically charged issues, suggest that like many political attitudes, the political relevance of anti-elite attitudes is context dependent. We propose that anti-expertise attitudes, rather than representing a knee-jerk rejection of expert recommendations, must be made politically relevant—such as through elite cues (Zaller, 1992) or priming of relevant political identities (Lunz-Trujillo, 2022) to be deployed in evaluating expert judgments. Contextual factors, such as the utility of accuracy judgments and absence of political cues, may diminish the relevance of anti-expert

judgments, thereby enhancing the influence of expertise cues. Future work should further explore contextual factors that moderate the influence of expert judgments on political attitudes.

The study holds particular relevance to the issue of freshwater watershed protection and for other topics for which there is no salient elite signaling or polarization on the topic. Specifically, it suggests that information from people perceived as experts on watershed protection—scientists, for example—can play a key role in shaping attitudes toward protection policies and that messages emanating from them can be persuasive.

There are a number of caveats to the current paper. First, the survey deals with one specific policy issue with residents of Great Lakes states in the United States at the start of the Biden administration. The unique context of the Great Lakes region means that the results may not apply to other countries or other regions in the United States. A particular feature of the issue is a lack of salient elite polarization on the topic at the time of the study. If respondents had encountered strong statements against the policy from a prominent populist political figure, these messages may have diminished the impact of the expert treatment, or even resulted in a backfire effect for expert consensus messages (Merkley, 2020). In contexts where water issues are more controversial (e.g., during drought), there is evidence that attitudes may be more resistant to change or that messages may result in unintended effects (Liang, Henderson, & Kee, 2018). Yet, because issues of water protection are ubiquitous globally, our research may be useful for understanding responses to information about policies in different regions of the U.S. and other countries, and at a minimum provide the basis for additional research on this issue. In addition, whites, people 65 and older, and highly educated respondents were overrepresented in the sample, although prior work on online survey samples suggest that this should not impact the substantive results (Berinsky, Huber, & Lenz, 2012).

A final caveat is that the current study took place in early 2021 during the COVID-19 pandemic, after one year of debates about expert recommendations about social distancing, mask wearing, school closings, and the like, which became a contentious topic of political discourse (Case et al., 2021). This may have made responses to the anti-expert populism items particularly closely related to political attitudes rather than reflecting general attitudes toward experts versus the public.

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