

How Anti-Social Personality Traits and Anti-Establishment Views Promote Beliefs in Election Fraud, QAnon, and COVID-19 Conspiracy Theories and Misinformation

American Politics Research
2022, Vol. 0(0) 1–13
© The Author(s) 2022
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/1532673X221139434
journals.sagepub.com/home/apr


Adam Enders¹, Casey Klofstad², Justin Stoler³, and Joseph E. Uscinski² 

Abstract

Conspiracy theories and misinformation (CTM) became a salient feature of the Trump era. However, traditional explanations of political attitudes and behaviors inadequately account for beliefs in CTM or the deleterious behaviors they are associated with. Here, we integrate disparate literatures to explain beliefs in CTM regarding COVID-19, QAnon, and voter fraud. We aim to provide a more holistic accounting, and to determine which political, psychological, and social factors are most associated with such beliefs. Using a unique national survey, we find that anti-social personality traits, anti-establishment orientations, and support for Donald Trump are more strongly related to beliefs in CTM than traditional left-right orientations or other frequently posited factors, such as education, science literacy, and social media use. Our findings encourage researchers to move beyond the traditional correlates of political behavior when examining beliefs that express anti-social tendencies or a deep skepticism of social and political institutions.

Keywords

Donald Trump, dark triad, conspiracy theory, QAnon, COVID-19

Despite widespread corrective efforts, many Americans continue to believe conspiracy theories and misinformation (CTM) related to COVID-19, QAnon, and the 2020 U.S. election (e.g., Arceneaux & Truex, 2022; Bierwiazzonek et al., 2022; Enders et al., 2021c). Beliefs in CTM regarding COVID-19 are closely associated with the utilization of untested medical treatments (Tuccori et al., 2020), vaccine hesitancy (Romer & Jamieson, 2020), the stockpiling of weapons (Imhoff & Lamberty, 2020), refusal to socially distance and mask (Hornik et al., 2021), and numerous idiosyncratic instances of violence (Harper, 2021). The same is true of beliefs in CTM about election fraud and QAnon: these beliefs are associated with criminal activity (Collins, 2020), violence (Bump, 2019), and the January 6, 2021 attack on the U.S. Capitol (Armaly et al., 2022).

We argue that political behavior research, in its focus on mainstream political elites (Zaller, 1992), mainstream parties and ideologies (Campbell et al., 1960; Converse, 1964), and the differences between those parties that promote (or are promoted by) sorting and polarization (Mason, 2018), cannot fully account for the aforementioned beliefs in CTM. To be sure, traditional left-right political orientations play a role in fomenting tensions and activating non-normative beliefs (DiMaggio, 2022) and tendencies (Kalmoe & Mason, 2022).

Likewise, partisan motivated reasoning (Miller et al., 2016; Pasek et al., 2014) and partisan elite cueing (Merkley & Stecula, 2018; Uscinski et al., 2020) are both key mechanisms by which some individuals come to believe in CTM—neither of which is new to our understanding of mass opinion, and both of which are driven by parties.

That said, to be a traditional partisan or liberal/conservative, generally, is to be enmeshed in the political establishment with mainstream beliefs (Enders & Uscinski, 2021b). Traditional conceptions of Republicanism and conservatism have little to say about the efficacy of vaccines, belief in the presence of Satanic baby-eaters among elected officials, and support for insurrections (Uscinski et al., 2021). Likewise, past disagreements between parties and ideologies—even relatively heated ones—have typically not

¹Political Science, University of Louisville, Louisville, KY, USA

²Political Science, University of Miami, Coral Gables, FL, USA

³Geography and Sustainable Development, University of Miami, Coral Gables, FL, USA

Corresponding Author:

Joseph E. Uscinski, Political Science, University of Miami, 1300 Campo Sano Bldg., Coral Gables, FL 33146, USA.

Email: uscinski@miami.edu

erupted into violence; hence, even polarization provides a lackluster explanation for recent events of concern. Nonetheless, political scientists have generally been slow to develop and expand theories that attempt to account for beliefs and behaviors that seem to undermine, rather than contribute to, traditional party competition or to recognize the critical importance of potential causal factors beyond partisan and ideological identities (but see, [Enders et al., 2022](#); [Peterson & Palmer, 2021](#)). Here, we expand existing work on beliefs in various political CTM to account for particular personality traits and political orientations beyond traditional partisan and ideological identities.

When accounting for the effect of personality traits on political attitudes and behaviors, political scientists have often focused on the “Big Five” personality traits—openness, conscientiousness, extraversion, agreeableness, and neuroticism ([Bakker, 2022](#)). While such studies provide a useful understanding of mainstream beliefs and behaviors, these ubiquitous personality traits offer a weak explanation of recent non-normative phenomena. Indeed, unsubstantiated beliefs in widespread voter fraud or the subsequent support for an insurrection at the U.S. Capitol, for example, appear to be the product of personality traits which are more extreme than a mere lack of agreeableness. Moreover, numerous social psychological studies find that the Big Five are only occasionally and weakly related to beliefs in CTM ([Goreis & Voracek, 2019](#)).

Beyond the Big Five, psychologists have looked to anti-social personality traits as potential explanations for non-normative beliefs and behaviors ([Hart et al., 2018](#); [Pailing et al., 2014](#)), with many such efforts focused on explaining beliefs in CTM ([Douglas et al., 2019](#)). These studies tend to find that more extreme, anti-social personality traits—such as the “dark triad” (a combination of narcissism, Machiavellianism, and psychopathy)—and conflictual interpersonal styles are strongly related to beliefs in many CTM and anti-system attitudes (e.g., [Enders et al., 2021a](#); [Hughes & Machan, 2021](#)).

Political scientists have also paid insufficient attention to the sorts of political traits—beyond partisanship and ideology—that might foster a deep skepticism of the mainstream political establishment, regardless of partisan or ideological orientation. In recent years, however, studies have sought to identify what is often viewed as a “second dimension” of mass political thought—an “anti-establishment” or “anti-system” worldview that is orthogonal to traditional left-right considerations ([Arceneaux et al., 2021](#); [Enders & Uscinski, 2021c](#); [Santucci & Dyck, 2022](#); [Trujillo & Crowley, 2022](#)). While these approaches vary in how they conceptualize this dimension, the cumulative findings suggest that: (1) many people harbor a deep-seated hostility toward the political establishment as a whole, and (2) what might at first appear to be beliefs or behaviors born of “extreme” left- and right-wing postures, might instead be derived from a blend of both left-right and anti-establishment

motivations ([Uscinski et al., 2021](#)). Thus, anti-establishment attitudes can help explain beliefs—particularly in CTM—that left-right identities and even “extreme” versions thereof, on their own, cannot.

In short, political scientists need to look beyond traditional left-right orientations, and more toward the types of political and personality factors that motivate the non-normative beliefs that currently concern social scientists and political observers. Here, we examine the characteristics associated with beliefs in CTM regarding COVID-19, QAnon, and the 2020 election, all of which have been salient during and after the Trump presidency. Accounting for the role of partisan and ideological identities, we also focus on the role of anti-social personality traits (e.g., dark triad traits and the propensity toward violent conflict), anti-establishment orientations, and information-related factors that might discourage beliefs in CTM (e.g., educational attainment, science literacy, and social media use). The strength of this study regards the simultaneous modeling of CTM using this diverse set of traits, orientations, and factors in a national sample, as the disparate social scientific work to-date has tended to focus on only one or a few potential predictors, oftentimes from within disciplinary silos. Our goal is to understand the magnitude of the relative, controlled association between these disparate predictors and beliefs in CTM. Doing so will allow us to properly contextualize the differential role of mainstream political and ideological orientations, on the one hand, and other factors that have been advanced in a largely idiosyncratic, piecemeal fashion, on the other hand, to explain beliefs in CTM.

Before describing our strategy, we wish to make note of two important qualifications to our study. First, our aim is not to suggest that traditional political identities and beliefs, like partisanship and ideology, do not matter in explaining beliefs in CTM. Indeed, the impact of partisan motivating reasoning (e.g., [Miller et al., 2016](#)) and partisan elite cues (e.g., [Saunders, 2017](#)) is quite clear, even when it comes to CTM. Rather, we argue that partisanship and ideology only get us so far in explaining beliefs in CTM. *Most* Republicans do not believe in QAnon, for example. Our aim is to shed light on some additional characteristics that might not only explain QAnon support irrespective of partisanship, but also distinguish those Republicans who do believe in QAnon from those who do not. Second, we intentionally focus on a limited number of CTM that have been particularly salient in the past few years. We chose CTM about election fraud, QAnon, and COVID-19 because of the potential political consequences of beliefs in these ideas, which were made especially tangible in the aftermath of the January 6, 2021 Capitol attack. While we expect that many of our inferences may apply to beliefs in other CTM, we make no such claim and caution readers in generalizing to all CTM.

In the following section, we outline our dependent and independent variables, detail how they are measured, and lay out general expectations about which characteristics are

likely to be most strongly associated with the beliefs in CTM we examine. We then examine the relative direction and strength of the relationships between these explanatory factors and CTM beliefs to disentangle which political, psychological, and social forces seem to matter most when a wide variety of traits, orientations, identities, and characteristics are accounted for simultaneously. Finally, we discuss the implications of our findings, with a particular focus on the revision and expansion of theories of political behavior and the development of strategies to limit the pernicious effects of CTM.

Data, Methods, and Expectations

To investigate the correlates of beliefs in CTM regarding COVID-19, QAnon, and 2020 voter fraud, we surveyed U.S. adults between July 17 and August 5, 2021, in partnership with Qualtrics, who recruited a sample that matched 2019 U.S. Census American Community Survey records on sex, age, race, education, and income. Approval to conduct this research was granted by the University of Miami Human Subject Research Office (Protocol #20210618). In line with emerging best practices for self-administered online questionnaires (Berinsky et al., 2021), four attention check questions were included. Participants who failed to complete all four correctly were excluded from the dataset. A soft-launch test of the questionnaire ($n = 127$) yielded a median

time to completion of 11.5 minutes; participants who completed the questionnaire in less than one-half the median time were discarded. The final sample size is 2,065 U.S. adults. Details about the sociodemographic composition of the sample appears in the [Supplementary Appendix](#).

Dependent Variables

Our dependent variables include beliefs in CTM regarding COVID-19, QAnon, and voter fraud, each of which have received considerable attention from scholars (e.g., Arceneaux & Truex, 2022; Armaly et al., 2022; Berlinski et al., 2021; DiMaggio, 2022; Pennycook & Rand, 2021). In [Table 1](#) we display the percentage of American adults who either “agree” or “strongly agree” with 17 CTM items across four categories (COVID-19 misinformation beliefs; and COVID-19, QAnon, and voter fraud conspiracy theory beliefs). For each category of CTM, [Table 1](#) presents our survey items in order from the most to the least believed. While these 17 ideas are not comprehensive or representative of all CTM about COVID-19, QAnon, and voter fraud, they range across substantive domains (e.g., Bill Gates, 5G, vaccines, tracking devices) and involve ideas that attracted significant attention on both social and mainstream media since 2020 (e.g., Silva, 2021). The order in which these questions—COVID-19, QAnon, and voter fraud—appeared in the questionnaire was randomized.

Table 1. Questions About Beliefs in Conspiracy Theories and Misinformation and The Percentage of the Mass Public That Either “Agree” or “Strongly Agree.”

Conspiracy theory/misinformation belief question	% Agree
COVID-19 misinformation beliefs ($\alpha = 0.93$)	
The COVID-19 vaccine can give you COVID-19	18
The COVID-19 vaccine is a scam by the pharmaceutical companies to make money	15
The COVID-19 vaccine will alter your DNA	12
The COVID-19 vaccine causes infertility	11
People receiving the COVID-19 vaccine will “shed” dangerous chemicals from that vaccine	11
COVID-19 conspiracy theory beliefs ($\alpha = 0.90$)	
The number of deaths related to the coronavirus has been exaggerated	29
The threat of coronavirus has been exaggerated by political groups who want to damage President Trump	25
Coronavirus was purposely created and released as part of a conspiracy	25
The coronavirus is being used to force a dangerous and unnecessary vaccine on Americans	20
The coronavirus is being used to install tracking devices inside our bodies	12
Bill Gates is behind the coronavirus pandemic	11
5G cell phone technology is responsible for the spread of the coronavirus	9
QAnon-related conspiracy theory beliefs	
There is a “deep state” embedded in the government that operates in secret and without oversight	35
“QAnon movement” feeling thermometer (average rating, 0–100 scale)	21 ^a
Donald Trump will return to the White House on August 13th in a second inauguration	14
Election fraud conspiracy theory beliefs	
Elections in this country are often rigged	30
Joe Biden won the presidential election through voter fraud	27

^aRespondents were asked to rate the “QAnon movement” on a 0–100 scale where 0 represents very cold/negative feelings and 100 represents very warm/positive feelings. We report the mean thermometer score.

As shown in the top of [Table 1](#), agreement with the five pieces of COVID-19 misinformation ranged from 18% agreement (“The COVID-19 vaccine can give you COVID-19”) to 11% (“The COVID-19 vaccine causes infertility” and “People receiving the COVID-19 vaccine will “shed” dangerous chemicals from that vaccine”). For COVID-19 conspiracy theory beliefs, 29% of our sample agreed that the number of deaths related to the coronavirus had been “exaggerated”; however, only 9% agreed that 5G cell phone technology “was responsible for the spread of the coronavirus.”

For QAnon-related beliefs, the most strongly supported theory regards the existence of a “deep state.” This is a widespread belief at 35% agreement, which forms the basis of most QAnon ideas, but has existed in various forms long before the emergence of QAnon in 2017 ([Enders et al., 2022](#)). The idea that Donald Trump would return to the White House in a “second inauguration” a theory spawned in the QAnon community—attracted only 9% agreement. Additionally, we included a feeling thermometer (0–100) by which respondents could log their support for the “QAnon movement”; the average rating was a 21, indicating that respondents overall did not feel positively toward QAnon.

At the bottom of [Table 1](#) are our election fraud conspiracy theories. Approximately 30% of Americans support the idea that U.S. elections are frequently rigged, while 27% believe that Joe Biden won the election through “voter fraud.” We observe a sharp partisan divide in these beliefs: whereas 50% of Republicans express support for the general election rigging idea, only 18% of Democrats do. The breakdown is even starker when it comes to the specific Biden fraud belief, which finds support among 51% of Republicans and only 12% of Democrats. While it is not uncommon for those on the losing side of major elections to express skepticism about the outcome ([Uscinski & Parent, 2014](#)), the elevated levels are, as far as past polling data can reveal, uncommon ([Enders et al., 2021b](#)).

To analyze the correlates of beliefs in each of these four categories of CTM belief, we scale the beliefs in COVID-19 misinformation and conspiracy theories by way of two additive indexes instead of analyzing each of the 12 beliefs separately. This comports with standard practice ([Enders et al., 2021c](#)) and both scales are statistically reliable ($\alpha = 0.93$ and $\alpha = 0.90$, for misinformation and conspiracy theory beliefs respectively) and unidimensional (exploratory factor analysis shows that the first factor explains at least 89% of variance in both cases). When it comes to conspiracy theory beliefs regarding voter fraud and QAnon, we examine each of those five beliefs separately. We do this for three reasons. First, there is a general lack of guidance in the literature on how to measure beliefs in election fraud and QAnon support; to our knowledge, no validated scales have been developed. Second, some of the beliefs regarding election fraud and QAnon involve partisan figures, while others do not—by averaging beliefs we might inadvertently obfuscate or

underestimate the potential relationship with partisan/ideological political orientations. Finally, one of the QAnon questions provided a different set of response options than the others, complicating the combination of survey responses. After scaling the COVID-19 misinformation and conspiracy theory beliefs, we are, therefore, left with seven dependent variables.

Independent Variables

Even though much is known about the relationship between beliefs in CTM and various political, social, and psychological orientations and mechanisms ([Douglas et al., 2019](#)), we aim to explicitly consider a host of anti-social personality traits and anti-establishment orientations that have only been idiosyncratically and incompletely examined by political scientists seeking to explain political attitudes and behaviors.

“Dark” Personality Traits. First, we consider the role of “dark triad” traits, which we measure with three standard four-item scales (e.g., [Klimstra et al., 2020](#)). Narcissism (Range = 1–5, $M = 2.51$, $\alpha = 0.87$), psychopathy (Range = 1–5, $M = 2.15$, $\alpha = 0.83$), and Machiavellianism (Range = 1–5, $M = 2.17$, $\alpha = 0.87$) are malevolent personality traits characterized by a lack of empathy and a manipulative, hostile interpersonal style ([Peterson & Palmer, 2021](#)). We also include a scale measuring one’s propensity toward interpersonal conflict, which asks about respondents’ behavior during a recent disagreement with another person ([Conrad et al., 2010](#)); response options range from using verbal insults to using a gun or knife (Range = 0–9, $M = 0.98$, $\alpha = 0.81$). Previous literature suggests that these traits are related to beliefs in at least some CTM ([Enders et al., 2021a](#)), likely because some CTM are outside the bounds of polite society and contradict mainstream thought in a way that offends many people. Hence, individuals exhibiting personality traits that are attracted to such anti-social ideas will be most likely to adopt those ideas. Therefore, we expected these anti-social personality traits and propensities, even after controlling for traditional partisan and ideological identities, to be strongly related to beliefs in the CTM investigated here, especially those that do not explicitly involve political figures and parties.

Anti-Establishment Orientations. Second, we consider anti-establishment orientations—a deep-seated antagonism toward and suspicion of the political establishment, including mainstream parties, politicians, and media. Anti-establishment orientations are often associated with beliefs in CTM and other non-normative tendencies, such as support for political violence ([Enders & Uscinski, 2021c](#)). Moreover, anti-establishment orientations are orthogonal to—uncorrelated with—traditional partisan and ideological identities, thus providing a potential alternative explanation to some non-partisan/ideological beliefs in CTM we consider. Per previous work ([Uscinski et al., 2021](#)), anti-

establishment orientations are measured using a combination of items tapping populist (e.g., “Established politicians who claim to defend our interests only take care of themselves”), conspiratorial (e.g., “Much of our lives are being controlled by plots hatched in secret places”), and Manichean (e.g., “Politics is a battle between good and evil”) worldviews (Range = 1–5, $M = 3.34$, $\alpha = 0.85$).

Political Orientations. Third, we consider the role of traditional political identities—partisanship (Range = 1–7, $M = 3.59$) and liberal-conservative ideology (Range = 1–7, $M = 3.89$), both measured vis-à-vis standard seven-point procedures whereby greater values represent stronger Republican/conservative identification. We also measure support for Donald Trump, specifically, using a 101-point feeling thermometer (Range = 0–100, $M = 38.14$). Past work shows that it is important to distinguish traditional partisan and ideological identities from support for Donald Trump (Barber & Pope, 2019; Blum & Parker, 2019; Enders & Uscinski, 2021a), who frequently trafficked in CTM (Enders et al., 2022; Pennycook & Rand, 2021; Uscinski et al., 2020). While we expect associations between traditional partisan and ideological identities and CTM beliefs, we also expect these associations to be eclipsed by those with Trump support because Donald Trump—along with his allies in Congress and the media—have explicitly endorsed or engaged with the beliefs studied here, while many traditional Republican and conservative voices (e.g., Mitt Romney, *The National Review*) have not.

Exposure and Education. Fourth, we consider educational attainment and potential exposure to CTM on social media. Education is operationalized using two variables: a standard question about one’s level of educational attainment (Range = 1–6, $M = 3.60$), and a measure of science literacy (Range = 0–11, $M = 7.65$), which is a count of the number of correct responses to 11 questions about scientific facts (Okamoto et al., 2001). Potential exposure to CTM is operationalized using an additive scale of responses to a series of questions about how frequently respondents visit Facebook, Twitter, Instagram, and YouTube (Range = 1–5, $M = 2.09$, $\alpha = 0.70$) (Enders et al., 2021b). Taken together, while past work reveals a negative relationship between beliefs in CTM and educational attainment and science literacy (e.g., van Prooijen, 2017) and a positive association with online exposure, these relationships also tend to be smaller and more conditional than those involving psychological and political factors (e.g., Enders et al., 2021c). Therefore, we expect the role of education and exposure to be more muted than other correlates we have discussed so far.

Finally, we also control for standard sociodemographic characteristics (e.g., age, religiosity, gender, race). See the [Supplementary Appendix](#) for question wording and additional descriptive statistics.

Analytical Strategy

Our investigation unfolds in two steps. First, we regress beliefs in CTM on each of the aforementioned factors (with controls) in order to decipher patterns in which beliefs are related to which explanatory factors. Second, we examine the relative predictive power of various groupings of predictors to better understand the relative impact of dark personality traits versus traditional partisan and ideological identities, for example. This analysis is conducted using Shapley Value Regression. Shapley Value Regression estimates the regression models described above using all possible combinations of predictors. This allows for the decomposition of R^2 in an effort to understand which (groups of) predictors demonstrate the most explanatory power (Lipovetsky, 2006).

Findings

The quantities presented in [Figures 1–3](#) are the result of OLS regression models. Each of the variables appearing along the left-hand vertical axis of the figure are independent variables. [Figures 1–3](#) plot standardized regression coefficients—all independent variables (except for dichotomous independent variables, such as gender and racial self-identifications, which are not pictured) and dependent variables were standardized (i.e., mean of 0, standard deviation of 1) to produce these estimates. Hence, the coefficients can be interpreted as the number of standard deviations change in the dependent variable associated with a single standard deviation unit change in the independent variable, holding other factors constant (precise estimates from these models are presented in tabular form in the [Supplementary Appendix](#)).

In [Figure 1](#), we present the correlates of beliefs in COVID-19 CTM. Of the factors we examined, we observe statistically significant relationships between one’s propensity toward physical conflict, psychopathy, narcissism (only in the case of COVID-19 conspiracy beliefs), and anti-establishment orientations, on the one hand, and beliefs in COVID-19 conspiracy theories (open circles) and misinformation (solid circles) on the other. Traditional political orientations—that is, partisanship and ideology—exhibit weaker and inconsistent effects with Republicans more likely to believe in COVID-19 misinformation and conservatives more likely to believe in COVID-19 conspiracy theories. Higher levels of education and science literacy are associated with fewer beliefs in both COVID-19 conspiracy theories and misinformation, but social media use is not associated with beliefs in either. The strongest positive predictors of beliefs in COVID-19 CTM are anti-establishment orientations, Trump support, psychopathy, and the propensity towards conflict.

We observe a similar pattern when it comes to QAnon-related beliefs in [Figure 2](#). Beginning with the most general conspiracy theory, the predisposition towards conflict, anti-establishment orientations, support for

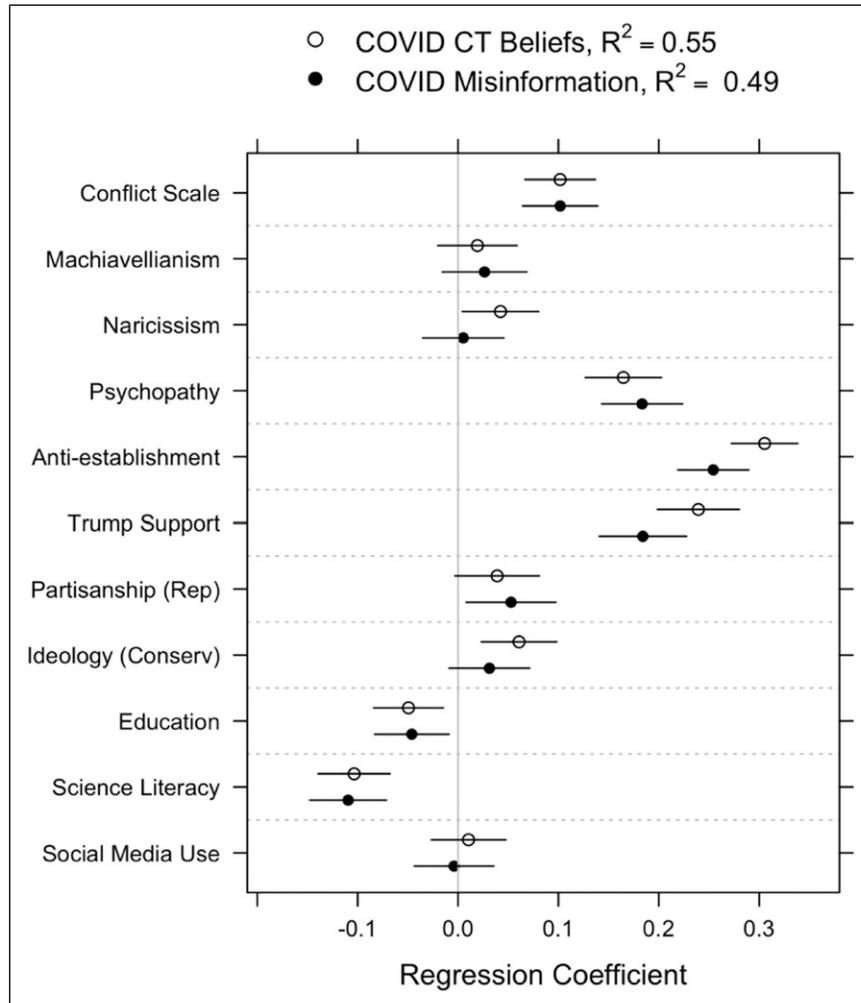


Figure 1. Standardized ordinary least squares (OLS) regression coefficients, with 95% confidence intervals where dependent variables are beliefs in COVID-19 misinformation and conspiracy theories ($n = 2016$ for both models).

Trump, and right-leaning ideology are positively associated with belief in the “deep state.” The belief that Donald Trump would return to the White House in August 2021 is associated with conflict, psychopathy, anti-establishment orientations, and Trump support; science literacy is negatively associated with believing Trump will be reinstated in 2021. For the most direct measure of QAnon, the propensity towards conflict, narcissism, psychopathy, Trump support, and partisanship are related to support for the QAnon movement. While we observe very weak negative relationships between QAnon support and partisanship (significant) and ideology (not significant), this is primarily because we are controlling for Trump support. If we remove Trump support from the model, the partisanship coefficient becomes positive and marginally significant ($p = 0.063$). Additionally, science literacy is negatively associated with QAnon support and social media use is positively related.

The most consistent correlates of these three QAnon-related beliefs are Trump support, which is statistically significant across all three beliefs, and the predisposition toward conflict, which exhibits the same pattern, albeit with weaker relationships. Anti-establishment orientations are positively associated with two CTM beliefs and science literacy is negatively associated with two of the three beliefs under consideration. Partisanship and ideology are inconsistent predictors of these three beliefs, which cuts against most popular accounts of QAnon and QAnon-related beliefs, though it is consistent with recent work on the political and psychological foundations of QAnon support (Enders et al., 2022).

Finally, we examine the correlates of beliefs in election fraud in Figure 3. For the more general belief (that elections are “often rigged”), we find that psychopathy, anti-establishment orientations, Trump support, partisanship (Republicans), and ideology (conservatives) are positively associated. For the belief that President Biden won the

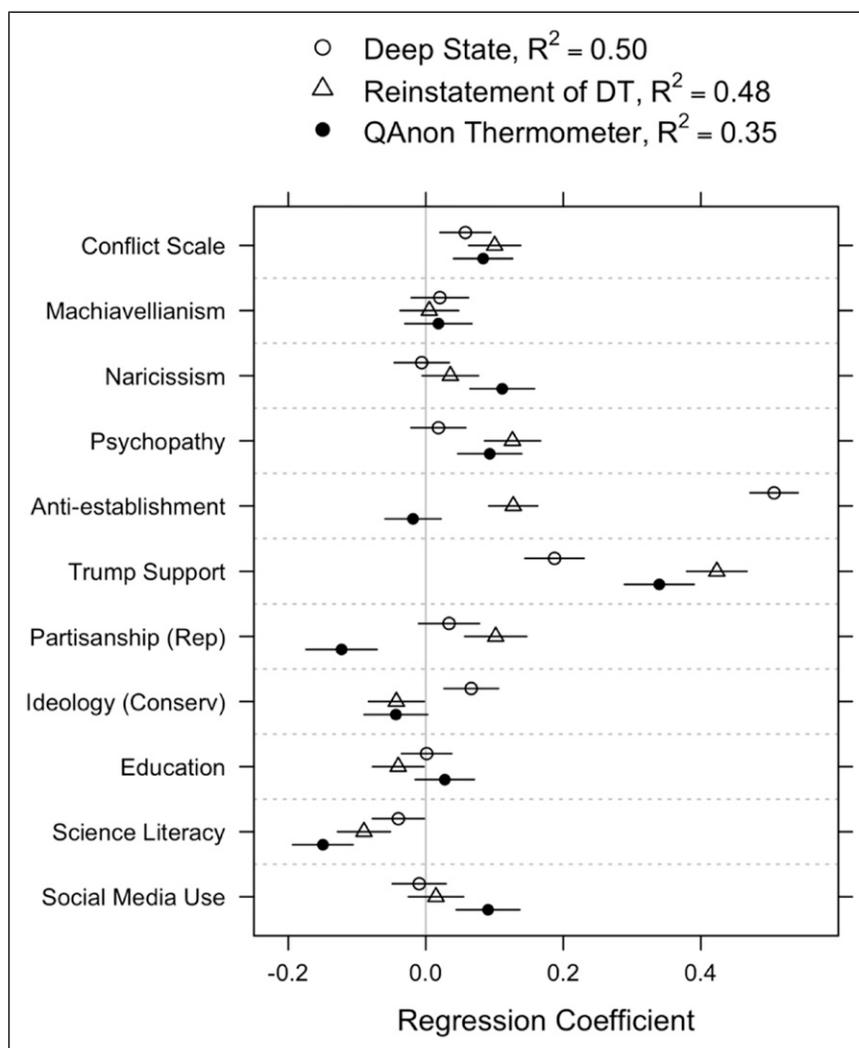


Figure 2. Standardized ordinary least squares (OLS) regression coefficients, with 95% confidence intervals where dependent variables are QAnon-related beliefs ($n = 2016$ for deep state and reinstatement of DT models, 1892 for QAnon thermometer).

election through fraud, the propensity toward physical conflict, psychopathy, anti-establishment orientations, Trump support, and partisanship (Republicans) are positively associated, while educational attainment is negatively associated with belief in this theory. The magnitude of the effects of the psychological traits rival those of partisan and ideological orientations, demonstrating that beliefs in particular conspiracy theories—even those with an obvious partisan component—are likely founded in personality traits and other orientations beyond partisanship and ideology.

Across all three sets of models, the only anti-social personality trait that systematically appears to be unrelated to conspiracy beliefs, at least controlling for other factors, is Machiavellianism. Every single other factor is associated with conspiracy beliefs in some, if not most, models. We also observe only inconsistent relationships between beliefs in CTM and educational attainment, science literacy, social media use, and left-right political identities.

What Groups of Correlates Matter Most?

Finally, we consider the relative importance of “dark” traits, traditional political orientations, and factors related to cognition and information. For this analysis, we classify as “dark” traits the propensity toward conflict, Machiavellianism, narcissism, and psychopathy. Political orientations include partisanship and ideology. Potential susceptibility to CTM includes educational attainment, science literacy, and social media use. Finally, anti-establishment orientations and Trump support constitute their own categories, not quite qualifying, theoretically, as either traditional political orientations or dark personality traits.

Figure 4 plots standardized Shapley regression values, which were estimated using the “ShapleyValue” R package (Liang, 2021). These quantities provide an estimate of the relative importance of each set of predictors in explaining beliefs in the CTM we examine—the greater the value, the

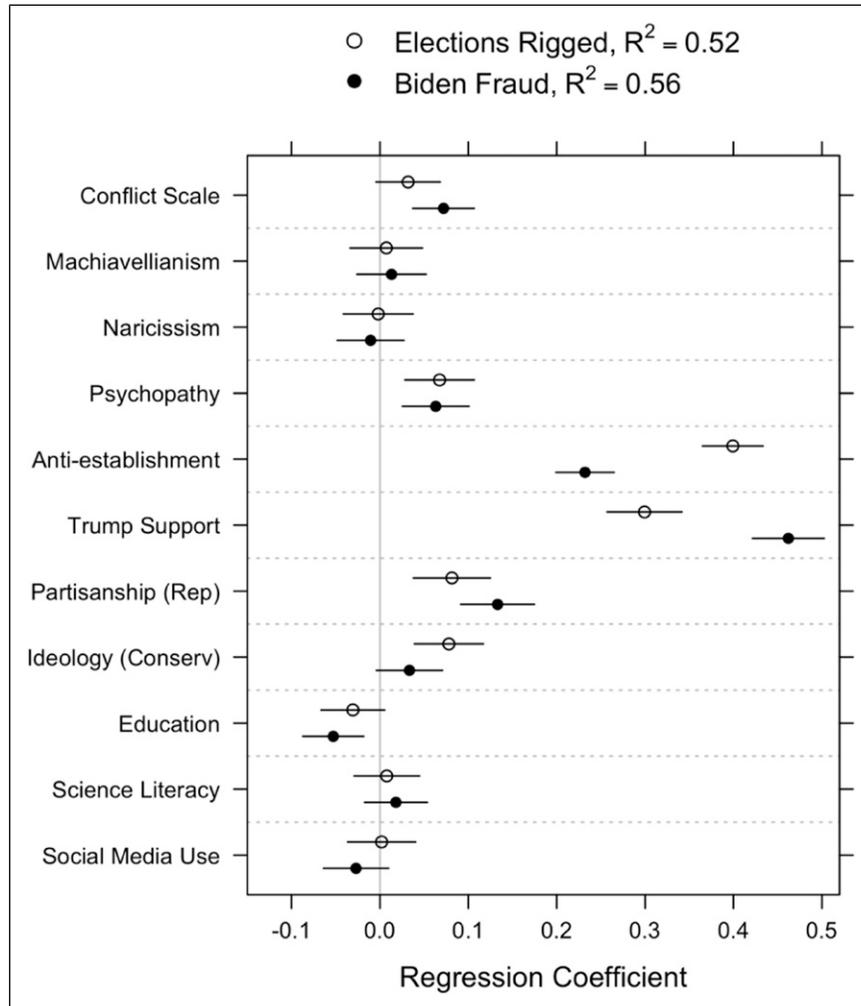


Figure 3. Standardized ordinary least squares (OLS) regression coefficients, with 95% confidence intervals where dependent variables are beliefs in election fraud conspiracy theories ($n = 2015$ for both models).

stronger the predictive power. Specifically, the values in Figure 4 are the summed standardized Shapley values for each of these groups of predictors. Standardized Shapley values are scaled to range from 0 to 1 and sum to 1 for each dependent variable. The individual standardized Shapley values for each predictor variable appear in the Supplementary Appendix. We also note that these results are substantively identical to other approaches, such as dominance analysis (Johnson, 2000).

In three of the seven cases, “dark” traits provide more explanatory power than the other factors (COVID-19 misinformation and QAnon support) or explanatory power similar to the strongest factor (COVID-19 conspiracy theories). Anti-establishment orientations also show strong effects—this worldview provides the most explanatory power when it comes to COVID-19 conspiracy beliefs, deep state beliefs, and belief in general election rigging, and is a close second when it comes to COVID-19 misinformation. Dark traits and

anti-establishment orientations seem to be the most important predictors of the CTM beliefs we consider—neither of which have received much attention from political scientists.

When it comes to Trump support, we find considerably more explanatory power across more CTM beliefs than we do with traditional political orientations. Indeed, Trump support is the strongest explanatory factor when it comes to the conspiracy beliefs about the reinstatement of Trump and election fraud on the part of Biden; it is the second most explanatory factor when it comes to beliefs about election rigging, the deep state, and support for QAnon (where it is tied with exposure/education). In no instances do partisanship and ideology provide the most explanatory power, and only with respect to the Biden fraud belief do they provide the second most.

Finally, susceptibility to CTM—as operationalized by educational attainment, scientific literacy, and frequency of social media use—appears to be a similarly weak explanatory

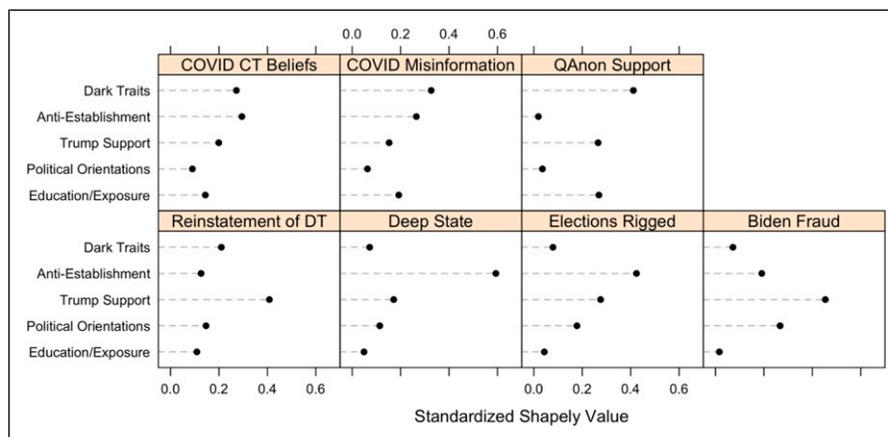


Figure 4. Standardized Shapely regression values. Quantities represent the average importance of each group of predictors to the overall variance explained in each of the seven dependent variables—the larger the value, the greater the importance. Values sum to 1.

factor, proving to be least consequential with respect to the three explicitly partisan CTM and the deep state belief. Susceptibility fares somewhat better when it comes to COVID-19 CTM and QAnon support but is never the most strongly related factor. While education and exposure to CTM surely impact belief in CTM to some extent, these findings comport with recent literature finding that the scope of CTM online is much more limited than once thought (Guess et al., 2019, 2020a, 2020b) and that exposure is likely to result in belief only if hospitable psychological groundwork has been laid (Enders et al., 2021c).

This analysis demonstrates the relative importance of anti-social personality traits and anti-establishment orientations compared to political identities and one's potential susceptibility to misinformation. Simply put, the psychological ingredients of conspiracy beliefs are quite important, perhaps more so than these other factors. Even though political figures like Donald Trump may facilitate beliefs in conspiracy theories and misinformation, certain personality traits and orientations toward the establishment may be necessary for toxic political rhetoric to influence attitudes and behavior (Pavlović & Franc, 2021), although we do not wish to diminish Trump's role (Hart et al., 2018). While traditional political orientations, education, and potential exposure to CTM exhibit weaker relationships than do dark traits, anti-establishment orientations, and Trump support, more research is needed to understand causal pathways and the conditions under which a given factor promotes belief in a conspiracy theory or misinformation.

Discussion

This study explored the effects of several disparate psychological, political, and social factors to disentangle which are most consistently and strongly related to recent beliefs in CTM regarding the COVID-19 pandemic, QAnon, and election fraud. Despite the popular culprit status of left-right

political strife, educational deficiencies, and online exposure to CTM, we find that dark personality traits—including narcissism, psychopathy, and a propensity towards conflict—and anti-establishment political orientations—which are orthogonal to mainstream partisan and ideological identities (Uscinski et al., 2021)—are strongly and consistently related to beliefs in a variety of CTM about the COVID-19 pandemic, QAnon, and election fraud. While traditional explanations, such as partisanship and ideology, remain valuable for understanding interparty divisions, the characteristics identified here shed additional light on both intraparty divisions (i.e., which *particular* Republicans or Democrats are likely to adopt a particular belief?) and beliefs that seem to transcend party lines.

Our findings have several implications. First, the patterns we observe do not bode well for the development of strategies to prevent or correct beliefs in the CTM studied here. While some techniques such as pre-bunking offer great promise (Roozenbeek et al., 2020), researchers have also found that many people resist correction (Nyhan et al., 2013), sometimes clinging more strongly to closely-held beliefs in the face of disconfirming evidence (Gal & Rucker, 2010). Our findings might explain why: certain beliefs attract people with anti-social and conflictual styles who are inherently less amenable to "correction" or persuasion by outside forces. Conspiracy theorists have long had a reputation for an unwillingness to change their minds in the face of disconfirming evidence (Cassam, 2016); our findings suggest this reputation may be well-deserved.

Relatedly, because some beliefs are undergirded by narcissism, psychopathy, anti-establishment political views, and a propensity for violent conflict, changing some minds might require corrective measures more involved than most efforts currently being developed. Researchers must consider these largely stable, foundational personality traits and worldviews when developing strategies for combatting CTM. Assuming that only casual misunderstanding or a lack of quality

information are to blame for some beliefs will only steer future efforts down unproductive paths.

Since conspiracy theories are unlikely to cause personality traits or worldviews—the reciprocal is more likely—we should understand anti-social personality traits and conflictual behaviors as characteristics of the types of people that are *attracted to CTM*. While anti-social personality traits and behavioral tendencies may not prove sufficient to promote specific beliefs or actions, our findings suggest that politics may be a key connective ingredient. Specifically, the public endorsement of CTM by prominent trusted leaders may connect anti-social, conflictual people to those ideas, subsequently motivating them to act. Although we do not observe a systematic relationship between beliefs in CTM and partisanship or ideology, we do observe a consistent and substantively strong relationship with support for Donald Trump, providing supporting evidence for this proposition.

That we find only limited evidence for a relationship between beliefs in CTM, on the one hand, and the stereotypical markers of susceptibility to such beliefs (e.g., educational attainment, science literacy, and social media use), on the other, underscores the importance of personality traits. While science literacy and education provide people with valuable context with which to understand politics, other bottom-up (e.g., anti-social traits) and top-down (e.g., elite discourse) pressures are equally, if not more, predictive of beliefs in CTM in our analysis.

Limitations

Our study is not without limitations. As an observational study based on correlational analyses, we cannot infer causal relationships between the constructs analyzed. It may very well be the case, for instance, that some CTM activate or inflame the psychological, political, and social forces we examined. More experimental and panel-based studies are sorely needed to test this possibility. We have also chosen to focus on beliefs in CTM that were prominent in the past few years in American politics, which were different than previous eras, largely due to the rhetorical style and behavior of Donald Trump. While we suspect that broad trends identified here are similar in other sociopolitical contexts, this is a supposition that requires empirical testing.

Our findings are also limited by our focus on CTM beliefs that are associated with Donald Trump. To be sure, our analysis is capable of explaining salient beliefs and behaviors from the end of the Trump presidency and beginning of the pandemic and offering a cautionary tale about the powerful role of elite partisan communication in shaping public opinion. Yet, Trump will not be around forever, and it is too early to tell how idiosyncratic his presidency will be in the grand scheme of American politics. We suspect that a simple refrainment from engaging in CTM-based rhetoric could drastically alter the popularity and correlates of some of the CTM beliefs we examine, though we also surmise that dark

personality traits and anti-establishment orientations would be associated to some extent regardless of top-down pressures. Ultimately, this is an empirical question that will be answered with time.

We also caution readers about generalizing beyond our specific findings. Beliefs in CTM not studied here may not necessarily be indicative of anti-social or anti-establishment traits (Enders et al., 2021a). For example, we would not assume that the majority of Americans consistently believing conspiracy theories about the 1963 Kennedy assassination are psychopathic or unable to disagree without hostility. What likely sets the CTM studied here apart from conspiracy theories about the Kennedy assassination, for example, is the disconnection of the former from both mainstream institutional consensus and social norms (e.g., Lantian et al., 2018). To believe, for example, that the pandemic is fake a year into it and after hundreds of thousands have died is to discount our shared reality on a matter of existential importance and to invite confrontation. By focusing more on the personality characteristics that make CTM attractive to some people we can better understand why some beliefs are associated with non-normative behaviors, which will subsequently aid in the design of interventions to correct those beliefs and mitigate the harms with which they are associated.

Finally, we note that the sample on which our analyses were conducted is an opt-in online one. While previous work finds that these samples are able to recover population characteristics and frequently produce estimates that are on par with probability samples (Coppock & McClellan, 2019) and we also followed best practices in order to ensure quality responses, probability samples are ideal. We also encourage the replication of this study in other samples and using beliefs in other CTM. Because we polled individuals at an atypical time about atypical events and circumstances, there is a possibility that beliefs have changed or will change in the future. Hence, we reiterate our caution to fellow researchers about generalizing beyond the time point or CTM that we examined in this study.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the National Science Foundation (No. 2123635).

Ethical Approval

All research was approved by the appropriate Institutional Review Board.

ORCID iD

Joseph E. Uscinski  <https://orcid.org/0000-0003-2179-6952>

Supplemental Material

Supplemental material for this article is available online.

References

- Arceneaux, K., Gravelle, T. B., Osmundsen, M., Petersen, M. B., Reifler, J., & Scotto, T. J. (2021). Some people just want to watch the world burn: The prevalence, psychology and politics of the 'need for chaos'. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 376(1822), 20200147. <https://doi.org/10.1098/rstb.2020.0147>
- Arceneaux, K., & Truex, R. (2022). Donald Trump and the lie. *Perspectives on Politics*, 1-17. <https://doi.org/10.1017/S1537592722000901>.
- Armaly, M. T., Buckley, D. T., & Enders, A. M. (2022). Christian nationalism and political violence: Victimhood, racial identity, conspiracy, and support for the capitol attacks. *Political Behavior*, 44(2), 937–960. <https://doi.org/10.1007/s11109-021-09758-y>
- Bakker, B. (2022). Personality approaches to political behavior. In *Oxford handbook of political psychology*. Oxford University Press.
- Barber, M., & Pope, J. C. (2019). Conservatism in the era of Trump. *Perspectives on Politics*, 17(3), 719–736. <https://doi.org/10.1017/S153759271900077X>
- Berinsky, A., 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(2), 430–437. <https://doi.org/10.1017/psrm.2019.53>
- Berlinski, N., Doyle, M., Guess, A. M., Levy, G., Lyons, B., Montgomery, J. M., Nyhan, B., & Reifler, J. (2021). The effects of unsubstantiated claims of voter fraud on confidence in elections. *Journal of Experimental Political Science*, 1-16. <https://doi.org/10.1017/XPS.2021.18>.
- Bierwaczonk, K., Kunst, J. R., & Gundersen, A. B. (2022). The role of conspiracy beliefs for COVID-19 prevention: A meta-analysis. *Current Opinion in Psychology*, 46(101346). <https://doi.org/10.1016/j.copsyc.2022.101346>.
- Blum, R. M., & Parker, C. S. (2019). Trump-ing foreign affairs: Status threat and foreign policy preferences on the right. *Perspectives on Politics*, 17(3), 737–755. <https://doi.org/10.1017/S1537592719000999>
- Bump, P. (2019). *The murder of an alleged gangster on staten island loops in an unexpected figure: QAnon*. Washington Post.
- Campbell, A., Converse, P., Miller, W., & Stokes, D. (1960). *The American voter* (Unabridged Edition). University of Chicago Press.
- Cassam, Q. (2016). Vice epistemology. *The Monist*, 99(2), 159–180. <https://doi.org/10.1093/monist/onv034>
- Collins, B. (2020). *How QAnon rode the pandemic to new heights — and fueled the viral anti-mask phenomenon*. NBC News. Retrieved August 15, 2020 from <https://www.nbcnews.com/tech/tech-news/how-qanon-rode-pandemic-new-heights-fueled-viral-anti-mask-n1236695>
- Conrad, K. J., Riley, B. B., Conrad, K. M., Chan, Y.-F., & Dennis, M. L. (2010). Validation of the crime and violence scale (CVS) against the rasch measurement model including differences by gender, race, and age. *Evaluation Review*, 34(2), 83–115. <https://doi.org/10.1177/0193841x10362162>
- Converse, P. E. (1964). The nature of belief systems in mass publics. In D. Apter (Ed.), *Ideology and discontent*. Free Press.
- Coppock, A., & McClellan, O. A. (2019). Validating the demographic, political, psychological, and experimental results obtained from a new source of online survey respondents. *Research & Politics*, 6(1), 2053168018822174. <https://doi.org/10.1177/2053168018822174>
- DiMaggio, A. R. (2022). Conspiracy theories and the manufacture of dissent: QAnon, the 'Big Lie', Covid-19, and the rise of rightwing propaganda. *Critical Sociology*, 48(6), 1025–1048. <https://doi.org/10.1177/08969205211073669>
- Douglas, K., Uscinski, J., Sutton, R., Cichocka, A., Nefes, T., Ang, C. S., & Deravi, F. (2019). Understanding conspiracy theories. *Advances in Political Psychology*, 40(1), 3–35. <https://doi.org/10.1111/pops.12568>
- Enders, A., & Uscinski, J. (2021a). On modeling the social-psychological foundations of support for Donald Trump. *American Politics Research*, 49(6), 551–567. <https://doi.org/10.1177/1532673X211022188>
- Enders, A., & Uscinski, J. (2021b). Are misinformation, anti-scientific claims, and conspiracy theories for political extremists? *Group Processes & Intergroup Relations*, 24(4), 583–605. <https://doi.org/10.1177/1368430220960805>
- Enders, A., & Uscinski, J. (2021c). The role of anti-establishment orientations during the Trump presidency. *The Forum*, 19(1), 47–76. <https://doi.org/10.1515/for-2021-0003>
- Enders, A., Uscinski, J. E., Klofstad, C. A., Premaratne, K., Seelig, M. I., Wuchty, S., Murthi, M. N., & Funchion, J. R. (2021b). The 2020 presidential election and beliefs about fraud: Continuity or change? *Electoral Studies*, 72(102366). <https://doi.org/10.1016/j.electstud.2021.102366>.
- Enders, A., Uscinski, J., Klofstad, C., Seelig, M., Wuchty, S., Murthi, M., Premaratne, K., & Funchion, J. (2021a). Do conspiracy beliefs form a belief system? Examining the structure and organization of conspiracy beliefs. *Journal of Social and Political Psychology*, 9(1), 255–271. <https://doi.org/10.5964/jspp.5649>
- Enders, A., Uscinski, J., Klofstad, C., Wuchty, S., Seelig, M., Funchion, J., Murthi, M., Premaratne, K., & Stoler, J. (2022). Who supports QAnon? A case study in political extremism. *Journal of Politics*, 84(3), 1844-1849. <https://doi.org/10.1086/717850>.
- Enders, A., Uscinski, J. E., Seelig, M. I., Klofstad, C. A., Wuchty, S., Funchion, J. R., Murthi, M. N., Premaratne, K., & Stoler, J. (2021c). The relationship between social media use and beliefs in conspiracy theories and misinformation. *Political Behavior*, 1-24. <https://doi.org/10.1007/s11109-021-09734-6>.

- Gal, D., & Rucker, D. D. (2010). When in doubt, shout! paradoxical influences of doubt on proselytizing. *Psychological Science*, 21(11), 1701–1707. <https://doi.org/10.1177/0956797610385953>
- Goreis, A., & Voracek, M. (2019). A systematic review and meta-analysis of psychological research on conspiracy beliefs: Field characteristics, measurement instruments, and associations with personality traits. *Frontiers in Psychology*, 10, 205. <https://doi.org/10.3389/fpsyg.2019.00205>.
- Guess, A., Nagler, J., & Tucker, J. (2019). Less than you think: Prevalence and predictors of fake news dissemination on Facebook. *Science Advances*, 5(1), eaau4586. <http://advances.sciencemag.org/content/advances/5/1/eaau4586.full.pdf>
- Guess, A., Nyhan, B., O’Keeffe, Z., & Reifler, J. (2020a). The sources and correlates of exposure to vaccine-related (mis) information online. *Vaccine*, 38(49), 7799–7805. <https://doi.org/10.1016/j.vaccine.2020.10.018>
- Guess, A., Nyhan, B., & Reifler, J. (2020b). Exposure to untrustworthy websites in the 2016 US election. *Nature Human Behaviour*, 4(5), 472–480. <https://doi.org/10.1038/s41562-020-0833-x>
- Harper, K. B. (2021). *Verbal and physical attacks on health workers surge as emotions boil during latest COVID-19 wave*. The Texas Tribune. Retrieved September 18, 2021 from <https://www.texastribune.org/2021/09/01/coronavirus-texas-hospital-attacks-health-workers/>
- Hart, W., Richardson, K., & Tortoriello, G. K. (2018). Dark personality voters find dark politicians more relatable and fit for office. *Journal of Research in Personality*, 75, 59–68. <https://doi.org/10.1016/j.jrp.2018.05.007>.
- Hornik, R., Kikut, A., Jesch, E., Woko, C., Siegel, L., & Kim, K. (2021). Association of COVID-19 misinformation with face mask wearing and social distancing in a nationally representative US sample. *Health Communication*, 36(1), 6–14. <https://doi.org/10.1080/10410236.2020.1847437>
- Hughes, S., & Machan, L. (2021). It’s a conspiracy: Covid-19 conspiracies link to psychopathy, Machiavellianism and collective narcissism. *Personality and Individual Differences*, 171(110559). <https://doi.org/10.1016/j.paid.2020.110559>.
- Imhoff, R., & Lamberty, P. (2020). A bioweapon or a hoax? The link between distinct conspiracy beliefs about the coronavirus disease (COVID-19) outbreak and pandemic behavior. *Social Psychological and Personality Science*, 11(8), 1110–1118. <https://doi.org/10.1177/1948550620934692>
- Johnson, J. W. (2000). A heuristic method for estimating the relative weight of predictor variables in multiple regression. *Multivariate Behavioral Research*, 35(1), 1–19. https://doi.org/10.1207/S15327906MBR3501_1
- Kalmoe, N. P., & Mason, L. (2022). *Radical American partisanship: Mapping violent hostility, its causes, and the consequences for democracy*. University of Chicago Press.
- Klimstra, T. A., Jeronimus, B. F., Sijtsma, J. J., & Denissen, J. J. A. (2020). The unfolding dark side: Age trends in dark personality features. *Journal of Research in Personality*, 85(103915). <https://doi.org/10.1016/j.jrp.2020.103915>.
- Lantian, A., Muller, D., Nurra, C., Klein, O., Berjot, S., & Pantazi, M. (2018). Stigmatized beliefs: Conspiracy theories, anticipated negative evaluation of the self, and fear of social exclusion. *European Journal of Social Psychology*, 48(7), 939–954. <https://doi.org/10.1002/ejsp.2498>
- Liang, J. (2021). Shapley value: Shapley value regression for relative importance of attributes. In *Version 2.0*.
- Lipovetsky, S. (2006). Entropy criterion in logistic regression and shapley value of predictors. *Journal of Modern Applied Statistical Methods*, 5(1), 9. <https://doi.org/10.22237/jmasm/1146456480>
- Mason, L. (2018). *Uncivil agreement: How politics became our identity*. University of Chicago Press.
- Merkley, E., & Stecula, D. (2018). Party elites or manufactured doubt? The informational context of climate change polarization. *Science Communication*, 40(2), 258–274. <https://doi.org/10.1177/1075547018760334>
- Miller, J. M., Saunders, K. L., & Farhart, C. E. (2016). Conspiracy endorsement as motivated reasoning: The moderating roles of political knowledge and trust. *American Journal of Political Science*, 60(4), 824–844. <https://doi.org/10.1111/ajps.12234>
- Nyhan, B., Reifler, J., & Ubel, P. A. (2013). The hazards of correcting myths about health care reform. *Medical Care*, 51(2), 127–132. <https://doi.org/10.1097/MLR.0b013e318279486b>
- Okamoto, S., Niwa, F., Shimizu, K., & Sugiman, T. (2001). *The 2001 survey for public attitudes towards and understanding of science and technology in Japan* (pp. 72). NISTEP Report.
- Pailing, A., Boon, J., & Egan, V. (2014). Personality, the dark triad and violence. *Personality and Individual Differences*, 67, 81–86. <https://doi.org/10.1016/j.paid.2013.11.018>.
- Pasek, J., Stark, T. H., Krosnick, J. A., & Tompson, T. (2014). What motivates a conspiracy theory? Birther beliefs, partisanship, liberal-conservative ideology, and anti-black attitudes. *Electoral Studies*, 40, 482–489. <https://doi.org/10.1016/j.electstud.2014.09.009>.
- Pavlović, T., & Franc, R. (2021). Antiheroes fueled by injustice: Dark personality traits and perceived group relative deprivation in the prediction of violent extremism. *Behavioral Sciences of Terrorism and Political Aggression*, 1–26. <https://doi.org/10.1080/19434472.2021.1930100>.
- Pennycook, G., & Rand, D. G. (2021). Examining false beliefs about voter fraud in the wake of the 2020 presidential election. *Harvard Kennedy School Misinformation Review*, 2(1), 1–20. <https://doi.org/10.37016/mr-2020-51>.
- Peterson, R. D., & Palmer, C. L. (2021). The dark is rising: Contrasting the dark triad and light triad on measures of political ambition and participation. *Frontiers in Political Science*, 3(60), 1–9. <https://doi.org/10.3389/fpos.2021.657750>.
- Romer, D., & Jamieson, K. H. (2020). Conspiracy theories as barriers to controlling the spread of COVID-19 in the US. *Social Science & Medicine*, 263, 113356. <https://doi.org/10.1016/j.socscimed.2020.113356>.
- Roosenbeek, J., van Der Linden, S., & Nygren, T. (2020). Prebunking interventions based on “inoculation” theory can reduce susceptibility to misinformation across cultures. *The*

- Harvard Kennedy School (HKS) *Misinformation Review*, 1(2), 1-23. <https://doi.org/10.37016/mr-2020-008>.
- Santucci, J., & Dyck, J. J. (2022). The structure of American political discontent. *Public Opinion Quarterly*, 86(2), 381–392. <https://doi.org/10.1093/poq/nfac009>
- Saunders, K. L. (2017). The impact of elite frames and motivated reasoning on beliefs in a global warming conspiracy: The promise and limits of trust. *Research & Politics*, 4(3), 1–9. <https://doi.org/10.1177/2053168017717602>
- Silva, D. (2021). *Miami private school to require students who get vaccinated to stay home for 30 days*. NBC News. <https://www.nbcnews.com/news/us-news/miami-private-school-require-students-who-get-vaccinated-stay-home-n1281926>
- Trujillo, K. L., & Crowley, Z. (2022). Symbolic versus material concerns of rural consciousness in the United States. *Political Geography*, 96(1), 102658. <https://doi.org/10.1016/j.polgeo.2022.102658>
- Tuccori, M., Convertino, I., Ferraro, S., Cappello, E., Valdiserra, G., Focosi, D., & Blandizzi, C. (2020). The impact of the COVID-19 “infodemic” on drug-utilization behaviors: Implications for pharmacovigilance. *Drug Safety*, 43(8), 699–709. <https://doi.org/10.1007/s40264-020-00965-w>
- Uscinski, J., Enders, A., Seelig, M. I., Klofstad, C. A., Funchion, J. R., Everett, C., Wuchty, S., Premaratne, K., & Murthi, M. N. (2021). American politics in two dimensions: Partisan and ideological identities versus anti-establishment orientations. *American Journal of Political Science*, 65(4), 877–895. <https://doi.org/10.1111/ajps.12616>
- Uscinski, J., Enders, A. M., Stefan, W., Klofstad, C., Seelig, M., Funchion, J., Murthi, M., Premaratne, K., & Everett, C. (2020). Why do people believe COVID-19 conspiracy theories? *The Harvard Kennedy School (HKS) Misinformation Review*, 1, 1-12. <https://doi.org/10.37016/mr-2020-015>.
- Uscinski, J., & Parent, J. M. (2014). *American conspiracy theories*. Oxford University Press.
- van Prooijen, J.-W. (2017). Why education predicts decreased belief in conspiracy theories. *Applied Cognitive Psychology*, 31(1), 50–58. <https://doi.org/10.1002/acp.3301>
- Zaller, J. (1992). *The nature and origins of mass opinion*. Cambridge University Press.

Author Biographies

Adam Enders is Associate Professor of Political Science at the University of Louisville where he teaches and conducts research on conspiratorial thinking and misinformation, political extremism, and polarization.

Casey Klofstad is a professor of political science at the University of Miami. He studies how psychology, society, and biology influence human decision-making.

Justin Stoler is an Associate Professor of Geography and Sustainable Development at the University of Miami. His research focuses on global health disparities, particularly those related to the interaction of communicable diseases, geodemographics, and the physical and built environments. His work has been published in a variety of social, environmental, and health sciences journals.

Joseph E. Uscinski is professor of political science at University of Miami where he teaches about and researches conspiracy theories.