The Conditional Associations of Authoritarianism with Americans' Responses to COVID-19: An Out-of-Sample Replication

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Abstract: Seeking to understand why right-wing Americans adopted a lax response to COVID-19 despite psychological theories of threat sensitivity and dispositional security needs that might have predicted the opposite, Ollerenshaw (2022) shows that dispositional authoritarianism was conditionally associated with Americans' responses to COVID-19. Examining national surveys, Ollerenshaw (2022) finds that authoritarianism was directly associated with greater concern for COVID-19 and concomitant health behaviors and preferences toward public health restrictions; indirectly, however, authoritarianism was associated with right-wing political identification and cue-taking for politically engaged Americans, which reduced these individuals' level of concern over COVID-19 and their willingness to engage in health behaviors and support public health restrictions. In this note, I conduct an out-of-sample replication of Ollerenshaw (2022) using the Voter Study Group survey (n=3,275). I similarly find authoritarianism was conditionally related to concerns about COVID-19 and preferences toward public health restrictions, with similar or even larger effects. This replication adds weight to Ollerenshaw's (2022) claim that psychological traits and political context jointly influenced Americans' responses to COVID-19.

[1] **Author Note:** I did not encounter the Voter Study Group sample until June 2023, eight months after my original study was published in *Political Behavior.* My thanks to an anonymous reviewer for an entirely different paper who pointed out that the Voter Study Group panel included an authoritarianism measure in its 2016 wave.

Political psychologists have long argued that US conservatives maintain higher threat sensitivity and dispositional needs for security than liberals (Jost et al. 2003). Thus, Ollerenshaw (2022) proposes a puzzle emerged during the COVID-19 pandemic when right-wing Americans adopted laxer responses to COVID-19 than left-wing Americans despite these groups' purported dispositional orientations towards threat and security. To resolve this puzzle, Ollerenshaw (2022) shows that authoritarianism, a common measure of threat sensitivity and needs for security, was *conditionally* associated with Americans' responses to COVID-19. Directly, authoritarianism was associated with increased concern regarding COVID-19 and, in turn, greater willingness to adopt protective health behaviors and support public health restrictions. Indirectly, however, among politically engaged Americans, authoritarianism was associated with right-wing identification and cue-taking from elites who often downplayed the pandemic's severity, reducing politically engaged authoritarians' level of concern about COVID-19, with concomitant effects on health behaviors and public health restrictions preferences. Thus, Ollerenshaw (2022) shows that the associations between authoritarianism and Americans' responses to COVID-19 flipped from stringent at low levels of political engagement to lax at high levels of political engagement.

In this note, I replicate several of Ollerenshaw's (2022) main findings. Section 1 reviews Ollerenshaw's (2022) theory and empirical approach. Section 2 outlines my approach for testing Ollerenshaw's (2022) claims out-of-sample using the Voter Study Group survey. Section 3 offers the results of these tests, which show similar or larger effects than those reported in Ollerenshaw (2022). Section 3 concludes with a brief discussion of how my findings can inform researchers' thinking about the way individuals respond to threats by considering psychological *and* political inputs, as well as their interaction.

1. Ollerenshaw (2022): "The Conditional Effects of Authoritarianism on COVID-19 Pandemic Health Behaviors and Policy Preferences"

Ollerenshaw (2022) lays out a puzzle for political psychologists. Psychological theories would predict that authoritarianism, a disposition rooted in threat sensitivity and acute needs for security, should have spurred behaviors and preferences that showed concern for the threats faced by Americans during the deadly COVID-19 pandemic. But Republicans and conservatives, who are on average higher in authoritarianism than Democrats and liberals, had *laxer* responses to COVID-19. Ollerenshaw (2022) asks: why did right-wing Americans take a laxer approach to COVID-19 mitigation than left-wing Americans, despite these groups' dispositional orientations towards threat and security?

Ollerenshaw (2022) theorizes that authoritarianism had both direct and indirect effects on Americans' responses to COVID-19. Directly, authoritarianism should have been associated with greater concern for the threat posed by COVID-19 and, in turn, increased health behavior uptake and support for health restrictions. Indirectly, however, the sorting of authoritarian Americans who are politically engaged (i.e., attentive to, knowledgeable about, and invested in politics) into the Republican Party should induce associations between authoritarianism and reduced concern over COVID-19, with concomitant effects on health behaviors and health restriction preferences. Conversely, the sorting of engaged non-authoritarians into the Democratic Party should induce associations between non-authoritarianism and greater COVID-19 concerns, health behavior uptake, and support for health restrictions. Because sorting is more pronounced among politically engaged Americans, the indirect effects of authoritarianism should strengthen with engagement. Thus, Ollerenshaw (2022) hypothesized for politically disengaged Americans, authoritarianism would be associated with increased COVID-19 concerns, health behavior uptake, and support for

public health restrictions. But for politically engaged Americans, Ollerenshaw hypothesized authoritarianism would be associated with reduced COVID-19 concerns, less health behavior uptake, and opposition to public health restrictions.[2]

Ollerenshaw (2022) tests these hypotheses in three national samples: the 2020 American National Election Study-General Social Survey (ANES-GSS) survey (n=806) and two Lucid samples fielded in 2020 (n=1,032), and 2021 (n=2,117). He first shows that authoritarianism is increasingly associated with Republican partisanship and conservative ideological identification as functions of political engagement, replicating Ollerenshaw and Johnston (2022) and Johnston et al. (2017). He then uses the 2020 ANES-GSS to examine COVID-19 concerns and the Lucid studies to examine health behaviors and health restriction preferences. Ollerenshaw (2022) mostly finds support for his hypotheses: authoritarianism is associated with stringent COVID-19 responses among politically disengaged Americans, but lax responses among politically engaged Americans.[3] Ollerenshaw (2022) concludes that political engagement served as a "link between authoritarianism and Americans' responses to the COVID-19 pandemic."

2. Replication Methodology

After the publication of Ollerenshaw (2022), I learned that some of its findings could be replicated using the Voter Study Group (VSG) survey (n=3,277). The VSG is a non-probability panel with waves fielded from 2011 to 2020 (see Appendix 1 for a detailed sample description). In September 2020, VSG respondents were asked about COVID-19, including one item about COVID-19 concerns and eight items gauging preferences for public health restrictions (e.g.,

[2] Ollerenshaw (2022) examines another outcome I do not take up here—support for economic stimulus and social welfare. Previous research has found that authoritarianism is conditionally associated with economic preferences (Johnston et al. 2017; Jedinger and Burger 2019; Ollerenshaw and Johnston 2022); Ollerenshaw (2022) replicates this finding with COVID-related economic policies like renter protections and enhanced unemployment benefits.
[3] The exception is that Ollerenshaw (2022) does not find support for his expectations examining masking/social distancing behaviors in the Lucid 2021 study. However, the predicted conditional associations do emerge in the Lucid 2020 study for masking/distancing and in the Lucid 2021 study for COVID-19 vaccination.

travel restrictions, business closures; see Appendix 2 for question wordings). Unfortunately, the VSG did not assess health behaviors. I test two of Ollerenshaw's (2022) hypotheses:

"Authoritarianism will be associated with greater concern for the threat posed by COVID-19 among politically disengaged citizens, but less concern among politically engaged citizens."

"Authoritarianism will be associated with support for public health restrictions among politically disengaged citizens, but opposition to such measures among politically engaged citizens."

I follow Ollerenshaw (2022) in terms of variable operationalization. I additively scale the eight health restrictions items. I assess authoritarianism with the standard four-item childrearing values measure where respondents choose between two traits desirable for children to have. Respondents choosing more authoritarian traits (e.g., "obedience" over "self-reliance") are taken as more authoritarian. One deviation vis-à-vis Ollerenshaw (2022) is that authoritarianism was assessed in the 2016 VSG wave. I assume authoritarianism is stable enough to where authoritarianism in 2016 predicts authoritarianism in 2020.[4] I assess political engagement with political interest and knowledge items, again drawing items across VSG waves. Political interest is the average of six items asked between 2016 and 2020. Political knowledge is the number of seven knowledge items answered correctly in 2019. Political interest and knowledge are combined (equally weighted) to create the political engagement measure.

For statistical modeling, I use weighted least squares (incorporating a VSG weight for national representativeness) and moderated linear regression to estimate the associations of authoritarianism with COVID-19 concerns and health restrictions preferences as functions of political engagement. I use the same controls as Ollerenshaw (2022): age, gender, race/ethnicity,

[4] A possible benefit of using pre-pandemic authoritarianism is that it is more plausibly exogeneous to the outcomes.

income, education, unemployment, and southern residency. All variables are categorical or range between 0 and 1 to ease coefficient interpretability.

The key differences between my replication and Ollerenshaw (2022) are: (1) the VSG is four times larger than the ANES-GSS used to examine COVID-19 concerns and approximately the same size as the combined 2020/2021 Lucid surveys used to examine public health restriction preferences; (2) the VSG and Lucid studies asked different public health restrictions questions; (3) in the VSG, authoritarianism is measured in 2016 and political engagement is measured with items spanning 2016 to 2020, rather than contemporaneously as in Ollerenshaw (2022). Given its large sample and similar questionnaire, the VSG is an excellent sample for replicating several of Ollerenshaw's (2022) claims.

3. Replication Results

In Figure 1, I display the conditional associations between authoritarianism and COVID-19 concerns in the VSG compared against those reproduced from the ANES-GSS.[5] The results are strikingly similar across samples. In the ANES-GSS, authoritarianism is associated with 19-points greater COVID-19 concern at the lowest political engagement, but 35-points less concern at the highest engagement—a 53-point interaction. In the VSG, authoritarianism is associated with 23-points greater COVID-19 concern at the lowest political engagement, but 27-points less concern at the highest engagement—a 51-point interaction. That this relationship holds in a large sample lends support to Ollerenshaw (2022).

[5] Regression tables provided in Appendix 3.

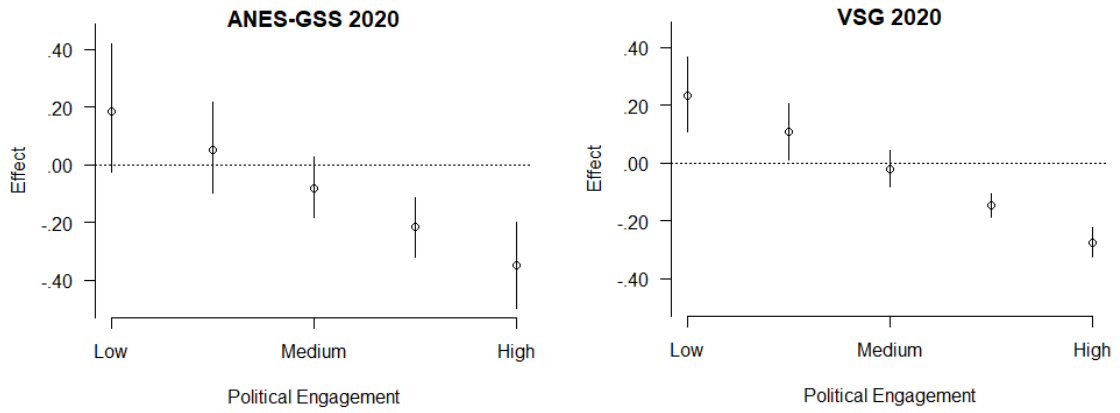

Figure 1—Conditional Associations of Authoritarianism with COVID Concerns. Points are marginal associations between authoritarian dispositions and concerns regarding COVID-19 as functions of political engagement with 95 percent confidence intervals. ANES-GSS panel (left) reproduced from Ollerenshaw (2022) (n=786). VSG panel (right) replicates Ollerenshaw (2022) with the Voter Study Group sample (n=3,277). Both analyses are weighted.

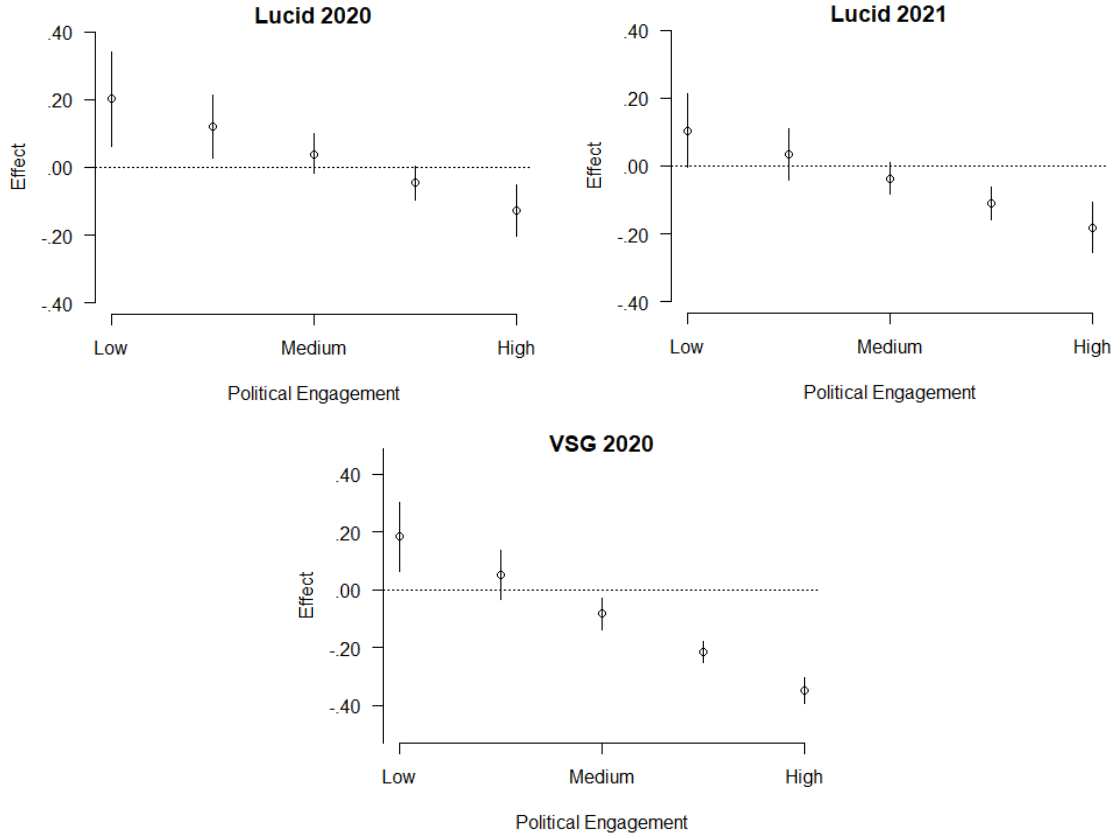

Figure 2—Conditional Associations of Authoritarianism with Support for COVID Public Health Restrictions. Points are marginal associations between authoritarian dispositions and support for COVID-19 public health restriction policies as functions of political engagement with 95 percent confidence intervals. Lucid panels (top) reproduced from Ollerenshaw (2022) (n_{2020}=1,008, n_{2021}=2,060). VSG panel (bottom) replicates Ollerenshaw (2022) with the Voter Study Group survey (n=3,277). VSG analysis is weighted, Lucid analyses are unweighted.

In Figure 2, I examine public health restriction preferences. In the 2020/2021 Lucid studies, Ollerenshaw (2022) found authoritarianism was associated with support for public health restrictions at low engagement, but opposition at high engagement, with interactions of 33-points and 28-points, respectively. In the VSG, authoritarianism is associated with 19-points greater support for public health restrictions at the lowest level of engagement but 35-points less support at the highest engagement—a 53-point interaction. I find a larger interaction than Ollerenshaw (2022), which could be explained by differences in the health restriction items, inattentiveness and attenuation bias in the Lucid studies (Ternovski and Orr 2022), and/or sampling error.

4. Conclusion

In this note, I conducted out-of-sample tests of Ollerenshaw (2022) regarding the conditional associations between psychological authoritarianism and Americans' responses to COVID-19. I find support for both of Ollerenshaw's hypotheses testable with the VSG survey. First, authoritarianism was associated with greater concern towards COVID-19 for politically disengaged Americans, but reduced concerns for engaged Americans. Second, authoritarianism was associated with support for COVID-19 public health restrictions for politically disengaged Americans, but opposition to public health restrictions for engaged Americans. These findings support Ollerenshaw's (2022) claim that although authoritarianism directly promoted stringent COVID-19 responses, indirectly, authoritarianism promoted right-wing identification and, in turn, laxer COVID-19 responses. These findings emphasize the point that psychological traits rarely act in a vacuum; political discourse influences how psychological traits are translated into behaviors and preferences, especially for politically engaged citizens (Federico and Malka 2018).

Additionally, this note contributes to recent efforts across the social sciences to increase replicability (Open Science Collaboration 2015; Camerer et al. 2018). Although my findings here

may seem less significant because they do not upturn the original study (Ollerenshaw 2022), it is good scientific practice to write-up unsurprising findings to avoid contributing to publication bias (Berinsky et al. 2021). Further, this replication is useful because it would otherwise be impossible to directly replicate Ollerenshaw's (2022) findings with new surveys; the salience of COVID-19 as a public health threat has declined for most Americans since 2020-2021. That said, Ollerenshaw's (2022) broader theory that dispositional traits like authoritarianism interact with political context to influence individuals' threat responses can and should be tested in other high-threat contexts—though, ideally, researchers can do so without us experiencing another "once-in-a-lifetime" pandemic.

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Appendix 1—Voter Study Group Sample Description

Sponsor: The Voter Study Group survey was funded by the Democracy Fund in partnership with YouGov.

Sample Size: 3,275 respondents completed the requisite waves to be included in this analysis.

Field Dates: I use one or more variables from the following waves: September 2020, November 2019, January 2019, May 2018, July 2017, November 2016.

Sampling Methodology: The VSG uses non-probability sampling. The VSG Survey Guide says: "Original panelists were interviewed by YouGov in 2011–2012 as part of the 2012 Cooperative Campaign Analysis Project (CCAP). The 2012 CCAP was constructed using YouGov's sample matching procedure. A stratified sample is drawn from YouGov's panel, which consists of people who have agreed to take occasional surveys. The strata are defined by the combination of age, gender, race, and education, and each stratum is sampled in proportion to its size in the U.S. population. Then, each element of this sample is matched to a synthetic sampling frame that is constructed from the U.S. Census Bureau's American Community Survey, the Current Population Survey Voting and Registration Supplement, and other databases. The matching procedure finds the observation in the sample from YouGov's panel that most closely matches each observation in the synthetic sampling frame on a set of demographic characteristics. The resulting sample is then weighted by a set of demographic and non-demographic variables."

Weighting: I use the weight_genpop_2020 to approximate representatives to the 2020 electorate.

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Table 1A—Comparison of VSG Descriptive Characteristics to Ollerenshaw (2022)

Sample	VSG	ANES-GSS	Lucid 2020	Lucid 2021
Age (Median)	60	53	43	46
Male	49	43	48	46
Black	8	14	12	12
Hispanic	5	10	14	13
Unemployed	7	7	11	11
Bachelor/Graduate	42	34	45	35
Less than $10k	2	10	7	9
$10k to $50k	34	44	36	45
$50k to $100k	36	29	31	27
$100k to $150k	16	9	13	13
More than $150k	12	8	12	6
Democrat + Leaners	48	45	44	50
Republican + Leaners	37	33	42	33
Independent	15	23	14	17
Liberal	27	34	32	33
Conservative	33	34	37	30
Moderate/DK	40	32	31	37
Region: South	35	36	37	38
N	3,277	806	1,032	2,117

Note: The ANES-GSS and VSG descriptive statistics are unweighted, but weights are used to analyze these samples. VSG statistics measured in 2020, but include only those not missing data for authoritarianism, political engagement, and income since these are the respondents who ultimately can be used in the analysis.

Appendix 2—Question Wordings

Authoritarianism: The authoritarianism measure is constructed as the average of responses to four items measured in the 2016 wave of the VSG. The responses coded as indicating greater authoritarianism are bolded. The measure ranges from 0 (non-authoritarian) to 1 (authoritarian).

1. "Which one is more important for a child to have?" [Self-Reliance/**Obedience**]
2. "Which one is more important for a child to have?" [Independence/**Respect for Elders**]
3. "Which one is more important for a child to have?" [**Good Manners**/Curiosity]
4. "Which one is more important for a child to have?" [Considerate/**Well-Behaved**]

Political Engagement: The political engagement measure is constructed from two equally weighted subscales: political interest and political knowledge. The measure ranges from 0 (low engagement) to 1 (high engagement).

Political Interest: Political interest is the average of six answers across the VSG waves spanning 2016 to 2020 to the following question: "Some people seem to follow what's going on in government and public affairs most of the time, whether there's an election going on or not. Others aren't that interested. Would you say you follow what's going on in government and public affairs..." [Most of the time, Some of the time, Only now and then, Hardly at all].

Political Knowledge: Political knowledge is the number of correctly answered questions asked in the January 2019 VSG wave. The correct answers are bolded. Skips and Don't Know responses are coded as incorrect answers.

1. "For how many years is a United States Senator elected? That is, how many years are there in one full term of office for a U.S. Senator?" [Text Entry, **Six years**]
2. "Taking the November election results into account, which party will have the most members in the U.S. House of Representatives?" [Republicans, **Democrats**, Don't Know]
3. "Taking the November election results into account, which party will have the most members in the U.S. House of Representatives?" [**Republicans**, Democrats, Don't Know]
4. "What job or political office does Theresa May currently hold?" [U.S. Representative, Secretary of Education, **Prime Minister of the United Kingdom**, President of Australia, Don't Know]
5. "What job or political office does Neil Gorsuch currently hold?" [U.S. Senator, Governor, **Supreme Court Justice**, White House Chief of Staff, Don't Know]
6. "How many votes does it take for the U.S. Senate to override a presidential veto?" [50, 51, **67**, 100, Don't Know]
7. "According to the Constitution, which part of government has the power to declare war on another country?" [The President, **Congress**, The Supreme Court, The Secretary of Defense, Don't Know]

COVID-19 Concern: One question asked in the September 2020 wave. "How concerned are you that you or a close family member will get sick from the coronavirus?" [Very concerned, Somewhat concerned, Not very concerned, Not at all concerned]. Measure ranges from 0 (not at all concerned) to 1 (very concerned).

COVID-19 Public Health Restrictions: An eight-item scale assessing support for the following public health restrictions in September 2020. Measure ranges from 0 (oppose) to 1 (support). Principal components factor analysis suggests a unidimensional scale is appropriate for these items since the first factor explains 70.4% of the variation in the eight items, and each item loads well onto this first factor (see reproduction files for full PCFA results). "Don't Know" responses are coded to item midpoint.

1. "Thinking about the decisions by a number of state governments to impose significant restrictions on public activity because of the coronavirus outbreak, is your greater concern that state governments will..." [Lift the restrictions too quickly, Not lift restrictions quickly enough]
2. "As you may know, some state and local governments have taken certain actions in response to the coronavirus and are considering other actions. Do you support or oppose the following actions? -- Cancel all meetings or gatherings of large groups, like sports events, concerts, conferences, etc." [Strongly support, Somewhat support, Somewhat oppose, Strongly oppose, Don't Know]
3. "As you may know, some state and local governments have taken certain actions in response to the coronavirus and are considering other actions. Do you support or oppose the following actions? -- Close certain businesses where larger numbers of people gather, like theaters, bars, restaurants, etc." [Strongly support, Somewhat support, Somewhat oppose, Strongly oppose, Don't Know]
4. "As you may know, some state and local governments have taken certain actions in response to the coronavirus and are considering other actions. Do you support or oppose the following actions? -- Close schools and universities." [Strongly support, Somewhat support, Somewhat oppose, Strongly oppose, Don't Know]
5. "As you may know, some state and local governments have taken certain actions in response to the coronavirus and are considering other actions. Do you support or oppose the following actions? -- Require people who can work from home to work from home." [Strongly support, Somewhat support, Somewhat oppose, Strongly oppose, Don't Know]
6. "As you may know, some state and local governments have taken certain actions in response to the coronavirus and are considering other actions. Do you support or oppose the following actions? -- Restrict all non-essential travel outside the home." [Strongly support, Somewhat support, Somewhat oppose, Strongly oppose, Don't Know]
7. "As you may know, some state and local governments have taken certain actions in response to the coronavirus and are considering other actions. Do you support or oppose the following actions? -- Encourage people to stay in their homes and avoid socializing with others." [Strongly support, Somewhat support, Somewhat oppose, Strongly oppose, Don't Know]
8. "As you may know, some state and local governments have taken certain actions in response to the coronavirus and are considering other actions. Do you support or oppose the following actions? -- Test people for a fever before letting them enter public buildings." [Strongly support, Somewhat support, Somewhat oppose, Strongly oppose, Don't Know]

Appendix 3—Regression Tables

Table 3A. Conditional Associations of Authoritarianism with COVID-19 Concerns

	VSG	ANES-GSS
Authoritarianism	0.233	0.187
	(0.067)	(0.112)
	p < 0.001	p = 0.097
Political Engagement	0.300	0.306
	(0.056)	(0.102)
	p < 0.001	p = 0.003
Authoritarianism:Engagement	-0.508	-0.533
	(0.079)	(0.159)
	p < 0.001	p = 0.001
Age	-0.120	0.275
	(0.042)	(0.058)
Male	-0.073	-0.032
	(0.013)	(0.032)
Black	0.113	0.171
	(0.025)	(0.050)
Hispanic	0.061	0.042
	(0.033)	(0.055)
Education	0.046	0.011
	(0.025)	(0.056)
Income	-0.041	-0.048
	(0.032)	(0.092)
Unemployed	0.010	-0.001
	(0.027)	(0.056)
South	0.014	-0.049
	(0.013)	(0.029)
Constant	0.484	0.426
	(0.053)	(0.082)
Observations	3,277	775

Note: Table entries are weighted least squares regression coefficients with standard errors in parentheses. Positive coefficients indicate associations with greater COVID-19 concerns. Source: 2020 ANES-GSS, Voter Study Group.

Table 3B. Conditional Associations of Authoritarianism with Preferences for COVID-19 Public Health Restriction

	VSG	Lucid 2020	Lucid 2021
Authoritarianism	0.186	0.204	0.104
	(0.060)	(0.071)	(0.054)
	p = 0.002	p = 0.005	p = 0.055
Political Engagement	0.189	0.230	0.214
	(0.053)	(0.068)	(0.050)
	p < 0.001	p = 0.001	p = 0.000
Authoritarianism:Engagement	-0.533	-0.331	-0.285
	(0.072)	(0.096)	(0.081)
	p < 0.001	p = 0.001	p = 0.001
Age	-0.111	-0.065	-0.139
	(0.038)	(0.037)	(0.031)
Male	-0.094	0.039	0.012
	(0.012)	(0.016)	(0.013)
Black	0.211	0.040	0.108
	(0.020)	(0.025)	(0.019)
Hispanic	0.096	0.057	0.067
	(0.029)	(0.023)	(0.018)
Education	0.066	0.148	0.061
	(0.024)	(0.031)	(0.026)
Income	-0.075	0.064	0.103
	(0.029)	(0.029)	(0.024)
Unemployed	-0.008	-0.007	0.020
	(0.025)	(0.026)	(0.021)
South	-0.011	0.000	-0.028
	(0.012)	(0.016)	(0.013)
Had COVID-19			-0.023
			(0.014)
Constant	0.657	0.362	0.385
	(0.049)	(0.050)	(0.034)
Observations	3,277	1,008	2,060

Note: Table entries are weighted least squares regression coefficients with standard errors in parentheses. Positive coefficients indicate associations with greater COVID-19 concerns. Source: 2020 ANES-GSS, Voter Study Group.