Faculty Research Report on American Public Opinion

Report on Wave 1 and Wave 2 of the 2022 U.S. Midterm Election Survey Project

February 15, 2023

David Buckley, Dewey Clayton, Adam Enders, Jason Gainous, Tricia Gray, Melissa Merry, Laura Moyer, and Rodger Payne

University of Louisville Political Science Department

Table of Contents

Tables and Figures

I. Introduction

The University of Louisville Department of Political Science conducted a two-wave poll of the American mass public over the course of 2022 with the goal of examining both the broad contours of attitudes about the state of democracy and elections, as well as topics ranging from climate change attitudes to perceptions about the legitimacy of political institutions like the Supreme Court. The multi-wave nature of the data allowed us to track, for example, particular attitudes about elections and political candidates over time, providing a unique view into the temporal dynamics of mass opinion across the span of a campaign. Furthermore, each individual wave also included a variety of experiments that facilitated a different view of the causal relationships between various political attitudes, predispositions, and behaviors. Combined, the two-wave study makes for a rich window into some of the most pressing political questions of our time that is theoretically deeper and methodologically more sophisticated than the horserace polling one is typically exposed to during a campaign cycle.

Because the report touches on diverse aspects of American democracy, it is not necessarily intended to generate an overall summary judgement. Some portions appear more pessimistic; for instance, we find strong links between social media consumption and anti-democratic attitudes. Other portions are more optimistic; for example, we find relatively limited support for non-democratic political institutions or the ability of cultural narratives to shape attitudes related to a great challenge of our time: climate change. Our evidence shows areas of weakness and others of resilience. Analyzing the future prospects of American democracy requires attention to long-standing challenges like racial justice and gender equality, alongside newer trends like support for conspiracy theories and the effects of precedent-shattering court decisions.

This report is organized by sections, each of which details a set of findings produced by an individual or team that elected to participate in the survey project. We also discuss the methodology used to collect data, including details regarding sample characteristics and questionnaire design. While this report contains information about only two waves of data collection in late spring and fall 2022 (before the U.S. midterm elections), a final post-2022 election wave is currently in planning.

II. Methodology[1]

Data from Wave 1 was collected between April 18–May 10, 2022, and Wave 2 was data collected between October 28–November 7, 2022; in both cases we partnered with Qualtrics, who fielded the surveys on panels of respondents they maintain. The target sample size for both waves was 1,735 American adults (18+). The quota sample was designed such that the characteristics of the sample matched the population in terms of gender, age, race/ethnicity, and educational attainment based on 2020 U.S. Census estimates.[2] Furthermore, survey rake weights were designed in order to minimize any lingering discrepancies between sample and population characteristics, a best practice in scientific polling as determined by the American Association of Public Opinion Research (AAPOR). In compliance with both university policy and broader ethical standards, both data collections were approved by the University of Louisville Institutional Review Board (#22.0312 and #22.0828). Respondents registered their consent to participate before answering any questions, were able to exit the survey at any time they wished, and were compensated upon completion of the survey.

Several steps were taken to ensure the quality of responses. Unlike horserace polling, scientific polling requires that participants be fairly compensated for their time—this bolsters the quality of responses. Both surveys were designed to take no more than 15 minutes to complete, an industry standard for ensuring attentive responses. Following best practices, each of the two surveys also included four attention check questions, two standalone and two embedded in grids with other questions (Berinsky et al. 2021). Any respondent who did not successfully complete all four attention checks was removed from the dataset. We also excluded from the final sample

---

[1] Prepared by Adam Enders
[2] Wave 1 also includes an oversample of Hispanic respondents. This was in addition to the original target sample of 1,735 and all results presented below employ weights that account for this oversample (i.e., that adjust the composition of the sample to reflect the U.S. population).

any respondent who spent less than half of the median amount of time to complete the survey, based on average time during a soft launch of the survey on a small sample (~100 respondents). Finally, Qualtrics employs a variety of methods for detecting fraudulent respondents and response set bias (or "flat-lining"), including the use of reCAPTCHA and A.I. technology.

Table 1 compares both the weighted and unweighted samples from the first and second wave of the survey to 2020 U.S. Census estimates. While the unweighted samples are generally close in composition to census estimates, the samples tend to over-represent the college educated and whites and under-represent those with no high school degree. As can be seen, weighting corrects these discrepancies.

Table 1: Comparison of Wave 1 and Wave 2 sample characteristics to 2020 U.S. Census estimates.

	2020 Census	Wave 1 (unweighted)	Wave 1 (weighted)	Wave 2 (unweighted)	Wave 2 (weighted)
Female	51	51	52	52	53
No High School	12	3	12	3	12
HS Grad	27	26	27	24	27
Some College	29	35	29	33	29
Bachelor's	20	26	20	28	20
Advanced Degree	12	9	12	12	12
18-24 years	13	9	13	10	13
25-44 years	35	40	35	40	35
45-64 years	35	29	35	26	35
65+ years	17	22	17	25	17
White	71	76	71	77	71
Black	14	13	14	13	14
Asian	7	6	7	5	7
Other	8	6	8	5	8
Hispanic	19	31	19	18	20
Northeast	17	20	17	21	17
Midwest	21	19	21	23	21
South	38	40	38	38	38
West	24	21	24	19	24

Note: Cell values are percentages. Recall that Wave 1 included an oversample of Hispanics.

III. Concern about Elections[3]

We assessed concerns about the fairness and presence of fraud in the upcoming election in a number of different ways in both waves of the survey. Even though many pollsters asked about the likely presence of fraud both before and in the months after the 2020 U.S. presidential election, not many polls followed up on related concerns after spring of 2021. This practice leaves a hole in our understanding of the temporal dynamics of concerns about elections over time—the extent to which concern waxes and wanes as we move farther from or closer to a major election.

Table 2 lists five different questions. For the first three, respondents were asked to react to the statement using a sliding scale ranging from 0 ("not all concerned") to 10 ("very concerned"). These questions asked a general question about perceived "fairness," and then more specific questions about "fraud," and "unfair restrictions on voting." Considering Wave 1 first, there appears to be moderate concern (i.e., 6.62–7.52 out of 10). In each case, the level of concern dropped by a substantively small, but statistically significant degree, when reassessed in Wave 2. In both surveys, we also find that Republicans expressed a greater concern than Democrats in reaction to question 2 in Table 2 (about fairness in counting votes), whereas Democrats registered greater levels of concern than Republicans in reaction to question 3 (about unfair restrictions on voting; $p<0.001$ in all cases). This comports with recent concern among Democratic Party representatives about attempts unfairly prevent easy access to the ballot box among some citizens most likely to vote for the Democratic Party. Even so, the party members exhibiting less concern (i.e., Republicans on question 3, Democrats on question 4) still registered moderate or greater levels of concern.

---

[3] Prepared by Adam Enders

Table 2: Average level of concern about fairness and fraud in the 2022 midterm election, with differences between spring and fall.

Question	Wave 1 (Spring)	Wave 2 (Fall)	Difference over time? (*p*-value)
1. "People like me are very concerned about fairness in elections in the U.S. today." (0-10)	7.52	6.95	-0.57 *p*<0.001
2. "People like me are very concerned about fraud in counting election votes in the U.S. today." (0-10)	6.62	5.96	-0.66 *p*<0.001
3. "People like me are very concerned about unfair restrictions on voting in elections in the U.S. today." (0-10)	6.82	6.19	-0.62 *p*<0.001
4. "How confident are you that votes will be counted correctly during the 2022 midterm election?" (1-4)	2.79	2.93	0.14 *p*<0.001
5. "How confident are you that votes in YOUR neighborhood will be counted correctly during the 2022 midterm election?" (1-4)	3.00	3.09	0.09 *p*<0.05

Note: Cell values are means, either on a scale ranging from 0 (not at all concerned) to 10 (very concerned) or 1 (not at all confident) to 4 (very confident), or differences between means. *P*-values are based on two-tailed differences of means tests. Rake weights are used to compute means.

Questions 4 and 5 asked respondents how confident they were—on a scale from 1 ("not at all confident") to 4 ("very confident") —that either their own votes or votes in their neighborhood would be counted correctly. In both cases, respondents registered an average reaction of "somewhat confident." As with the first three questions discussed above, we observed statistically significant, although minor, increase in confidence between Wave 1 and Wave 2, which was fielded primarily in the week before the 2022 midterm elections.

On the one hand, it may come as surprise that Americans felt *more* confident in elections the closer the midterm elections—the first national elections since the 2020 cycle, which was mired in conspiracy theories about election fraud—crept. Indeed, a wealth of scholarship shows that a growing—though not always sizeable—contingent of Americans tend to anticipate fraud as elections draw near (e.g., Enders et al. 2021). On the other hand, there was much less concern about fraud in the 2022 midterm than there was in 2020: very few politicians were warning their base of supposed plot to steal the election, let alone the sitting president. In this light, the

decrease in concern could be interpreted as a joint production of both lingering heightened concern in early 2022 among citizens remembering the discord from 2020 and early 2021 and an increasing sense that the 2022 elections were going to be more normal. In the final, post-election wave of the survey project respondents will be asked about their perceptions of the role of fraud in the 2022 election outcomes. This data will help understand the dynamics of concern about fraud during a unique period of American politics.

IV. Attitudes about Democracy[4]

More than perceptions of election fairness/fraud, we sought to understand Americans' more general attitudes about democracy. Perhaps the simplest way to accomplish this task is by asking respondents, "On the whole, are you very satisfied, fairly satisfied, not very satisfied, or not at all satisfied with the way democracy works in the United States." We report the average response—as assessed on scale ranging from 1 ("not at all satisfied") to 4 ("very satisfied") —among all Americans, among self-identified Democrats, and among self-identified Republicans, for both survey waves, in Table 3.

On average, Americans tend to feel somewhere between "not very satisfied" and "fairly satisfied" with democracy in both survey waves. That said, as was the case with concern about election fraud, we found minor statistically significant increases in satisfaction between spring and fall 2022 among all Americans, as well as Democrats and Republicans, specifically. We also found that Democrats registered more satisfaction with democracy in both waves ($p<0.001$ in both cases). This is to be expected: it is well-documented that those identifying with the party who "lost" the most recent major election (Republicans in this case) tend to register lower levels of satisfaction with democracy (e.g., Enders and Thornton Forthcoming).

Table 3: Average level of satisfaction with democracy, with differences between spring and fall.

	Wave 1 (Spring)	Wave 2 (Fall)	Difference? (p-value)
All Americans	2.47	2.54	0.07 $p<0.01$
Democrats	2.68	2.80	0.12 $p<0.01$
Republicans	2.36	2.47	0.11 $p<0.05$

Note: Cell values are means on a scale from 1 ("not at all satisfied") to 4 ("very satisfied"). *P*-values are based on two-tailed differences of means tests. Rake weights are used to compute means.

---

[4] Prepared by Adam Enders

Next, we sought to determine which features of democracy were most important to Americans. Average responses to each of the questions we examine appear in Table 4. On average, Americans think that both a news media that is free from government interference and peaceful protests are "fairly important" to have in the U.S. There is no partisan difference in support for a free press, although we did observe a minor statistically significant partisan difference on the peaceful protest question (Republicans thought this was slightly less important, on average). We also asked two questions drawn from the study of democracy outside of the United States that represent different forms of anti-democratic attitudes: support for rule by "experts, not elected officials" and support for "strong leaders" who govern "without interference" from the legislature or courts. Americans are lukewarm about each proposition, although sizable minorities do express support for the antidemocratic position. In both cases, we found that Democrats were more likely to endorse these ideas, with the larger partisan gap evaluating support for expert rule.

Table 4: Average level of concern about fairness and fraud in the 2022 midterm election, spring 2022 wave.

Question	All	Dem.	Rep.	Party Diff?
How Important for Democracy? (1–5)				
1. "The media can report the news without government influence on the content of their reporting."	4.06	4.12	4.15	0.03 $p=0.554$
2. "Peaceful protest can continue even if many citizens are offended by its slogans."	3.96	4.12	3.94	0.18 $p<0.01$
How Good/Bad for Governing Country? (1–4)				
3. "Experts, not elected officials, made decisions according to what they think is best for the country."	2.49	2.72	2.33	0.39 $p<0.001$
4. "A system in which a strong leader can make decisions without interference from parliament or the courts."	2.27	2.37	2.23	0.14 $p<0.05$

Note: Cell values are means, either on a scale ranging from 1 (not at all important) to 5 (very important) or 1 (very bad) to 4 (very good), or differences between means. *P*-values are based on two-tailed differences of means tests. Rake weights are used to compute means.

To understand the characteristics of people who believe each of the aforementioned ideas, we conduct a form of statistical analysis known as regress to test links between each belief and a host of political, psychological, and social characteristics. In addition to partisanship and ideological identities (i.e., identifying as liberal, conservative, or moderate), we also include measures both right-wing authoritarianism (agreeing with, "This country would work a lot better if certain groups of troublemakers would just shut up and accept their group's traditional place in society") and left-wing authoritarianism (agreeing with, "If I could remake society, I would put people who currently have the most privilege at the very bottom"). Authoritarians should be less likely to support a free press and protest, and more likely to support the need for a strong leader. We also consider the impact of populist attitudes (e.g., "Established politicians who claim to defend our interests only take care of themselves") and a relatively new political-psychological construct, the need for chaos (e.g., "We cannot fix the problems in our society, we need to tear it down and start over"). Those exhibiting high levels of need for chaos tend to believe that the political system and social institutions are beyond repair and need to simply be burned to ground. Christian nationalism (e.g., "The federal government should advocate Christian values") is another potential correlate of attitudes about democracy, as this ideology is predicated on belief that the U.S. should not prize democracy and a separation of church a state over being a Christian nation. Finally, we control for age, educational attainment, gender, race, and ethnicity.

Estimates from these models appear in Table 5. Across dependent variables (i.e., attitudes about democracy), we found a fairly inconsistent relationship with partisanship. This makes sense: even though we observed some partisan differences in Table 4, they were quite weak and likely to weaken further once other characteristics were controlled for. We did, however, observe a fairly consistent relationship with ideology. Conservatives were less likely than liberals to

Table 5: Regressions of attitudes about the characteristics of democracy on various predispositions and sociodemographic characteristics, spring 2022 wave.

	Free Press	Peaceful Protest	Need Experts	Strong Leader
Partisanship (Rep)	-0.003	-0.028	-0.030*	-0.037*
	(0.015)	(0.015)	(0.013)	(0.014)
Ideology (Con)	-0.046*	-0.039*	-0.085***	0.017
	(0.019)	(0.020)	(0.018)	(0.019)
Left-wing Author.	-0.122***	-0.052	0.064**	0.086**
	(0.027)	(0.027)	(0.025)	(0.026)
Right-wing Author.	-0.062**	-0.125***	0.073***	0.131***
	(0.021)	(0.022)	(0.019)	(0.021)
Populism	0.304***	0.299***	0.000	-0.043
	(0.033)	(0.034)	(0.031)	(0.033)
Need for Chaos	-0.101***	-0.077**	0.025	0.123***
	(0.026)	(0.027)	(0.024)	(0.026)
Christian Nationalism	-0.079**	-0.074**	0.029	0.154***
	(0.026)	(0.027)	(0.024)	(0.025)
Education	0.061**	0.075***	0.003	-0.039
	(0.021)	(0.021)	(0.019)	(0.020)
Age	0.006***	0.002	-0.009***	-0.011***
	(0.002)	(0.002)	(0.001)	(0.002)
Female	-0.070	-0.080	-0.088*	-0.023
	(0.047)	(0.049)	(0.044)	(0.047)
White	0.054	0.119	-0.136*	-0.032
	(0.071)	(0.073)	(0.065)	(0.070)
Black	-0.042	0.091	-0.063	0.158
	(0.090)	(0.093)	(0.084)	(0.089)
Hispanic	0.036	-0.069	0.008	0.077
	(0.064)	(0.066)	(0.059)	(0.063)
Constant	3.745***	3.878***	3.072***	1.678***
	(0.215)	(0.222)	(0.199)	(0.212)
R^2	0.148	0.130	0.138	0.227
n	1,552	1,552	1,552	1,552

Note: OLS coefficients with standard errors in parentheses. Rake wakes applied.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

ascribe importance to a free press and peaceful protest, and less likely to believe that experts were more important than elected officials (which democratic theorists would frequently label an "anti-democratic" attitude). Interestingly, both right-wing and left-wing authoritarians appear to

share many attitudes about democracy. They both ascribe less importance to a free press and peaceful protests, and more agreement that strong leaders and experts make for better governing. An identical pattern emerges for those exhibiting high levels of need for chaos and Christian nationalists: they view core tenets of democracy as less important and see value in strong leaders that are unimpeded by courts and legislatures. Populists, on the other hand, appear to value a free press and the ability to peacefully protest, though there is no distinction between populists and non-populists when it comes to the role of experts or strong leaders. Finally, sociodemographic characteristics are only inconsistently related to these attitudes, and, in most cases, relationships are not statistically significant. One exception is educational attainment: higher levels of formal education are associated with ascribing more importance to a free press and the ability to peacefully protest.

These results showcase that, even though Americans tend to support many of the classical core tenets of democracy and resist some authoritarian urges, there are still some forces at play among the mass public—a need for chaos, right- and left-wing authoritarianism, and Christian nationalism, for example—that can foster anti-democratic attitudes. That said, populist orientations, which are more widespread than any of the aforementioned characteristics, seem to support democratic principles even though they do not appear to defend against some anti-democratic urges for stronger leaders and a replacement of elected leaders with "experts." Importantly, anti-democratic attitudes do not appear to principally be a function of a lack of formal education. Rather, it is one's broader orientations toward the political establishment that color their feelings about democracy.

V. Testing Sources of Political Participation[5]

Concerns about the future of American democracy rest not only on attitudes, but also political behavior. Scholars have long argued, à la Robert Putnam in his classic *Bowling Alone*, that patterns of civic participation may be weakening in the United States over time, and these trends could have deepened during the enforced isolation of the COVID-19 pandemic. At the same time, certain forms of extra-institutional political participation, at times including violence, seem to be building, most darkly during the insurrection at the U.S. Capitol on January 6, 2021. We conduct regression analysis to test the correlates of both conventional political participation (e.g., placing a yard sign, donating to a candidate, writing letters to elected officials) and contentious participation (e.g., attending a protest or joining in a boycott). We are particularly interested in testing the influence of some of the attitudes associated with democratic backsliding like Christian nationalism and authoritarian attitudes on participation. Do similar factors that drive anti-democratic *attitudes* impact patterns of *participation* in our democracy?

Table 6 reports results for both conventional and contentious participation variables, with some attitudes commonly linked to backsliding listed first in the tables. On the whole, the results in Table 6 point to the fact that patterns in political participation still seems most strongly tied to factors that scholars have identified before our period of concern over potential democratic backsliding: education, religious participation, interest in politics, and a sense of personal efficacy. In short, there is relatively limited consistent evidence that indicators strongly associated with *attitudes* towards democracy are associated with changes in political *participation* in our sample. Christian nationalism seems unrelated to forms of political

---

[5] Prepared by David Buckley

Table 6: Regressions of Reported Political Participation on various predispositions and sociodemographic characteristics, Spring 2022 wave.

	(1) Conventional Participation	(2) Contentious Participation
LW Authoritarianism	0.03	0.03**
	(0.02)	(0.01)
RW Authoritarianism	-0.02	-0.07***
	(0.02)	(0.01)
Populism	0.08	0.02
	(0.05)	(0.02)
Conspiracy Thinking	0.13***	0.05**
	(0.04)	(0.02)
Christian Nationalism	-0.05	-0.01
	(0.03)	(0.01)
Partisanship (Rep)	-0.02	-0.01
	(0.02)	(0.01)
Ideology (Con)	-0.03	-0.04***
	(0.02)	(0.01)
Education	0.09***	0.04***
	(0.02)	(0.01)
Age	-0.00	-0.01***
	(0.00)	(0.00)
Female	-0.00	-0.06*
	(0.06)	(0.03)
White	0.10	0.03
	(0.08)	(0.04)
Black	-0.16	0.01
	(0.10)	(0.05)
Hispanic	-0.06	-0.04
	(0.08)	(0.03)
Religiosity	0.14***	0.03**
	(0.02)	(0.01)
Political Interest	0.50***	0.21***
	(0.03)	(0.02)
Political Efficacy	0.15***	0.04***
	(0.03)	(0.01)
Constant	-1.78***	1.26***
	(0.28)	(0.12)
R^2	0.25	0.29
n	1595	1595

Note: OLS models; standard errors in parentheses. $^*p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

participation. Authoritarian attitudes and populism are not particularly consistent, although right-wing and left-wing authoritarianism are associated with lower and higher levels of contentious participation respectively. It is notable and perhaps surprising that conspiratorial thinking is associated with increases in both conventional and contentious participation. Given the fact that conspiracy politics were so present in contentious events like January 6th, further research into its ties to political behavior seems warranted.

VI. Race and Democratic Attitudes[6]

Since 2020, the United States has seen new fronts opened in the nation's long, unending march towards racial justice. Most prominently, repeated cases of police brutality against Black people touched off massive multiracial and multi-generational public protests across the country, often under the loose umbrella of the Black Lives Matter movement. In addition to those protests about approaches to policing, it opened a broader dialogue about systemic racism in this country. That discussion has included sharp debates over the removal of public monuments honoring figures aligned with the Confederate States of America. It includes new proposals to restrict teaching about race, slavery, and African American history. These debates are tied to broader questions about restrictions on voting rights such as stricter voter I.D. requirements, purging of the voter rolls, and felony disenfranchisement laws, all of which touch on core democratic norms that deny equal access to the ballot box by all Americans.

Against this backdrop, the survey contained multiple measures specifically tied to diverse aspects of racial justice in the United States today. We did this in several ways. First, the survey included a battery of questions about attitudes towards police reform. Subjects were asked on a five-point set of responses ranging from "strongly disagree" (1) to "strongly agree" (5): "I trust civilian oversight boards to make fair judgements in reviewing alleged policy misconduct and use of excessive force"; "Policing reform is a major moral issue today"; "Police departments in places with a civilian oversight board are less likely to have problems with police misconduct and excessive use of force." These items are strongly related to each other in the data ($\alpha = 0.65$), so we combine them into a single score we call *Police Oversight*. Second, subjects were asked specific support or opposition for several hot button topics in racial justice: the BLM Movement;

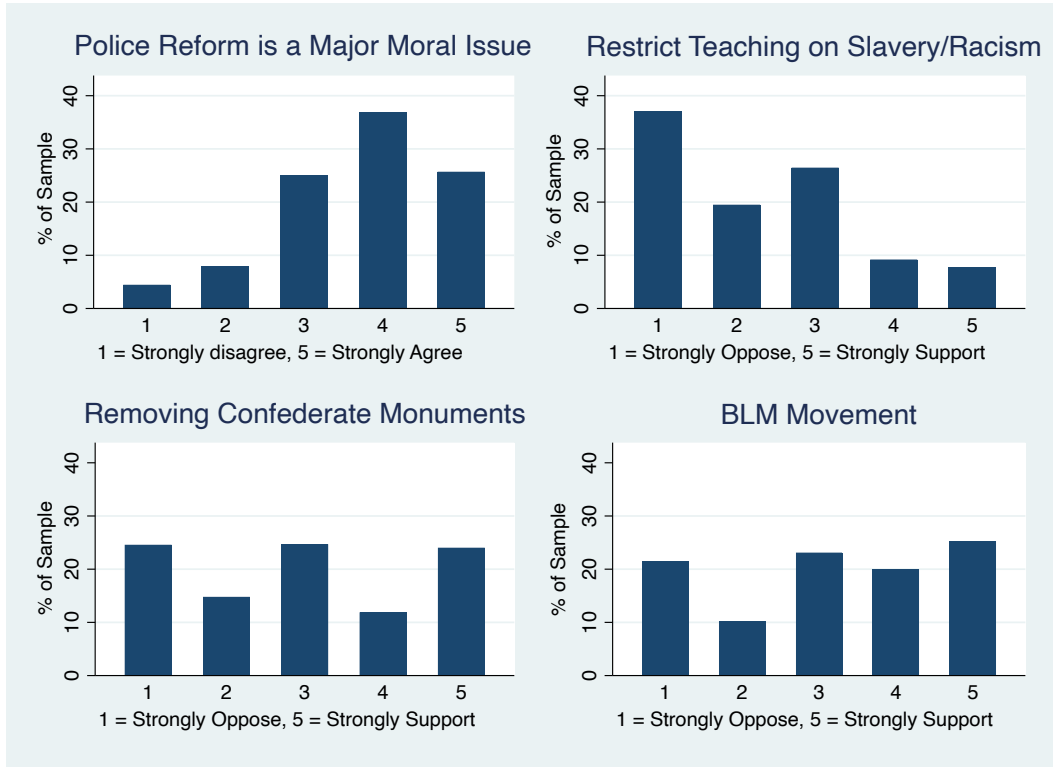[6] Prepared by Dewey Clayton and David Buckley

removal of Confederate monuments; and restricting "what students can be taught about the role of slavery in American history and the ongoing effects of racism." These items are strongly related to each other in the data ($\alpha = 0.68$), so we combine them into a single score we call *Racial Reckoning*. Third, subjects were asked a standard battery of questions about racial resentment, drawn from research of Kinder and Sanders (1996). These items are strongly related to each other in the data ($\alpha = 0.84$), so we combine them into a single score we call *Racial Resentment.*

To begin, Figure 1 reports distributions for some of the individual questions related to racial justice. In keeping with research from pollsters like the Pew Research Group,[7] more Americans support the BLM Movement than express opposition, but there is significant variation in the population, with our data showing less than half expressing support. A strong majority agrees that police reform is a major moral issue in the country, but the population is much more divided over the removal of Confederate monuments, with almost even balance across the population. This wave of our study showed a majority of Americans opposed to restrictions on teaching slavery/racism. This issue has taken on much more public salience in the months since our original data collection, so we are somewhat cautious about interpreting this result.

Next, Table 7 turns to regression models to test which other political and demographic characteristics are most consistently related to different aspects of racial justice. Unsurprisingly considering the broad partisan polarization in the country, partisanship and political ideology are strongly and consistently associated with all three measures, as are age and race. We also find evidence that the set of religious beliefs known as Christian nationalism is strongly associated

---

[7] See for example https://www.pewresearch.org/fact-tank/2021/09/27/support-for-black-lives-matter-declined-after-george-floyd-protests-but-has-remained-unchanged-since/

Figure 1: Distribution of racial attitudes.

with increased racial resentment and decreased support for our *Racial Reckoning* index, although it is not correlated with our index of support for police oversight. In contrast, identifying as white evangelical is not associated with any racial attitudes, and increased attendance at religious services actually increases support for police oversight.

Finally, we tested the relationship between our racial attitude variables and some of the indicators of democratic backsliding summarized earlier in this report. We controlled for all of the variables included in earlier analysis here as well, although they are not shown in the table in the interest of space. One striking pattern emerges in these results: the preference for expert rule and support for a strong leader, which are both generally seen as anti-democratic attitudes in comparative survey data, are associated with racial attitudes, but in very different ways. Preferences for a strong leader is associated with stronger racial resentment and lower support

Table 7: Regressions of Racial Politics attitudes on various predispositions and sociodemographic characteristics, Spring 2022 wave.

	(1) Racial Resentment	(2) Police Oversight	(3) Racial Reckoning
Partisanship (Rep)	0.10***	-0.06***	-0.14***
	(0.01)	(0.01)	(0.01)
Ideology (Con)	0.16***	-0.08***	-0.16***
	(0.02)	(0.02)	(0.02)
Female	-0.13**	0.06	0.14***
	(0.05)	(0.04)	(0.04)
Age	0.00**	-0.00**	-0.00*
	(0.00)	(0.00)	(0.00)
Education	0.00	-0.00	0.00
	(0.02)	(0.02)	(0.02)
Hispanic	0.05	-0.02	-0.02
	(0.07)	(0.05)	(0.05)
White	0.21***	-0.11*	-0.20***
	(0.06)	(0.05)	(0.05)
Christian Nationalism	0.21***	0.00	-0.19***
	(0.03)	(0.02)	(0.02)
Religious Attendance	0.01	0.03*	-0.01
	(0.02)	(0.02)	(0.02)
Evangelical	-0.13	0.03	0.06
	(0.07)	(0.06)	(0.06)
Constant	1.07***	4.08***	3.59***
	(0.17)	(0.14)	(0.14)
R^2	0.31	0.12	0.43
n	1595	1595	1595

Note: OLS models; standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

for racial reckoning, while a preference for expert rule is correlated with *lower* racial resentment, and *higher* support for police oversight and racial reckoning.

Table 8: Regressions of racial politics attitudes on various predispositions and sociodemographic characteristics, Spring 2022 wave.

	(1) Racial Resentment	(2) Police Oversight	(3) Racial Reckoning
Freedom of Press	-0.04	0.09***	0.03
	(0.02)	(0.02)	(0.02)
Rule of Law	-0.00	0.05	0.05
	(0.03)	(0.03)	(0.03)
Experts Rule	-0.12***	0.19***	0.14***
	(0.03)	(0.02)	(0.02)
Prefer Strong Leader	0.13***	0.00	-0.05*
	(0.03)	(0.02)	(0.02)
Political Control Variables?	✓	✓	✓
Demographic Control Variables?	✓	✓	✓
Constant	1.35***	2.98***	3.01***
	(0.22)	(0.18)	(0.18)
R^2	0.33	0.17	0.45
n	1595	1595	1595

Note: OLS models; standard errors in parentheses. Models include all control variables for political and demographic characteristics, not shown in the interest of space. $^*\ p < 0.05,\ ^{**}\ p < 0.01,\ ^{***}\ p < 0.001$

VII. Prevalence and Correlates of Christian Nationalism[8]

Many recent academic and journalistic reports have the political importance of what scholars call "Christian nationalism": a set of beliefs that blend a religious understanding of America's origins with nearly apocalyptic views on future threats to that Christian heritage. Christian nationalism is more than mere religiosity; rather, it is an ideology that fuses American and Christian identity, privileging Christianity in political institutions. We measure Christian nationalism using a standard set of 6 questions listed in Table 9 (Whitehead and Perry 2020). Generally speaking, between a quarter and a third of Americans exhibit attitudes that are indicative of Christian nationalism. For example, 33% believe that the federal government should advocate Christian values and 34% believe the success of the U.S. is part of God's plan.

Even though plenty of emerging studies examine the potential impact of Christian nationalism on one attitude or behavior or another, there is room to learn significantly more about the political and psychological characteristics exhibited by Christian nationalists—what else do they believe, who are they? Figure 2 depicts the correlations between Christian nationalism and 22 other characteristics. We find that Christian nationalists are more like to identify as conservative and Republican and are more likely to support Donald Trump and less likely to support Joe Biden. We also observe a positive correlation with hostile sexism, racial resentment, conspiracy thinking, Manicheanism (i.e., believing that politics is fundamentally a fight between good and evil), the need for chaos, and right-wing authoritarianism. We also found positive, albeit weak, correlations with populism, political efficacy, support for political violence, and aspirations to hold political office. Finally, we observe negative correlations with feelings toward Muslims, the BLM movement, and scientists.

---

[8] Prepared by Adam Enders and David Buckley

Table 9: Percent agreeing with 6 questions designed to measure Christian nationalism, spring 2022 wave.

Question	% Agree
1. "The federal government should declare the United States a Christian nation."	25
2. "The federal government should advocate Christian values."	33
3. "The federal government should enforce strict separation of church and state." (reversed)	21
4. "The federal government should allow the display of religious symbols in public spaces."	45
5. "The success of the United States is part of God's plan."	34
6. "The federal government should allow prayer in public schools."	48

Note: Cell values are percentages who agree/strongly agree. Rake weights are used to compute percentages.

Figure 2: Correlations between Christian nationalism and a host of political and psychological characteristics and attitudes, spring 2022 wave. Horizontal bars represent 95% confidence intervals.
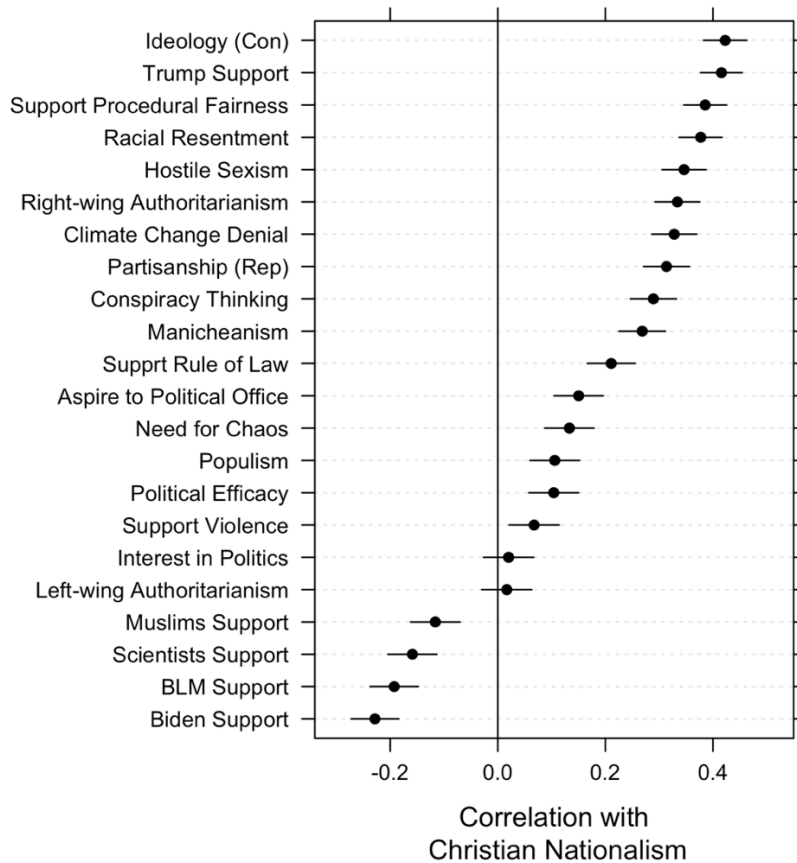
VIII. Americans, Government Employees and the "Deep State" [9]

Among the distinctive features of American politics since the 2016 election of President Trump is elite rhetoric alleging "Deep State" resistance to Trump and other outsider political leaders. The deep state is a concept that receives the most scholarly attention in contexts like Turkey and Egypt, where structures linking pillars of the economy and security services exert a heavy hand limiting popular influence in politics.[10] Scholars question whether this type of deep state exists in the United States, however concerns about the relationship between elected politicians and career government officials remain ubiquitous in American politics.

With this in mind, the survey set out to measure attitudes about career government employees and see what factors might most impact these perceptions. We did this in several ways. First, the survey contained a basic feeling thermometer asking subjects to express their rating of "Government Employees." To more directly measure ideas related to the "deep state," the survey included a battery of questions related to the personal authority of former-President Trump over government bureaucrats. Subjects were asked on a five-point set of responses ranging from "strongly disagree" (1) to "strongly agree" (5): 1) New presidents should have the power to replace non-partisan government officials with members of their own political party; 2) Unelected officials in the federal government have too much influence in determining government policy; and 3) a deep state worked to undermine Donald Trump during his presidency. All three correlate strongly with one another ($p < 0.001$), and so we combined all three into a *Deep State* index for analysis.

---

[9] Prepared by David Buckley

[10] For an overview of the concept of a Deep State, see Jon D. Michaels, "Trump and the Deep State: The Government Strikes Back Essays," *Foreign Affairs*, no. 5 (2017).

Figure 3: Attitudes about career government employees.
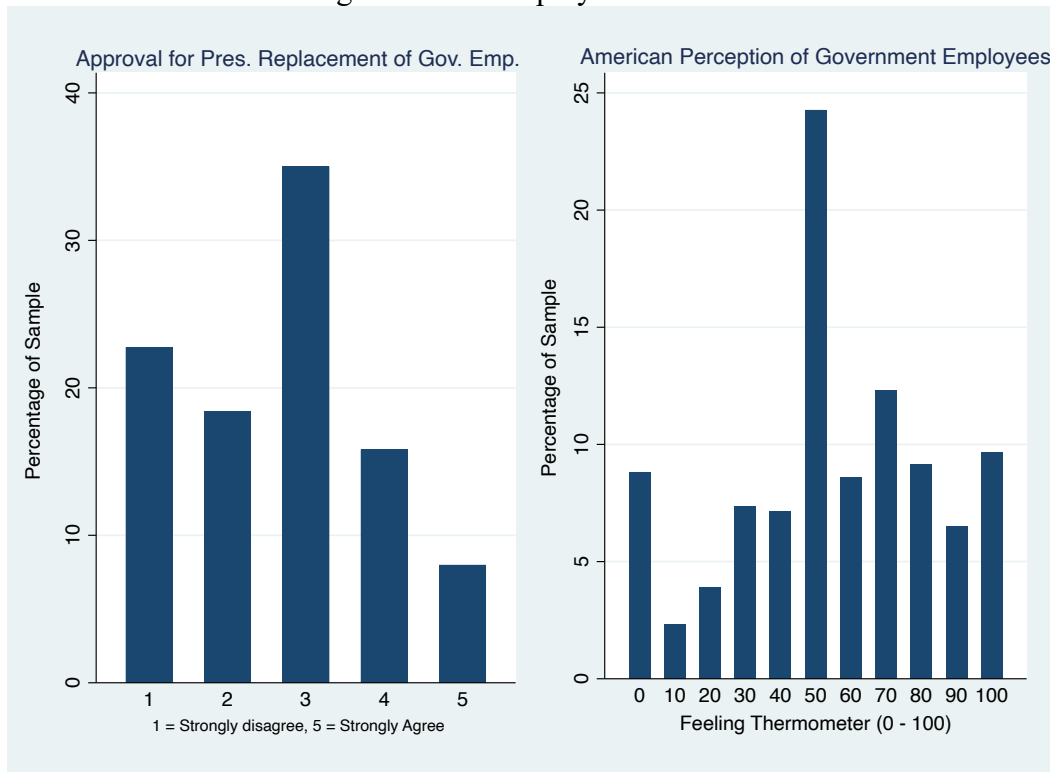
To give a sense of our sample as a whole, two tables summarize the feeling thermometer of Government Employees and the attitudes of Americans towards the ability of a president to replace career government employees with political loyalists. Results on each item indicate that, in the population as a whole, there is still fairly strong appreciation for career officials and support for insulating their positions from political control. Many more, for example, disagree with allowing presidents to replace career officials than agree with the statement.

With that said, we might be interested in understanding who, in the population as a whole, is most likely to express concern over supposed "deep state" influence. To conduct this test, we use regression models similar to those above to evaluate the relative strength of different sources of deep state threat. Table 10 shows the extent to which resistance to deep state influence has become strongly correlated to factors like partisanship and political ideology.

Table 10: Regressions of Deep State attitudes on various predispositions and sociodemographic characteristics, Fall 2022 wave.

	Deep State Index
Partisanship (Rep)	0.04**
	(0.01)
Ideology (Con)	0.08***
	(0.02)
Female	-0.05
	(0.04)
Age	-0.00***
	(0.00)
Education	0.01
	(0.02)
Hispanic	0.08
	(0.06)
South	0.02
	(0.04)
White	-0.02
	(0.06)
Christian Nationalism	0.32***
	(0.02)
Religious Attendance	-0.04**
	(0.02)
Evangelical	0.02
	(0.06)
Constant	1.83***
	(0.16)
R^2	0.25
n	1475

Note: OLS models; standard errors in parentheses. $^*p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

The elite signals sent by President Trump and his allies seem to correspond strongly to patterns in the general public.

An interesting contrast emerges in the realm of religion. Several analysts have noted that elements of conservative Christianity have become involved in supporting attacks on government institutions, including most prominently at the January 6th attacks on Congress. Our data similarly show a strong positive relationship between Christian Nationalism and deep state

resistance. At the same time, those who attend religious services most regularly actually register lower in their resistance to the Deep State, which is an interesting reminder that, at times, religious involvement may promote institutional trust among Americans.

In sum, on the whole Americans seem to view government employees fairly favorably and resist the politicization of career governmental service. At the same time, concerns about "deep state" politics do exist, and seem concentrated in some of the portions of the population most susceptible to other attitudes tied to democratic fragility.

IX. Support for the Supreme Court[11]

Polls tracking public support for major political institutions, such as Congress and the president, have consistently found that the Supreme Court enjoys greater support from the public than its co-equal branches. However, in recent years, that support has been declining.

With the June 2022 decision to overturn *Roe v. Wade* in *Dobbs v. Jackson Women's Health*, national surveys also found that the Supreme Court's approval rating fell to its lowest level since polling on this question began, and that there was the widest partisan gap in approval ever documented (Pew Research, September 2022). Public disapproval of the decision was also quite high. In July 2022, Pew Research found that nearly two-thirds of Americans believed that abortion should be legal in all or most cases.

So how did women's views of the Supreme Court change from the period just before the *Dobbs* leak to after the release of the final decision? Below are results from statistical models that analyze predictors of support for the Supreme Court using a "feeling thermometer" where more positive assessments are denoted by higher values.

We can see that, in April, there was no statistically significant effect for gender in the survey (see Table 11). Attitudes toward the Supreme Court were largely driven by knowledge about the Supreme Court, beliefs in procedural fairness of the Supreme Court, and nationalism, all of which are positively related to support.

From the first to the second wave of the survey, there is a substantial drop in women's feeling thermometer ratings of the Supreme Court (from a mean of 57 pre-*Dobbs* to a mean of 48 post-*Dobbs*). Men's ratings also declined (from 59 to 53). However, it is important to assess this relationship in a multivariate model, as other factors could be driving this change.

---

[11] Prepared by Laura Moyer.

Table 11: Support for the Supreme Court. April 2022 (pre-*Dobbs*)

	Supreme Court feeling thermometer
Female	-0.436
	(1.407)
Hispanic	-2.368
	(1.663)
Black	-2.424
	(2.230)
Age	0.013
	(0.044)
Republican	-0.976
	(1.696)
College	1.152
	(1.400)
Rule of law	0.850
	(0.899)
Procedural fairness	**14.489***
	(0.885)
Supreme Court knowledge	**1.825***
	(0.703)
Evangelical	-1.441
	(1.862)
Catholic	2.322
	(1.690)
Nationalism	**2.001***
	(0.776)
Wrong track	-2.441
	(1.615)
Constant	6.959
	(4.486)
n	1008
Adjusted R^2	.249

Note: Standard errors in parentheses. *$p < 0.05$. Weighted sample.

As Table 12 below shows, after controlling for other factors that should impact support for the Supreme Court, women's scores for the Supreme Court in November 2022 were indeed significantly lower than men's – in contrast to what we saw prior to the *Dobbs* decision. (Compared to a male respondent, a female respondent rated the Court 5 points lower, all else equal.) Also,

Table 12: Support for the Supreme Court. November 2022 (post-*Dobbs*).

	Supreme Court feeling thermometer
Female	**-5.187**[*]
	(1.629)
Hispanic	-0.534
	(2.175)
Black	-3.016
	(2.428)
Age	**-0.143**[*]
	(0.053)
Republican	0.393
	(1.928)
College	5.143[*]
	(1.751)
Rule of law	**3.242**[*]
	(1.092)
Procedural fairness	**10.490**[*]
	(1.103)
Supreme Court knowledge	0.454
	(0.816)
Evangelical	2.717
	(2.170)
Catholic	1.882
	(2.024)
Nationalism	**3.483**[*]
	(0.906)
Wrong track	-2.036
	(1.856)
Constant	13.775[*]
	(6.438)
n	1249
Adjusted R^2	0.166

Note: Standard errors in parentheses. [*] $p < 0.05$. Weighted sample.

unlike what we saw in the first wave of the survey, age is now statistically significant as a predictor of Supreme Court attitudes; as age increases, support for the Court decreases. Support for the rule of law, procedural fairness, and nationalism attitudes are all positively related to "warmer" Supreme Court ratings.

Figure 4: Fairness and Objectivity of Supreme Court.
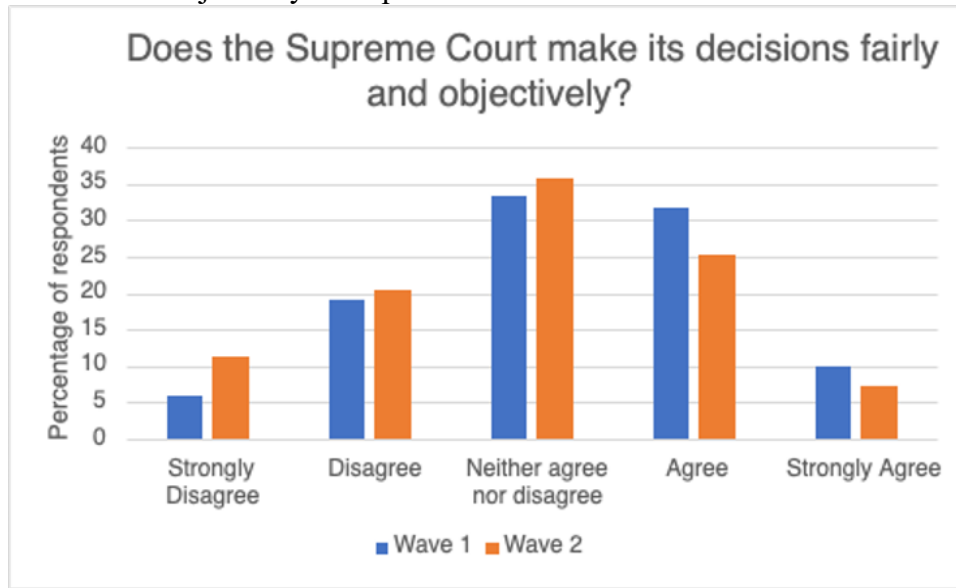
The Supreme Court's decision to overturn Roe v. Wade in between the two waves of the survey also offers an opportunity to compare respondents' views on the Court and on its role in securing abortion access. Below, the figure shows responses to a standard procedural fairness question about the Supreme Court, asking whether it makes its decisions fairly and objectively.

Between April and November, there appears to be a shift in public opinion on the fairness and objectivity of the Supreme Court. More respondents strongly disagree or disagree with the statement in Wave 2, and there are substantial drops in those who agree or strongly agree with the statement.

With respect to attitudes about the Supreme Court and abortion, respondents in both waves were asked whether the Supreme Court should make it easier to obtain an abortion. In April, the status quo was that abortion was considered to be a constitutional right under *Roe v. Wade*, but that substantial restrictions on abortion access had been allowed by the Court over the years. Shortly after the first wave was completed, the majority opinion from *Dobbs v. Jackson Women's*

Figure 5: Attitudes Toward Supreme Court and Abortion Access
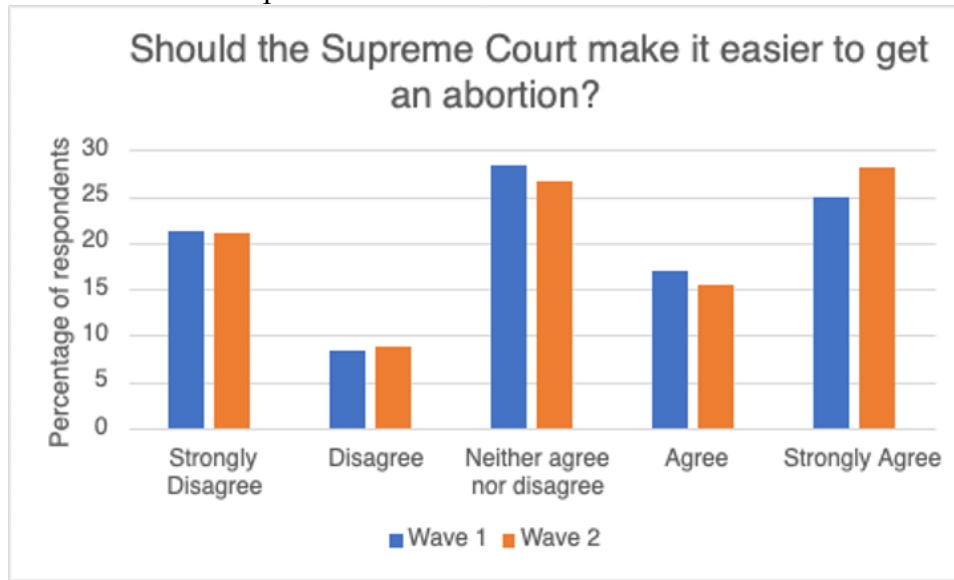
Health was leaked, and then the final *Dobbs* ruling was announced in the summer. Wave 2, then, captured attitudes in a post-*Roe* world.

Comparing the first and second waves, we can also see that responses have shifted from those in the "neither agree nor disagree" and in the "agree" categories into the "strongly agree" category. In other words, the *Dobbs* decision seems to have moved opinion in the so-called "mushy middle" category and done so in only one direction.

In conclusion, because the Supreme Court relies on its "reservoir of goodwill" to maintain legitimacy for its rulings – which it depends on other political actors to enforce – declines in support for this institution are likely to hamper its ability to function effectively.

X. Gender on the federal bench and public support for the judiciary[12]

As Federalist 78 noted, federal courts lack the power of the purse and the sword and consequently depend on a "reservoir of goodwill" (Gibson 2012, 2015) to maintain legitimacy with the public. Does the identity of these unelected judges affect public assessments about the propriety of the exercise of judicial power?

While scholars and practitioners often contend that increasing women's representation in the judiciary will increase public confidence in courts or enhance a particular court's legitimacy, this claim has not been empirically assessed. Indeed, existing work on race and judicial representation suggests that backlash effects are possible (Scherer and Curry 2010). The institutional features of courts also suggest that findings from legislative and executive contexts may not be applicable or may vary considerably in their applicability for different types of courts. For instance, surveys reliably show that large swaths of the public struggle to identify the current members of the Supreme Court (Bartels and Johnston 2013), suggesting that knowledge about the lower federal courts is likely to be even lower.

Using two waves of a large, nationally representative survey fielded before the *Dobbs* leak and after the *Dobbs* decision, I evaluate whether women's presence on the bench affects public support for the judicial exercise of power.

Wave 1 Experiment

In the first experiment (prior to the release of *Dobbs*), respondents were randomly assigned to either a control or one of two treatment conditions. In the first treatment, respondents were given a vignette that described that women were underrepresented as federal judges compared to their

share of law school graduates; in the second treatment condition, respondents read that women were proportionally represented as federal judges. All respondents then were asked to rate their agreement about the exercise of vertical judicial power, using a previously validated measure (Bartels and Kramon 2020; Shigemura et al. 2021): "Courts have the right to make decisions that people have to abide by." Figure 4 below shows the overall distribution of responses to this prompt, revealing that respondents were generally supportive of the exercise of vertical power by the courts.

Next, I examine whether respondents' beliefs about vertical power were affected by their exposure to information about gender representation on the bench. Using a regression model, I also include controls for demographics, attitudes about the Supreme Court and rule of law, hostile sexism, and abortion attitudes. With respect to abortion attitudes, respondents were asked to indicate their level of agreement with the statement, "The Supreme Court should make it easier to obtain an abortion."

The results in the Table 13 show that support for vertical power is not enhanced in the proportional representation condition; in fact, support for vertical power is only higher when comparing the control (with no information about gender composition) to the underrepresented condition. Rotating the baseline category, we find that there are no significant differences between those who received the underrepresented condition and those who received the proportional representation condition. Instead, knowledge and attitudes about the Supreme Court and rule of law are the primary drivers of support for vertical judicial power. Neither attitudes about abortion nor hostile sexism attitudes affect support for vertical power.

Figure 6: Distribution of support for vertical power. Wave 1.

Support for Vertical Power
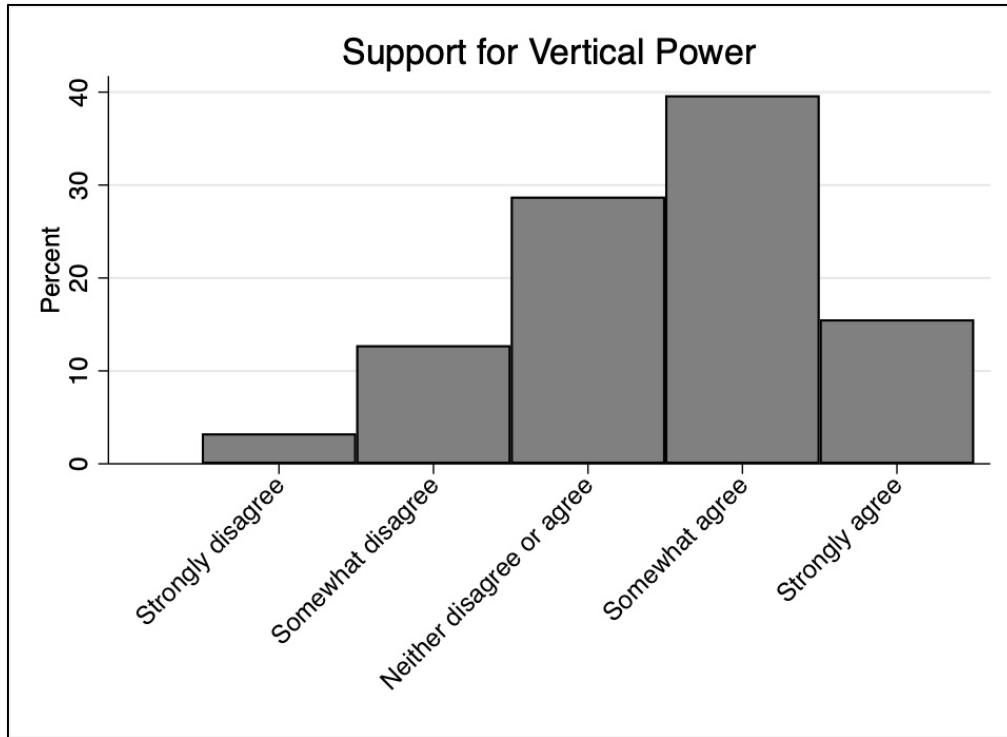
Wave 2 Experiment

In the second experiment, respondents were assigned to either the underrepresented or the proportionally represented conditions, and then asked about their agreement with a statement that tapped into trust in the court: "The federal courts can usually be trusted to make decisions that are right for the country as a whole." This new dependent variable focuses attention on the federal judiciary (as opposed to state courts or courts in general) and is an adaptation of a question used commonly in research assessing Supreme Court legitimacy.

A quarter of respondents disagreed with the statement that federal courts can usually be trusted to make decisions that are right for the country as a whole. About one-third of respondents appeared to be agnostic on this question. Figure 5 below shows the distribution of responses for this question.

Table 13: Regression of support for vertical power. Wave 1.

	Support for vertical power
Underrepresented condition	0.170*
	(0.060)
Proportional represented condition	0.127
	(0.180)
Female	0.026
	(0.063)
Hispanic	-0.107
	(0.070)
White	0.021
	(0.078)
College	0.070
	(0.062)
Republican	-0.090
	(0.072)
Hostile sexism	0.027
	(0.027)
Supreme Court knowledge	0.093*
	(0.031)
Supreme Court feeling thermometer	0.003*
	(0.001)
Rule of law	0.260*
	(0.038)
Procedural fairness	0.256*
	(0.045)
Abortion (somewhat disagree)	0.146
	(0.118)
Abortion (neither agree/disagree)	-0.049
	(0.089)
Abortion (somewhat agree)	-0.019
	(0.101)
Abortion (strongly agree)	0.034
	(0.098)
Constant	1.386*
	(0.229)
n	1008
Adjusted R^2	.1373

Note: Standard errors in parentheses. * $p < 0.05$. Model is significant at $p < .001$.

Figure 7: Distribution of Responses about Trust in Federal Courts. Wave 2.
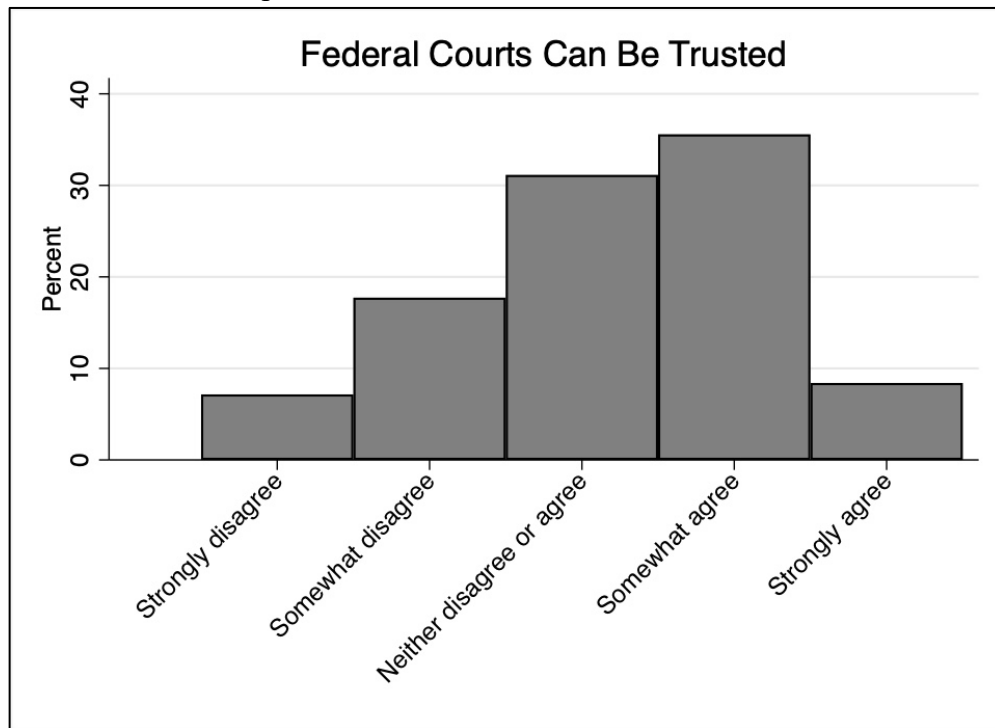
It should be emphasized that Wave 2 of the survey followed the release of the Supreme Court's *Dobbs* decision to overrule Roe v. Wade. This is likely to impact public views of the judiciary, so a new question also asked respondents how much they had heard about *Dobbs*. More than half (56%) of respondents indicated that they had heard "a lot" about the decision, 33.9% had heard "a little," and 9.3% had heard "nothing at all."

In Table 14, I present the results for a regression model exploring support for trust in federal courts. Like in Wave 1, there are controls for demographics, attitudes about the Supreme Court and rule of law, hostile sexism, and abortion attitudes. I also add a control for whether the respondents had heard a lot or a little about the *Dobbs* abortion ruling (1) or nothing at all (0).

Table 14: Ordered logistic regression.

	Federal courts can usually be trusted
Proportionally represented condition	0.231*
	(0.106)
Female	-0.173
	(0.112)
Hispanic	0.047
	(0.138)
White	0.003
	(0.128)
College	0.356*
	(0.120)
Republican	-0.712*
	(0.128)
Hostile sexism	0.018
	(0.053)
Supreme Court knowledge	0.033
	(0.055)
Supreme Court feeling thermometer	0.011*
	(0.002)
Rule of law	0.371*
	(0.074)
Procedural fairness	1.038*
	(0.085)
Abortion (somewhat disagree)	0.127
	(0.209)
Abortion (neither agree/disagree)	0.300
	(0.165)
Abortion (somewhat agree)	0.301
	(0.181)
Abortion (strongly agree)	0.388*
	(0.186)
Aware of Dobbs	0.299
	(0.187)
n	1249
Pseudo-R^2	0.070

Note: Standard errors in parentheses. * $p < 0.05$. Model is significant at $p < .001$. Cut points omitted for space.

The results for Wave 2 show that respondents who viewed the proportional representation condition about women on the bench showed higher levels of trust in federal courts, compared to those who were exposed to the underrepresented condition. As with the first experiment,

individuals with strong support for the rule of law and beliefs about procedural fairness held more trusting views of the judiciary. While neither respondent gender nor *Dobbs* awareness did not impact trust, those who strongly believed that the Supreme Court should make abortion easier to obtain also held high trust in federal courts. Future work should explore how abortion attitudes intersect with attitudes about gender representation.

In sum, in the post-*Dobbs* era, there does appear to be support for the proposition that women's representation in the judiciary can improve trust in federal courts. (In the third wave of the survey, this experiment will be repeated.) However, pre-*Dobbs*, the public's willingness to accept the exercise of judicial power was unaffected by the degree of women's judicial representation.

XI. Narrative Transportation and the Persuasive Power of the film *Don't Look Up*[13]

Natural scientists have long warned that climate change is one of the most pressing issues facing humanity. This understanding is reflected in the latest report from the Intergovernmental Panel on Climate Change, which calls for urgent action to avert or reduce catastrophic consequences. Underscoring the seriousness of these findings in world politics, the United Nations Environment Program (2021) has signaled "a red alert for our planet" and warns of "imminent peril" if individuals, private companies, and nation-states fail to address the causes. After decades of widespread failure to heed scientific warnings, the world must mobilize.

Many social science scholars argue that effective communication about climate change must play a central role in promoting timely and effective response to the crisis. While the earliest research focused primarily on the need to increase awareness of climate change and explain the science to the general public, the field's "critical concerns" now address the problem of how "to pivot from science to policy, from impacts to responses, from urgency to action, from explaining to mobilizing" (Moser 2016, 7).

Various streams of research studying science communication designed to influence public opinion in the United States reveal that analytical persuasion has proven difficult to achieve, especially among Republican audiences, who are less likely to believe the scientific consensus that climate change is happening or that it is a serious threat (AP-NORC, 2022). Previous experimental surveys employing short vignettes have found that Republicans are less likely than Democrats to be moved by overtly persuasive messages (Feldman and Hart, 2018). Some experiments have even produced evidence of backfire effects (Gainous, Payne, and Merry

---

[13] Prepared by Melissa K. Merry and Rodger A. Payne.

2021), whereby conservative respondents actively reject messages, shifting their attitudes in the opposite of the intended direction (Zhou, 2016).

In this study, we investigated the potential of entertainment media to induce meaningful changes in climate change attitudes. Specifically, we assessed the impact of the popular 2021 satirical film *Don't Look Up* on climate change concern, motivation to act, policy support, and efficacy. While the film is not explicitly about the need to address climate change, writer-director Adam McKay intended for it to serve as an allegory. We find that viewing *Don't Look Up* influenced climate change opinions. Further, we find that the depth of engagement with the film's story predicts pro-environmental attitude changes, even among people predisposed to climate skepticism. These findings illuminate the potential of film and fictional narratives to reach broad and politically diverse audiences and to create the cultural conditions that might facilitate much needed policy change.

Explaining the Experiment

In a broad literature, policy studies scholars have developed a Narrative Policy Framework (NPF) suggesting that narrative communication is key to shaping public opinion (Shanahan et al., 2018). Narratives—or stories with a setting, characters, plot, and morals—are a central means by which people make sense of their experiences. NPF scholars explore how narratives influence public opinion, shape the composition and power of political coalitions, and affect policy outcomes.

In particular, the concept of narrative transportation – a phenomenon in which a story receiver "gets lost" in the narrative – is an especially promising potential mechanism of narrative persuasion, potentially working to overcome partisan biases and other barriers to action.

Narrative transportation uses the metaphor of travel to describe the experience of engagement in a story. In following the plot and characters, the traveler "goes some distance from his or her world of origin," then returns "changed by the journey" (Gerrig, 1993: 10-11). As the literature on narrative persuasion suggests, such change can involve shifts in attitudes, beliefs, emotions, and behavioral intentions (Green and Brock).

For narrative transportation to occur, three conditions typically need to be met. First, at a minimum, the receiver of the narrative must attend to and interpret the story. Second, the receiver must empathize with the characters and develop mental images of the action. Third, when fully engaged, the receiver loses track of reality (Flores et al., 2022; van Laer et al., 2014).

Our experiment was guided by the notion that popular films might play a promising part in climate communication given that they are "visually arresting and emotionally provocative" (Dudo, Copple, and Atkinson, 2017: 4). These attributes are especially important for climate change, which is still abstract, difficult to understand, and temporally and geographically distant for many people, leading to low personal and emotional involvement. Compared to explicit policy advocacy, entertainment media are much more likely to reach a broad cross section of the public.

Why Study Reactions to *Don't Look Up*?

Don't Look Up (2021) is an apocalyptic, satirical, fictional film, described by writer and director Adam McKay as blending elements of comedy, disaster, and horror genres (Aurthur, 2021). Intended as an allegory about the climate crisis, the film begins with the discovery of a planet-killing comet, on track to hit Earth and cause mass extinction in just over six months. In the weeks and months to follow, the protagonists, two astronomers, seek to convince the U.S.

government to strike and divert the comet. Meanwhile, a technology company CEO proposes to use untested technology to harvest rare earth minerals from the comet, and a media disinformation campaign—denying that the comet even exists—gathers momentum. When a mission to fragment and harvest the comet fails, humanity's doomed fate is sealed. The film makes no mention of climate change, relying instead on viewers to connect the dots in its critique of late-stage capitalism, "post-truth politics and public culture" (Atik, Ozgun, and Dholakia, 2022).[14]

Don't Look Up had a limited theatrical release before becoming available on the streaming service Netflix in December 2021. With a star-studded cast (including Leonardo DiCaprio, Jennifer Lawrence, and Meryl Streep), the film set a record for the most viewing hours in a single week on Netflix (VanHoose, 2022) and was the second most watched film on Netflix (2022) within 28 days of its release. The film received four Academy award nominations, including Best Motion Picture, among other accolades. Given its widespread popularity and lack of direct references to climate change—references that might activate partisan biases—this film offers the potential to reach a broad and politically diverse audience. It thus presents an interesting case to explore whether and how narrative transportation can shift climate attitudes among the American public.

Could a disaster movie that does not explicitly address climate change shift viewers' climate change concern, motivation, policy support, and climate-related efficacy?

---

[14] Some viewers likely viewed the film as an allegory for the COVID-19 pandemic response.

<u>The Experiment</u>

Respondents were initially asked whether they had seen the film *Don't Look Up*. To evaluate narrative transportation among those who said yes, we used a three-item scale: (1) While I was watching the film, I could easily picture the events in it taking place, (2) I could picture myself in the scene of the events described in the film while I was watching it, and (3) I was mentally involved in the film while I was watching it. The average of these responses was used to create a scale of 1 (low) to 5 (high) narrative transportation.

To gauge climate change concerns, all survey respondents were asked four questions, drawn from the Yale Program on Climate Communication: (1) How important is the issue of global warming to you personally? (2) How worried are you about global warming?, (3) How much do you think global warming will harm you personally?, and (4) How much do you think global warming will harm future generations of people?

To assess motivation, respondents were asked to rate their agreement with the statement, "I feel motivated to try to do something about climate change." To gauge support for policy action, respondents were asked to rate their agreement with the following three statements: (1) It's worth pressuring politicians to take action on climate change, (2) The government should follow the recommendations of climate scientists, and (3) The government should do more to do reduce climate change.

Finally, three survey items assessed efficacy. To measure self-efficacy and personal response efficacy, respectively, we asked respondents to rate their agreement on a scale of 1 to 5 with the statements "I can take actions to prevent climate change from getting worse" and "Cutting my carbon emissions will not make a difference to the problem of climate change." This second item was reverse coded so that higher levels indicated greater efficacy. As another,

more general measure of response efficacy, we asked respondents to rate their agreement with the statement, "Climate change is an unstoppable process, we cannot do anything about it." This variable was also reverse coded.

Results

23% of respondents in the weighted sample saw the film *Don't Look Up*. As indicated in Table 15, 27.4% of viewers identified as or leaned Republican, and 25% identified as Independent, with the remainder identifying as Democrats.

To test our hypotheses about the effectiveness of film and narrative transportation, we ran a series of regression models. The first set of models compares respondents who did not watch *Don't Look Up* to those who did watch the film, with varying levels of narrative transportation. For this, we separated viewers into three categories representing low narrative transportation (0-2.99), moderate (3-3.99), and high (4-5). We then created a categorical variable representing the full range of engagement with the film, from 0 (did not watch) to 3 (highly transported). The second set of models focuses on respondents who watched the film, examining how narrative transportation interacted with party identification to shape climate change attitudes.

Figure 8 below illustrates the estimated effects of different levels of narrative involvement on persuasion.

Table 15: Viewership of *Don't Look Up.*

Control Variable	Subcategory	Percentage of Respondents Who Watched *Don't Look Up*	Mean Narrative Transportation (SE)
Party Identification	Strong Democrat	26.1	4.08 (0.07)
	Weak Democrat	18.0	3.84 (0.09)
	Leaning Democrat	1.8	4.26 (0.29)
	Independent	25.5	3.75 (0.09)
	Leaning Republican	6.9	3.43 (0.20)
	Weak Republican	9.4	3.37 (0.17)
	Strong Republican	11.1	3.60 (0.15)
Age	18-24	20.3	3.70 (0.13)
	25-44	42.5	3.89 (0.06)
	45-64	27.5	3.84 (0.08)
	65+	9.6	3.22 (0.15)
Education	Did not graduate high school	5.0	3.67 (0.32)
	High school diploma or GED	26.5	3.65 (0.10)
	Some college, but no degree	28.9	3.85 (0.07)
	Bachelor's degree	21.8	3.82 (0.08)
	Graduate degree	17.8	3.86 (0.10)
Gender	Male	47.5	3.74 (0.07)
	Female	52.5	3.82 (0.06)
Race	White	70.1	3.77 (0.05)
	Black	14.6	3.69 (0.13)
	Asian	9.3	3.82 (0.15)
	Other	6.0	4.05 (0.14)
When film was viewed	Soon after release	46.9	3.92 (0.06)
	Feb.-Mar. 2022	42.4	3.72 (0.07)
	April 2022	5.5	3.94 (0.11)
	Don't Recall	5.2	2.86 (0.21)

Figure 8: Estimated effects of narrative involvement on four measures of climate change concern, motivation to act, three measures of policy support, and three measures of efficacy. Note: lines around each estimate indicate 95 percent confidence intervals.
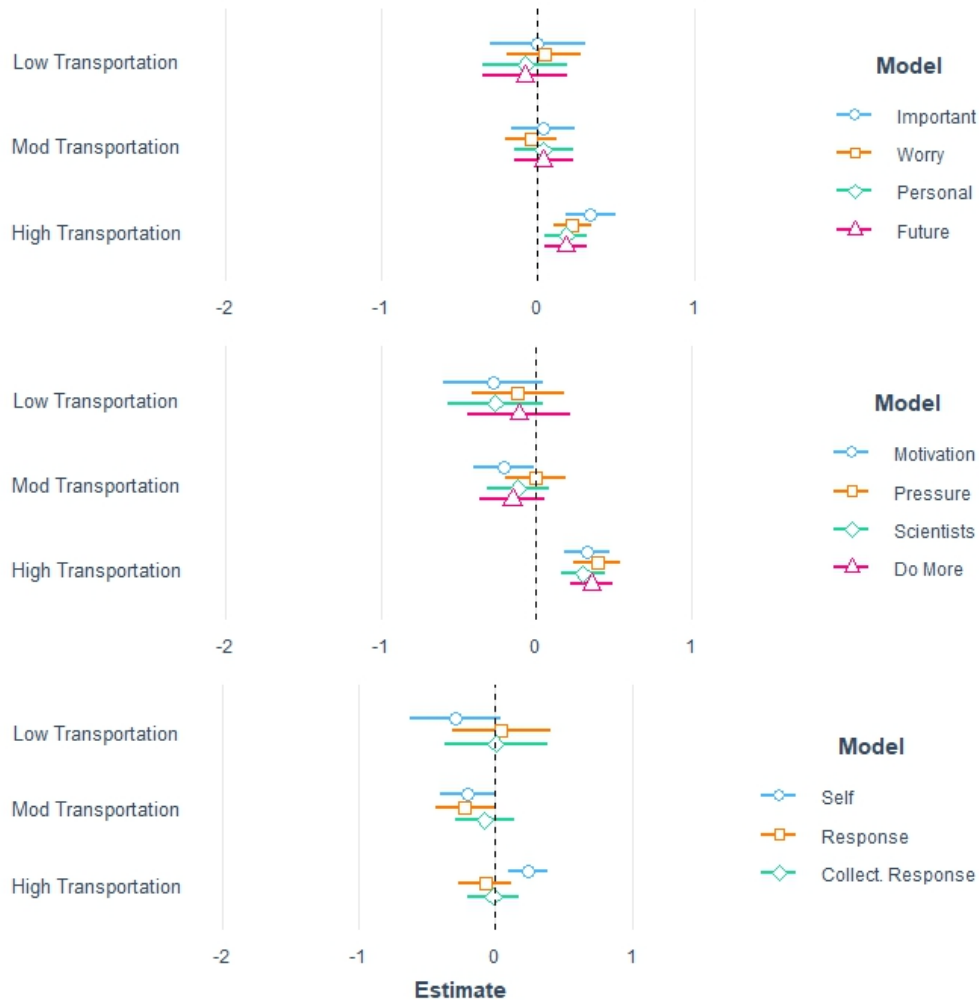

As expected from prior research, Democratic respondents compared to Republicans had higher levels of climate change concern, motivation, and support for government action. Democrats also had higher levels of self- and personal response efficacy, while Republicans were more likely to believe that climate change is *not* unstoppable. Despite these seemingly immutable partisan differences, the results indicate that watching and being narratively transported by *Don't Look Up* is associated with stronger climate change beliefs. Compared to the reference category (those who did not watch the film), individuals who were highly

transported by the film had significantly greater concern, motivation, policy support, and self-efficacy. Personal and general response efficacy beliefs were the only dependent variables unaffected by high narrative transportation. Interestingly, individuals who experienced moderate narrative transportation had less motivation, self-efficacy and personal response efficacy than those who did not watch the film.

Turning to the second set of models, we treated narrative transportation as a continuous variable ranging between 1 and 5. We also added an interaction term, separately estimating the impact of narrative transportation on climate change beliefs for viewers of different party identifications. Figure 9 illustrates the results for the interaction between party identification and narrative transportation.

With the inclusion of the interaction term, the main effect of narrative transportation is no longer significant. We also see that narrative transportation is not significant for weak Democrats, when compared to the reference category (strong Democrats). However, for viewers who identify as Independent but lean Democratic or Republican, narrative transportation significantly and positively influences climate change concern and self-efficacy. Narrative transportation is also predicted to increase motivation to act among viewers who lean Democratic, while support for pressuring politicians to act on climate change is increased for viewers who lean Republican. For viewers who lean Republican or who identify as weak or strong Republicans, narrative transportation significantly and positively influences the belief that policymakers should heed the recommendations of climate scientists.

Figure 9: Estimated effects of the interaction of party identification and narrative transportation on four measures of climate change concern, motivation to act, three measures of policy support, and three measures of efficacy. Note: lines around each estimate indicate 95 percent confidence intervals.
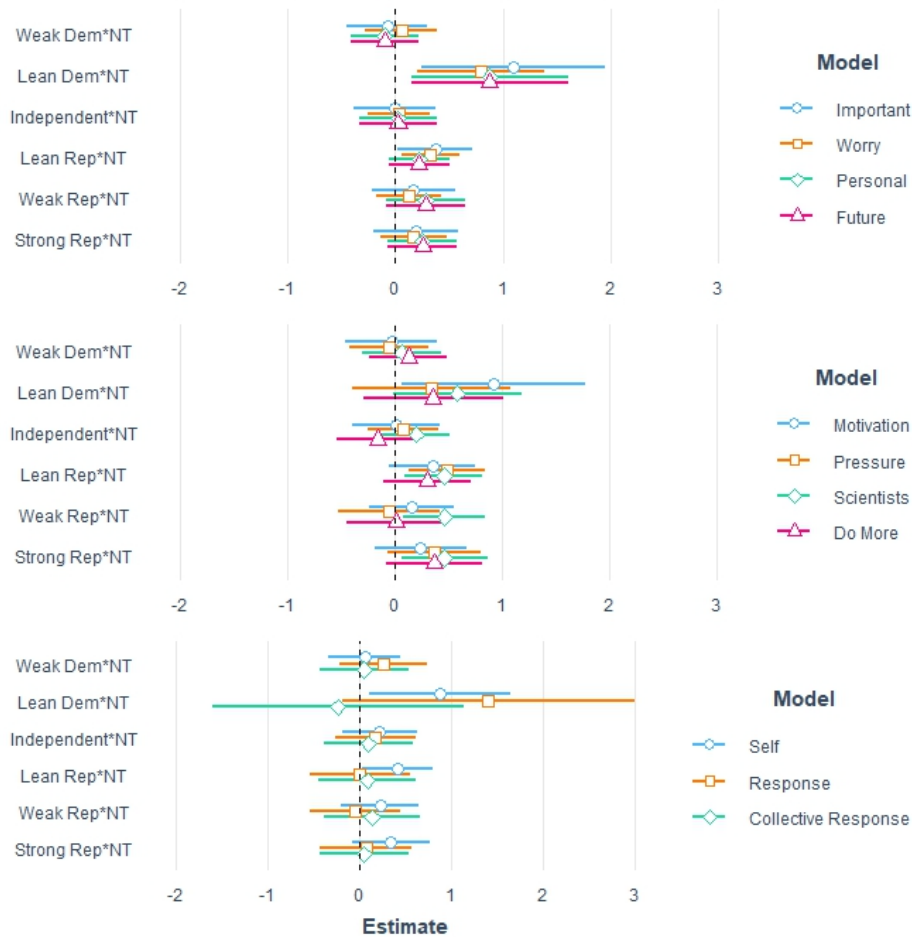
Discussion

In summary, the results strongly support the importance of narrative transportation as a mechanism of persuasion. In the models comparing non-viewers to viewers with different levels of transportation, we find that highly transported viewers had significantly greater climate change concern, motivation to act, policy support, and self-efficacy than non-viewers, while response efficacy was unaffected by narrative transportation. Surprisingly, we found that moderately transported viewers were predicted to have lower motivation, self-efficacy, and personal response efficacy than non-viewers. This finding may indicate a threshold effect of

transportation. At low and moderate levels, viewers may still have access to their pre-existing beliefs, allowing for some counter-arguing with the film's message. To override those beliefs, a high degree of transportation—in which viewers truly "get lost" in the story—may be necessary.

In the models focusing on those who watched the film, we find that the effects of narrative transportation occur across the ideological spectrum. We do not find a difference between weak and strong Democrats in the influence of narrative transportation on climate change beliefs. This finding likely indicates a "ceiling effect" for these viewers; in other words, given that Democrats are likely already concerned about climate change and motivated to act, there is little room for movement in those beliefs. For Independents who lean Democratic or Republican, however, narrative transportation significantly influences their climate change concern and self-efficacy *and* in the same direction. Further, among Republicans (strong, weak, and leaning) we find a strong association between narrative transportation and the belief that policymakers should listen to climate scientists. These findings suggest that, in some cases, narrative transportation can overcome even strong partisan biases.

Conclusion and Wave 3 Plans

These findings offer a glimmer of hope for climate communication. Despite the intense partisan divisions over climate change, it seems that highly engaging popular media can overcome biases and produce durable, pro-environmental attitude changes. These findings also provide support for a central tenet of the Narrative Policy Framework—the importance of narrative in human cognition and its potential to shape policy attitudes at the micro level. Existing research with the Narrative Policy Framework has focused mainly on communications designed for advocacy— press releases, news articles, social media posts, etc. These texts often contain narratives, but

they are non-fictional, and their persuasive intent is explicit. These communications are likely to reach smaller audiences and may cause some audiences to reject the messages. As this research shows, entertainment media may have a much larger impact, reaching more people and overcoming people's tendency to reject information inconsistent with their prior attitudes.

Previous research about the ability of climate films to influence viewer attitudes has often found promising results. Virtually none of that prior research has examined whether any affects are enduring over time. In the Wave 3 survey, we plan to repeat the experiment on the assumption that more than a year will have elapsed since viewers will have watched the film.

XII. Social Media Exposure and Attitudes about Democratic Norms[15]

There has been significant work considering how the shifting media landscape may be leading to heightened political polarization in public opinion (Gainous and Wagner 2011; Prior 2013; Stroud 2010). Some believe that social media, in particular, is a corrosive and toxic force in American politics that may ultimately threaten the very existence of this democratic republic. The data presented here are certainly not sufficient to settle that debate. With that said, the analysis that follows is a strong indictment of the value of social media for political discourse and stability.

The model results presented here suggest that, for Americans, heightened exposure to information via social media is related how they think about a range of democratic norms examined earlier in this report. Specifically, the results suggest that the more Americans rely on social media for political information:

- the less likely they are to believe that elections in this country are fair.

- the more likely they are to believe the common Republican narrative that elections are fraudulent (stolen, the Big Lie, etc.).

- the more likely they are to agree with the common Democratic narrative that laws are making the right to vote too restrictive – which can disproportionality suppress the African American vote in particular.

- the more likely they are to support both right-wing and left-wing authoritarianism.

- the less likely they are to support basic democratic norms like freedom of the press, the right to protest, democratic representation, and separation of powers.

- the more likely they are to believe that it is acceptable to use violence, including assault, to express disagreement with the government.

---

[15] Prepared by Jason Gainous

The graphics included below represent plotted regression results. Each outcome highlighted in the above bulleted points is tested in relation to an index of four social media exposure questions (listed below), while also controlling for partisan self-identification, attentiveness to politics, whether respondents live in the US South, self-identified race, gender, education, and age. The y-axis on each figure represents the range of the labeled democratic norm, and the x-axis represents the range of social media exposure and each of the controls respectively. The blue line is the linear relationship between the two variables in each graph while holding all other variables in the model at their means (controlling for these variables).

Notice that the relationship between social media exposure and each outcome is generally stronger than every other relationship in the model (the slope is steeper). Social media exposure combines responses from the following four items into a single index:

- How often do you use social media to get political news? (A few times a day, About once a day, A few times a week, A few times a month, A few times a year)

- How frequently do you get political news from podcasts? (A few times a day, About once a day, A few times a week, A few times a month, A few times a year)

- How often do you read the comments on political news posts on your social media? (Most of the time, Some of the time, Rarely, Never)

- If you had to guess, what percentage of the political news posts on your social media shares your opinion? (0-100)

These items were all rescaled to have the same range, recoded so that higher values always equaled more, added together, and then rescaled to range from 0-1. All the outcomes, some of which were indices, were also coded this way.

Included below each figure are the individual items measuring the outcome presented in that figure.

Figure 10: Modeling beliefs in the fairness of elections. Question: "People like me are very concerned about fairness in elections in the U.S. today."
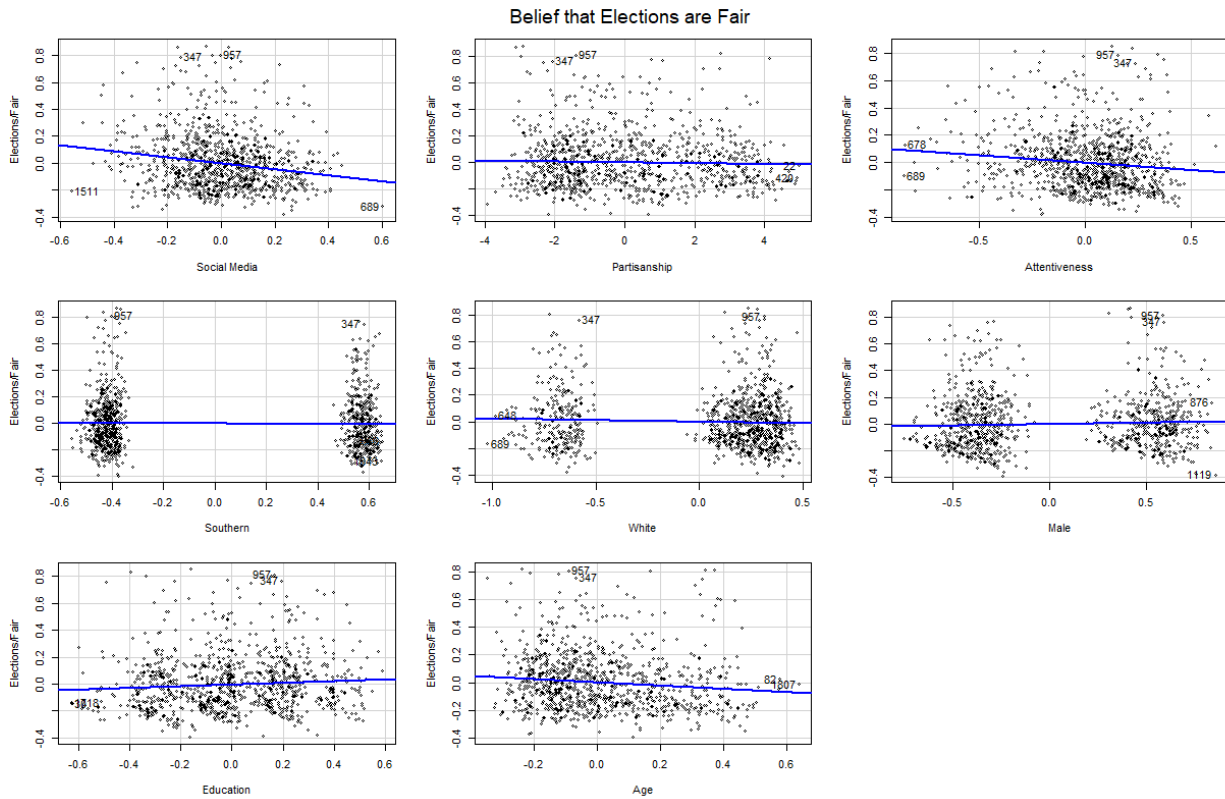
Figure 11: Modeling right-wing concerns about election fraud. Question: "People like me are very concerned about fraud in counting election votes in the U.S. today."
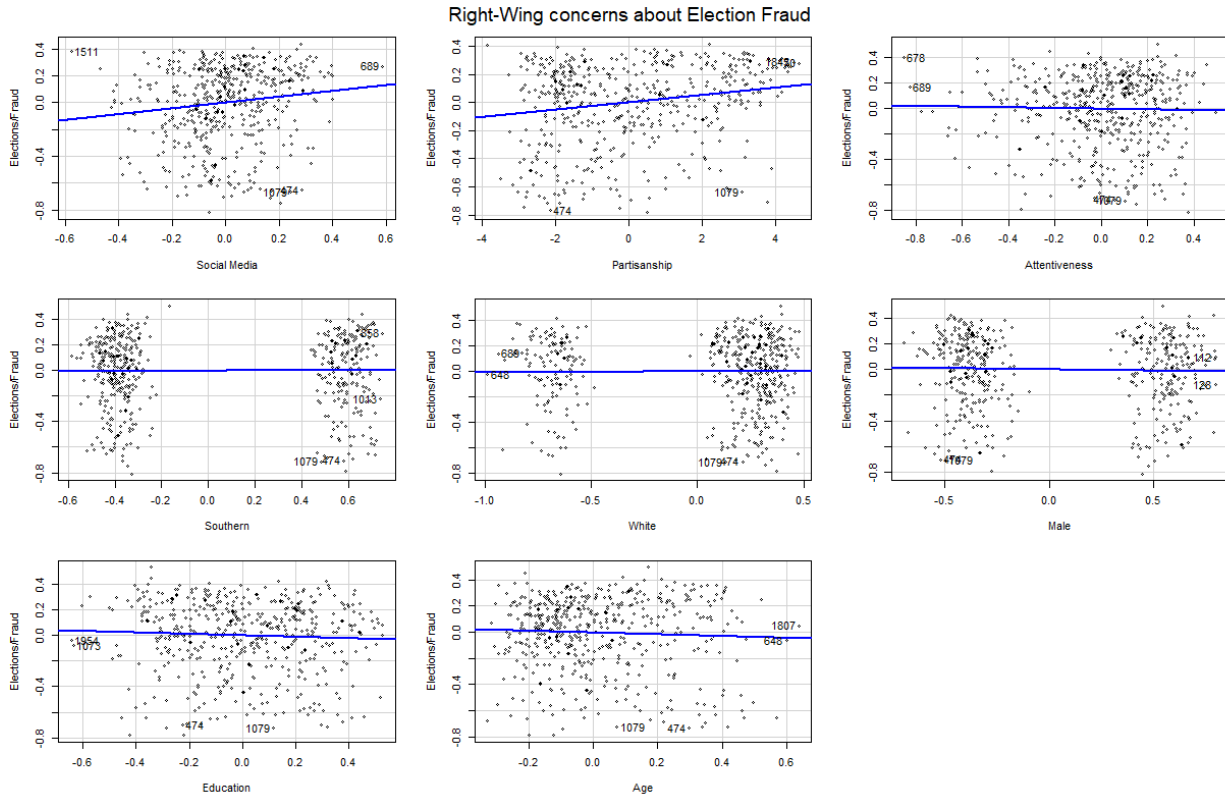
Figure 12: Modeling left-wing concerns about voter suppression. Question: "People like me are very concerned about unfair restrictions on voting in elections in the U.S. today."
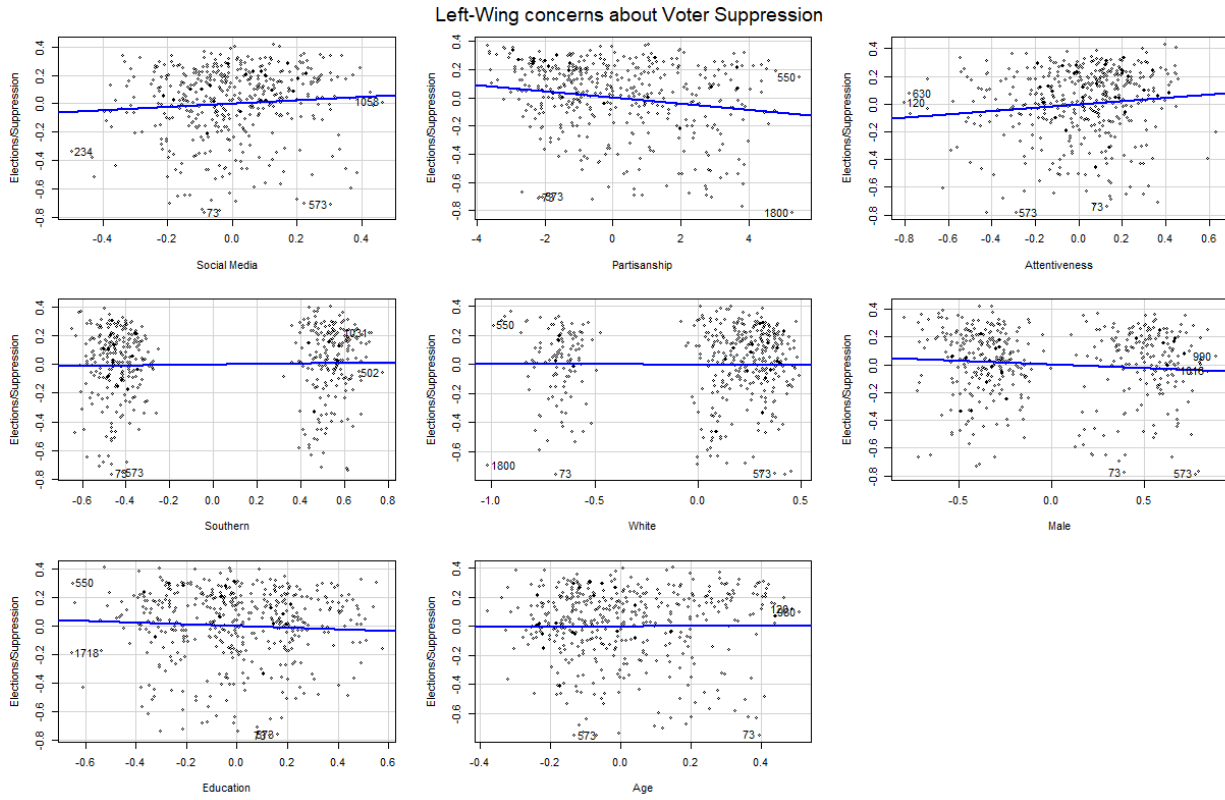

Left-Wing concerns about Voter Suppression

Figure 13: Modeling right-wing authoritarianism. Question: "This country would work a lot better if certain groups of troublemakers would just shut up and accept their group's traditional place in society."
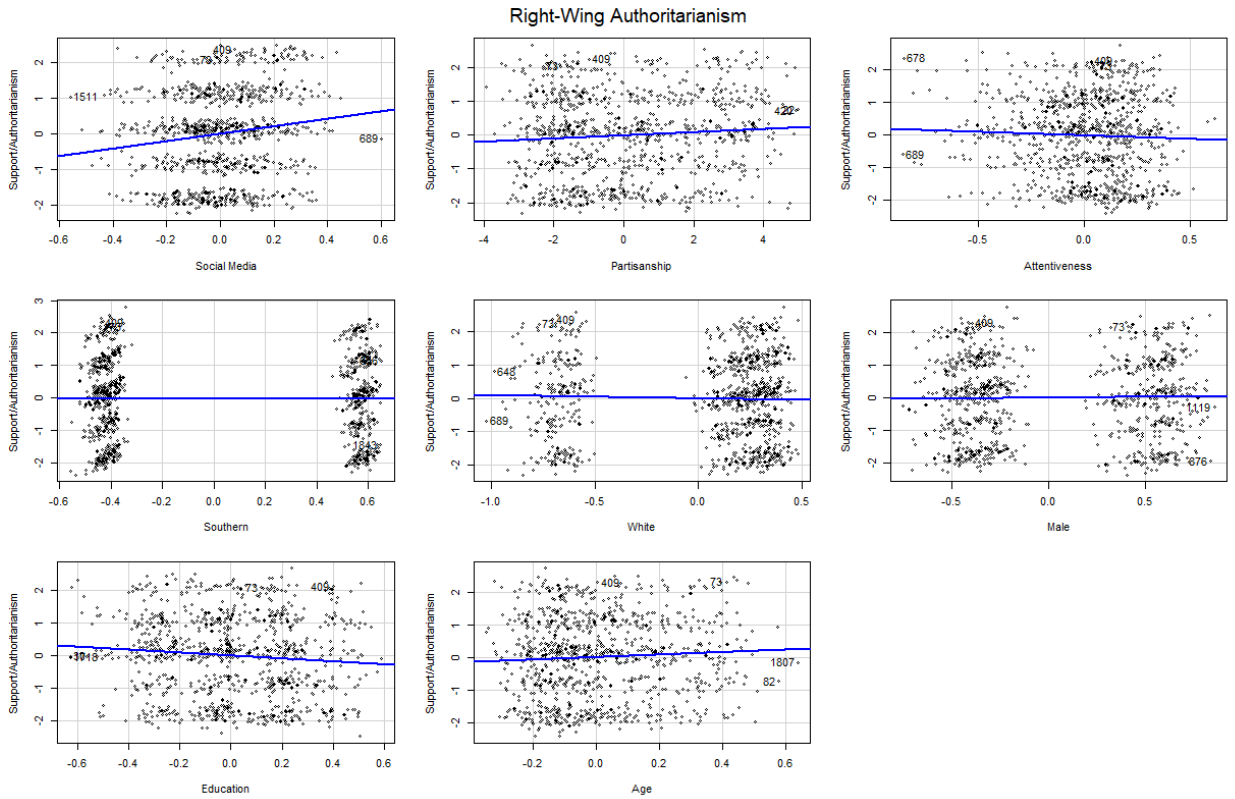
Figure 14: Modeling left-wing authoritarianism. Question: "If I could remake society, I would put people who currently have the most privilege at the very bottom."
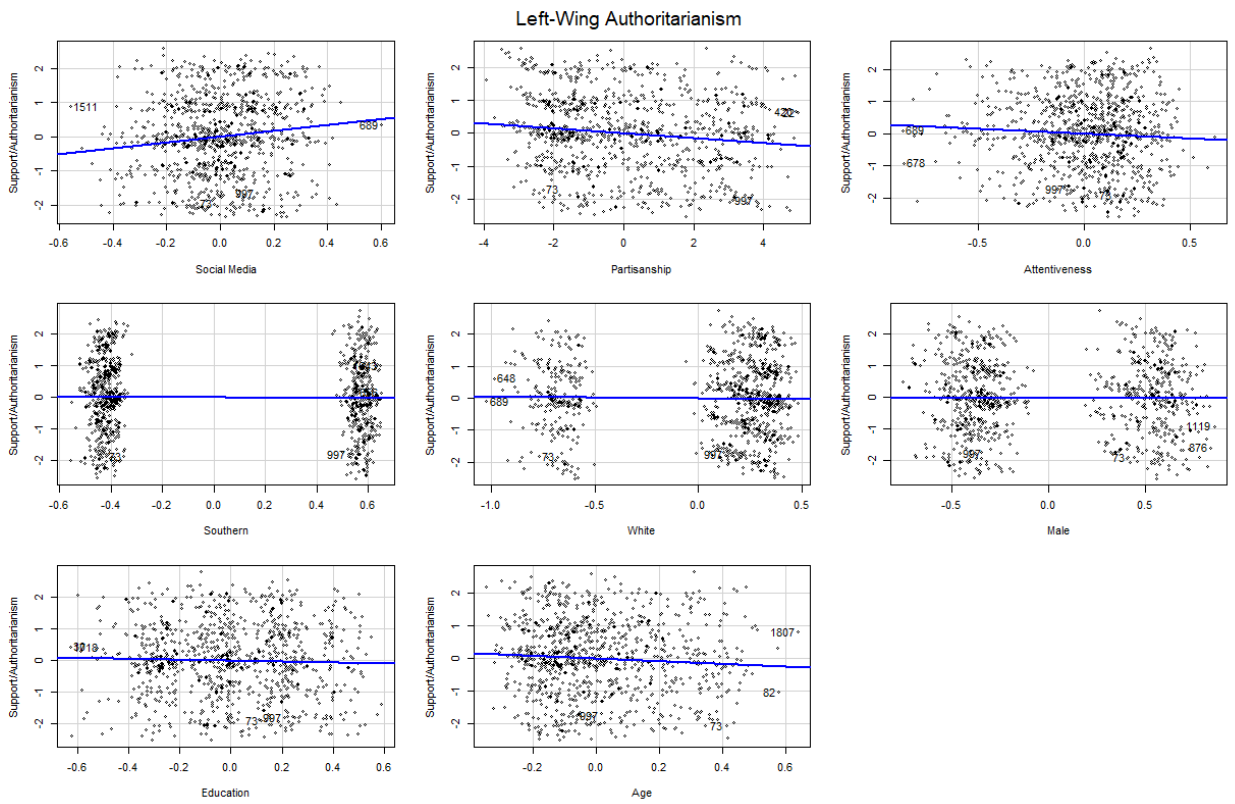
Figure 15: Modeling support for democratic norms regarding free press, peaceful protest, the role of experts versus elected officials, and the importance of strong leaders that are free from judicial and legislative interference (see Section III above for question wording).
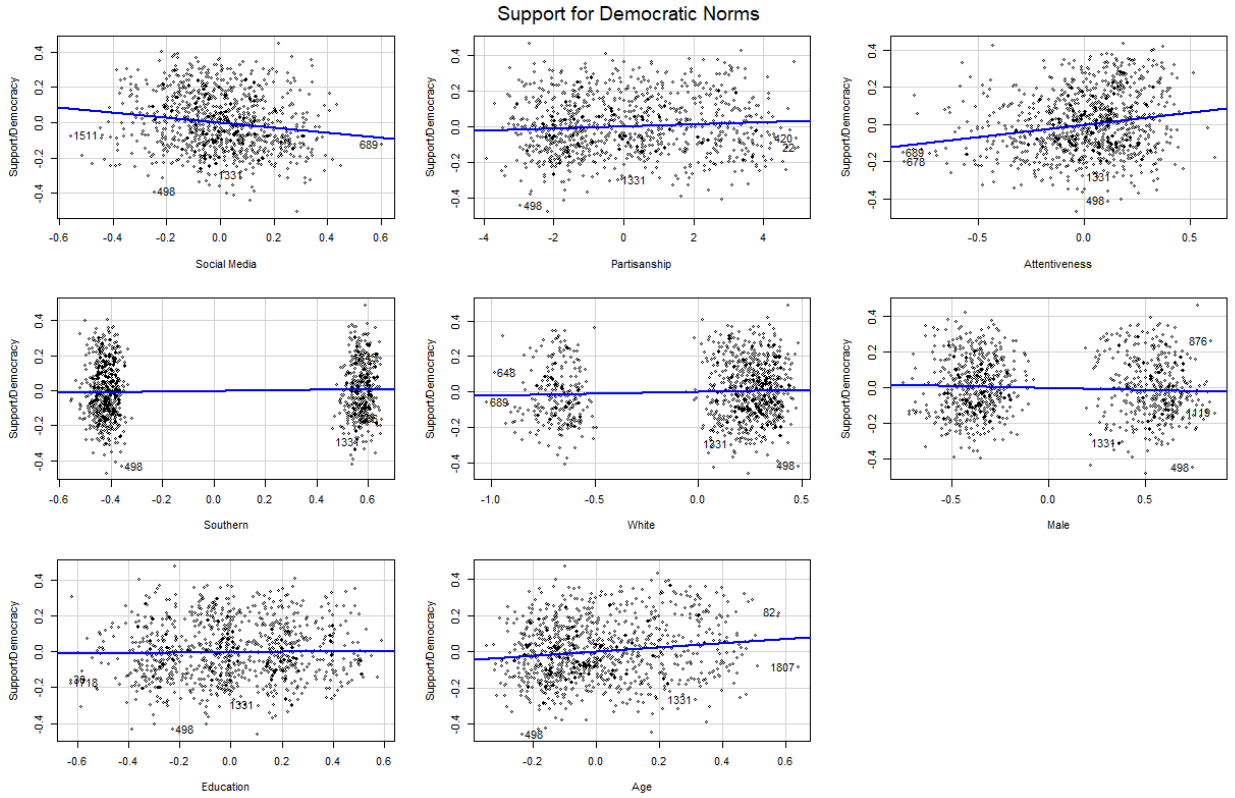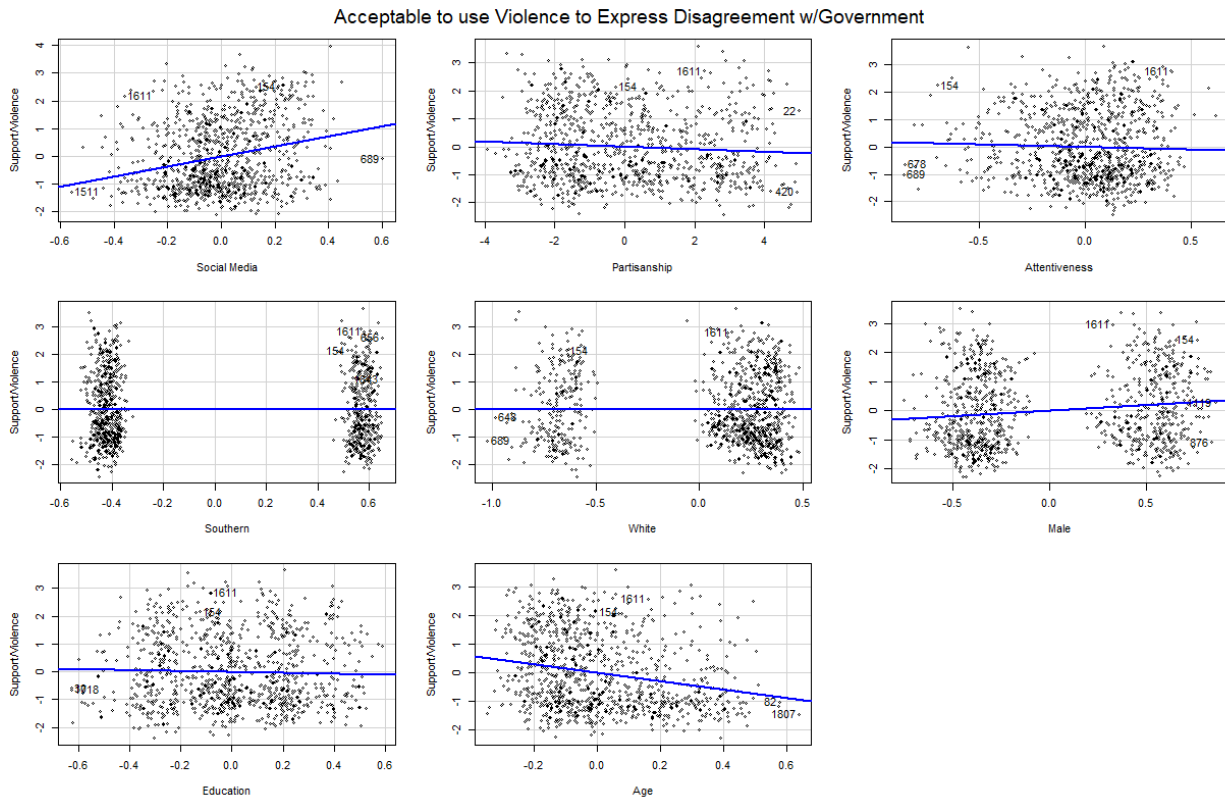
Figure 16: Modeling support for political violence. Question: "It is occasionally acceptable to use violence, including assault, to express disagreement with the government."

Acceptable to use Violence to Express Disagreement w/Government

References

AP-NORC Center for Public Affairs Research. 2022. "More Americans are Pessimistic about the Impact They Can Have on Climate Change Compared to Three Years Ago." https://apnorc.org/projects/more-americans-are-pessimistic-about-the-impact-they-can-have-on-climate-change-compared-to-three-years-ago/

Atik, Deniz, Araz Oxgun, and Nikhilesh Dholakia. 2022. "Book Review: Adam McKay (2021), Don't Look Up by Netflix." *Journal of Macromarketing* 42(3): 454-460.

Aurthur, Kate. 2021. "Adam McKay on the Ending(s) of 'Don't Look Up': DiCaprio's Last Minute Line, Streep's Improv and Brontarocs." *Variety*. https://variety.com/2021/film/news/adam-mckay-dont-look-up-ending-spoilers-1235142363/

Bartels, Brandon L., and Christopher D. Johnston. 2013. "On the ideological foundations of Supreme Court legitimacy in the American public." *American Journal of Political Science* 57(1): 184-199.

Bartels, Brandon L., and Eric Kramon. 2020. "Does public support for judicial power depend on who is in political power? Testing a theory of partisan alignment in Africa." *American Political Science Review* 114(1): 144-163.

Berinsky, Adam, Margolis, M. F., Sances, M. W. & Warshaw, C. 2021. "Using screeners to measure respondent attention on self-administered surveys: Which items and how many?" *Political Science Research and Methods* 9: 430-437.

Dudo, Anthony, Jacob Copple, and Lucy Atkinson. 2017. "Entertainment Film and TV Portrayals of Climate Change and Their Societal Impacts." In *Oxford Research Encyclopedia of Climate Science*. https://doi.org/10.1093/acrefore/9780190228620.013.374

Enders, Adam M., and Judd R. Thornton. Forthcoming. "Racial Resentment, Electoral Loss, and Satisfaction with Democracy Among Whites in the United States: 2004–2016." *Political Behavior*.

Enders, Adam M., Joseph E. Uscinski, Michelle Seelig, Casey Klofstad, John Funchion, Caleb Everett, Stephan Wuchty, Kamal Premaratne, and Manohar Murthi. 2021. "The 2020 Presidential Election and Accusations of Fraud: Continuity or Change?" *Electoral Studies* 72: 102366.

Feldman, Lauren, and P. Sol Hart. 2018. "Climate Change as a Polarizing Cue: Framing Effects on Public Support for Low-Carbon Energy Policies." *Global Environmental Change* 51 (July): 54–66. https://doi.org/10.1016/j.gloenvcha.2018.05.004.

Flores, Andrew, Daniel Boden, Donald Haider-Markel, Daniel Lewis, Patrick Miller, and Jami Taylor. 2022. "Taking Perspective of the Stories We Tell about Transgender Rights: The Narrative Policy Framework." *Policy Studies Journal*. https://doi.org/10.1111/psj.12475.

Gainous, Jason, Rodger A. Payne, and Melissa K. Merry. 2021. "Do Source cues or frames matter? Convincing the public about the veracity of climate science." *Social Science Quarterly* 102(4): 1894-1906.

Gainous, Jason, and Kevin M. Wagner. 2011. *Rebooting American Politics: The Internet Revolution*. Lanham, MD: Rowman & Littlefield Publishers.

Gerrig, Richard. 1993. *Experiencing Narrative Worlds: On the Psychological Activities of Reading.* New Haven, CT: Yale University Press.

Gibson, James L., Milton Lodge, and Benjamin Woodson. 2014. "Losing, but Accepting: Legitimacy, Positivity Theory, and the Symbols of Judicial Authority." *Law & Society Review* 48(4): 837-66.

Gibson, James L. 2015. "Legitimacy Is for Losers: The Interconnections of Institutional Legitimacy, Performance Evaluations, and the Symbols of Judicial Authority," in B. Bornstein & A. Tomkins, eds., *Motivating Cooperation and Compliance with Authority: The Role of Institutional Trust*. New York: Springer.

Green, Melanie C., and Timothy C. Brock. 2000. "The Role of Transportation in the Persuasiveness of Public Narratives." *Journal of Personality and Social Psychology* 79: 701–21. https://doi.org/10.1037/0022-3514.79.5.701.

Kinder, Donald R., and Lynn M. Sanders. 1996. *Divided by Color: Racial Politics and Democratic Ideals*. Chicago, IL: University of Chicago Press.

Laer, Tom van, Ko de Ruyter, Luca M. Visconti, and Martin Wetzels. 2014. "The Extended Transportation-Imagery Model: A Meta-Analysis of the Antecedents and Consequences of Consumers' Narrative Transportation." *Journal of Consumer Research* 40 (5): 797–817. https://doi.org/10.1086/673383.

Michaels, Jon D. 2017. "Trump and the Deep State: The Government Strikes Back Essays." [In eng]. *Foreign Affairs* 5: 1-56.

Moser, Susanne C. 2016. "Reflections on climate change communication research and practice in the second decade of the 21st century: what more is there to say?" *Wiley Interdisciplinary Reviews: Climate Change* 7(3): 345-369.

Netflix. 2022. "Global Top 10; Weekly Top 10 lists of the Most-Watched TV and Films." https://top10.netflix.com/.

Pew Research. "Positive Views of Supreme Court Decline Sharply Following Abortion Ruling." September 1, 2022. Accessed February 2, 2023. https://www.pewresearch.org/politics/2022/09/01/positive-views-of-supreme-court-decline-sharply-following-abortion-ruling/

Pew Research. "Majority of Public Disapproves of Supreme Court's Decision To Overturn Roe v. Wade." July 6, 2022. Accessed February 2, 2023. https://www.pewresearch.org/politics/2022/07/06/majority-of-public-disapproves-of-supreme-courts-decision-to-overturn-roe-v-wade/

Prior, Markus. 2013. "Media and political polarization." *Annual Review of Political Science* 16 (1): 101-127.

Scherer, Nancy, and Brett Curry. 2010."Does descriptive race representation enhance institutional legitimacy? The case of the US courts." *Journal of Politics* 72(1): 90-104.

Shanahan, Elizabeth A., Michael D. Jones, Mark K. McBeth, and Claudio Radaelli. 2018. "The Narrative Policy Framework." In Paul A. Sabatier and Christopher M. Weible, eds. *Theories of the Policy Process*, 4th edition. New York: Routledge, 173-213.

Shigemura, Sohei, Tatsuya Iseki, Shun Ikeda, and Hideo Ishima. 2021. "Public support for the judicial branches under the COVID-19 pandemic." *Journal of Elections, Public Opinion and Parties* 31: 348-360.

Stroud, Natalie J. 2010. "Polarization and partisan selective exposure." *Journal of Communication* 60(3): 556-576.

United Nations Environment Programme. 2021. "Emissions gap report 2021: The heat is on—A world of climate promises not yet delivered." https://www.unep.org/resources/emissions-gap-report-2021.

VanHoose, Benjamin. 2022. "'Don't Look Up' Breaks Netflix Record with Most Viewing Hours in Single Week, Director Is 'Flabbergasted'." *People*, January 6. https://people.com/movies/dont-look-up-breaks-record-netflix-most-streaming-hours-single-week/

Whitehead, Andrew L, and Samuel L Perry. 2020. *Taking America Back for God: Christian Nationalism in the United States*. Oxford University Press.

Zhou, Jack. 2016. "Boomerangs Versus Javelins: How Polarization Constrains Communication on Climate Change." *Environmental Politics* 25(5): 788-811. DOI: 10.1080/09644016.2016.1166602.