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Morbid Polarization:

Exposure to COVID-19 and Partisan Disagreement about Pandemic Response

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Abstract

The COVID-19 pandemic has affected the lives of all Americans, but the severity of the pandemic has been experienced unevenly across space and time. Some states saw sharp rises in COVID-19 cases in early March, whereas case counts rose much later in the rest of the country. In this article, we examine the relationship between exposure to COVID-19 and citizens' views on what type of measures are required to deal with the crises, and how experience with and exposure to COVID-19 is associated with greater partisan polarization. We find consistent evidence of partisan divergence in pandemic response policy preferences across the first six months of the COVID-19 pandemic: Republicans support national control measures whereas Democrats support welfare policies, and interparty differences grow over time. We find only limited evidence that exposure or experience moderates these partisan differences. Our findings are consistent with the view that Americans' interpret the COVID-19 pandemic in fundamentally partisan manner, and that objective pandemic conditions play at most a minor role in shaping mass preferences.

Keywords: COVID-19, partisanship, polarization, pandemic policies, risk aversion, terror management.

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Introduction

The COVID-19 pandemic hit the United States at a moment of near-historic partisan polarization. Arriving shortly after a failed Congressional attempt to impeach the President, and with sustained partisan disagreement about the state of American democracy, the administration's response to COVID-19 was marked by the Trump administration's repeated denial that the pandemic was a threat to American public health. This denial was in both rhetoric and practice, from support for early re-opening of businesses to rejecting the practice and requirement of face masks. Congressional Democrats, by contrast, sounded the alarm much earlier, anticipating what would later arrive as lockdown measures across most of the U.S. states (and, in particular, early lockdown by states led by Democratic governors).

In this context, it is not surprising that the COVID-19 crisis was quickly interpreted through partisan lens (Baker, 2020; Mead, 2020), not only in evaluative and normative terms (i.e. "schools should not open", "masks should not be mandatory") but also in factual claims (i.e. "hydroxychloroquine works", "closing business will not hurt the economy"). Studies have consistently shown that attitudes toward COVID-19 and about the adequate measures to fight it have been polarized across party lines (Gadarian et al., 2020; Makridis & Rothwel, 2020). While Democrats show increased concern for the coronavirus and support stronger preventive measures (social distancing, quarantine), Republicans downplay the health risks of COVID-19 ("just like the flu") and deem preventive measures as non-necessary and harmful to the economy (Briki & Dagot, 2020). In the same vein, studies using GPS-based mobility data have shown that county-

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level ideological differences predict compliance with stay-at-home orders (Allcott et al., 2020; Barrios & Hochberg, 2020).

While the COVID-19 pandemic has affected the lives of all Americans, and interpreted through partisan lenses, the severity of the pandemic has been experienced unevenly across space and time. Some states saw sharp rises in COVID-19 cases in early March, whereas case counts rose much later in the rest of the country. That the early hotspots were coastal, Democratic states only reinforced the differential experiences that Americans had with COVID-19: spikes in COVID-19 fatalities in states like New York and Washington were mirrored by limited outbreaks in many western and southern states. Only by July did case numbers in states like Florida and Texas rise to parallel those in New York.

This preliminary evidence suggests Democrats and Republicans are experiencing different pandemics, yet we lack a good understanding of whether individuals' exposure to COVID-19—either in their location, or within their own family—affects their partisan interpretation of the pandemic. That is, does the *experience* of COVID-19—measured by one's own exposure to COVID-19, or the local rate of COVID-19 diagnoses—affect mass attitudes? And more concretely, do these experiences with COVID-19 override or exacerbate prior partisan positions?

In this study, we examine the relationship between exposure and policy views that are directly or indirectly related to the pandemic. To orient our discussion, we draw on two literatures in social psychology—risk aversion and terror management—to develop a set of hypotheses about how exposure to the threat of COVID-19 might shape mass attitudes. We test these hypotheses using an original, high-quality longitudinal panel survey that includes a battery of items on policy responses to the COVID-19 pandemic. Using a factor analytic approach, we

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find that answers to these questions cluster around three dimensions: welfare policies like paid sick leave, national control policies that focus on border closures and trade barriers, and extreme measures such as delaying elections. We show consistent evidence of partisan divergence in pandemic response policy preferences across the first six months of the COVID-19 pandemic: Republicans support measures where the federal government exerts national control whereas Democrats support welfare policies. These interparty differences grow over time, and we find only limited evidence that exposure or experience moderates these partisan differences: extreme measures, for example, differed by partisan identity in early waves but these differences disappeared by summer 2020. Our findings suggest that Americans' maintain a partisan interpretation of the COVID-19 pandemic, and that objective pandemic conditions play a minor role in shaping mass preferences.

Theoretical Frameworks

Research in social psychology provides several ways to think how COVID-19 exposure could shift political attitudes. In this section, we consider two general expectations for how exposure shapes public attitudes: risk-aversion and existential threat. In the case of risk aversion, we examine both individual and collective or group-level theories for predicting responses to a pandemic, both of which are grounded in *behavioral immune system* (BIS) responses and which predict conservative shift and convergence, respectively. Turning to existential threat considerations, we draw on *terror management theory* (TMT) which predicts that death awareness will generate intergroup hostility rather than conservatism. Finally, we consider how these theoretical predictions might play out in the context of deep partisan polarization.

Risk aversion approach: individual and collective responses

We begin with risk aversion. In economics and psychology the term “risk aversion” frequently refers to preferences for certainty over gambles with equivalent expected utility (Kahneman and Tversky, but here we use risk aversion to refer directly to cognitive processes that lead individuals to avoid situations that are threatening. In other words, individuals seek to avoid contexts of threat or, if they find themselves in the context of threat, become preoccupied with mitigating the anticipated risk. The mechanism through which threat produces risk aversion operate at both the individual and aggregate levels and predict shifts in attitudes and behavior. A *behavioral immune system* (BIS) approach. argues that, in contexts of risk, aversion and avoidance of objects and people that can do harm are useful mechanisms to stay safe.

Based on an evolutionary framework, theorists have proposed that humans developed a series of adaptive mechanisms to minimize the exposure to disease (Schaller, 2006; Schaller & Park, 2011). The BIS is activated by cues indirectly signaling the existence of pathogens, which in turn trigger specific emotional reactions, such as disgust, cognitions such as focusing on disease-related thoughts, and behaviors, such as avoidance

The BIS developed to protect individuals and groups from harms in the physical world but also have social and political consequences. This line of reasoning proposes that attitudes towards social and political events are shaped by our primary dynamics of parasite prevention, regardless of the actual health risk involved (Aarøe et al., 2017; Tybur et al., 2010). The host of traits that go along with the BIS (such as disgust sensitivity) are correlated with negative attitudes toward outgroups, due to the perception that these groups may endanger the ingroup, and more support for ingroup conformity and policies that may benefit ingroups at the expense of other groups . Political and social leaders use the threat of contamination and disease to

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differentiate between which groups are worthy of help and rights and draw boundaries around who is part of the political community, making the BIS a potent tool in advocating for more socially conservative policies. Strong disgust sensitivity at the individual level predicts authoritarian views, opposition to immigration, and support for traditional family values (Feinberg et al., 2014; Inbar et al., 2012; Terrizzi et al., 2010). Experimental activation of the BIS also increases conservatism: college students incidentally exposed to hygiene cues – a hand sanitizer, “clean up after using” signs – reported more conservative political attitudes (Helzer & Pizarro, 2011; Terrizzi et al., 2013). And there is preliminary evidence in the context of the ongoing COVID-19 pandemic¹ that are consistent with this view (McKay et al., 2020; Olivera-La Rosa et al., 2020). Thus, for individuals high in BIS traits, we would predict more conservative, risk averse behavior and attitudes. But this prediction, as we will discuss below, does not consider deep partisanship in a polarized political landscape.

Moving to the aggregate level, research also discusses how ecological pathogen threat may affect the development of social processes and cultural norms, where perceptions of pathogen threat have been linked to higher ingroup conformity (Murray et al., 2011; Wu & Chang, 2012). Studies at the country and region-level have consistently shown that societies that have faced ecological threat are *tighter*: that is, they hold stronger cultural norms and show less tolerance for deviance (Gelfand, 2019; Gelfand et al., 2011; Harrington & Gelfand, 2014; Jackson et al., 2019). Terms such as ‘rallying around the flag’ or ‘conservative shift’ characterize a specific correlation between social closure and leaning toward the ideological right in response to collective traumatic events, such as terrorist attacks, natural disasters, and health crises (Bonanno & Jost, 2006; Porat et al., 2019). Importantly, these effects operate for liberals as well

¹ Unless noted, findings introducing coronavirus-related variables are not published in peer-reviewed journals by the time of writing of this paper.

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as conservatives (van de Vyver et al., 2016). Analyzing the findings around 9/11 psychological and social consequences, Janoff-Bulman and Sheikh suggest that these events displace people's regulatory focus from promotion-oriented to protection-oriented concerns (Higgins, 1997), and more specifically, a moralizing motive of social order as a response to threats to the group (Janoff-Bulman & Sheikh, 2006). Thus, we would expect—again, all else being equal—that pandemics produce social closure, tightness, and a conservative shift at the societal level.

To summarize, individual and collective-level theories of risk aversion support two hypotheses for predicting the effect of COVID-19 exposure. One, the constant salience of pathogen contamination and infectious disease may shift attitudes toward more authoritarian measures, support for immigration restriction and travel bans, and, in general, support for right-wing political attitudes. Based on BIS research, we hypothesize that being exposed to COVID-19 will be associated with more support for right-wing policies (*conservative shift hypothesis*). Two, based on research at the collective level, exposure to COVID-19 might be connected to stronger enforcement of social norms, tightness, higher ingroup conformity and support for the government among both liberals and conservatives. In this scenario, we could expect COVID-19 exposure to reduce partisan polarization even as both liberals and conservatives shift towards more conservative policies (*conservative convergence hypothesis*).

Existential threat approach: terror management theory

Since human beings are conscious organisms that value their own existence and, thus, self-preservation, humans are theoretically troubled by the awareness of their death. The main tenet of the Terror Management Theory (Greenberg et al., 1990; Rosenblatt et al., 1989) is that “terror is managed by sustaining faith in a view of the world and oneself that denies the precarious and transient nature of one's own existence.” (Greenberg & Arndt, 2012, p. 402). The

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first reaction to an awareness of death would be to deny one's own death or mortality, by clinging to something larger than oneself (cultural worldview) and by deeming oneself as a worthy member of that entity (self-esteem).

Death anxiety, then, sets in motion a series of downstream psychological processes at the cognitive, affective, and motivational level. From the cognitive perspective, inducing awareness of mortality has been found to deplete cognitive resources (Pyszczynski et al., 1999; Trémolière et al., 2014) and to over-activate thoughts relevant to our own identities and worldviews (Arndt et al., 2002). From an affective perspective, mortality salience boosts self-esteem (Solomon et al., 1991) and fuels intergroup conflict: ingroup preference and outgroup derogation (Castano et al., 2002; Greenberg & Kosloff, 2008; Reiss & Jonas, 2018). And, from a motivational perspective, when people are reminded of their own mortality, they are more likely to desire to punish more severely those who violates their worldview (Rosenblatt et al., 1989) or who threatens cultural values (Greenberg et al., 1990). A meta-analysis covering over 20 years of TMT-based research revealed that effect sizes of mortality salience on attitudes toward people were larger ($r = .42$) than any effects on other attitudes ($r = .33$), affect ($r = .21$) behaviors ($r = .34$) or cognitions ($r = .32$; Burke et al., 2010).

Since evidence drawing from TMT shows that death awareness motivates greater intergroup aversion, it follows that political conflict will be also affected by mortality salience. Experimentally-induced death awareness motivates greater dislike for the political outgroup (Greenberg et al., 1992), leads to more extreme moral judgments across liberal and conservatives (Bassett et al., 2015), and even being more willing to serve more a painfully spicy hot sauce to someone holding opposite views (McGregor 1998). Evidence from a Swiss longitudinal panel

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revealed that respondents who had suffered the death of a loved one reported more polarized attitudes than those who did not (Chatard et al., 2010).

In the context of the present health crisis, people should be more attuned to death than usual. Prior evidence from the Ebola and Zika virus crises shows that information related to the ongoing health crises trigger more death-related thoughts and increase worldview defense (Arrowood et al., 2017) and an increased polarization of trust in scientists, respectively (Safford et al., 2017). Thus, we hypothesize that exposure to COVID-19 will increase political polarization, by making people hold positions more strongly aligned with their worldview, which we label the *partisan divergence hypothesis*.

Yet the COVID-19 crisis emerged in the context of deep partisan polarization in the United States (Abramowitz, 2010; Fiorina & Abrams, 2008; Pew Research Center, 2014). American politicians show greater distance in their positions (Druckman et al., 2013); mass opinion are structured and sorted in terms of partisanship (Davis & Dunaway, 2016; Lelkes, 2016) and affective polarization is on the rise. That is, Americans feel increasing aversion to those who identify with the opposing political party (Iyengar et al., 2012). In this context, political self-identification, as with other social identities (Tajfel & Turner, 1986), provides partisans with cues through which they interpret events, especially those relevant to the group goals (Abrams et al., 1990). Individuals systematically select sources of information that confirm their own ideological views (Garrett & Stroud, 2014; Rodriguez et al., 2017; Stroud, 2010). Politics is both an informational shortcut and a heuristic for decision-making. The implication is that in the context of preexisting polarization, a global pandemic that heightens the salience of death may actually reinforce existing polarization, leading to greater divergence between the policy preferences of liberals and conservatives. The avoidance mechanisms that produce

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conservatism according to a risk aversion perspective may be overwhelmed by the group antagonism predicted by a terror management approach. Greater exposure to COVID-19 may heighten these distinctions further.

To summarize, based on our theoretical overview of risk aversion and terror management approaches, we identify three main ways in which exposure to COVID-19 might shape policy attitudes (see Figure 1):

(insert Figure 1 about here)

Hypothesis 1 (Conservative Shift): Higher levels of exposure to COVID-19 will correspond to more conservative views overall: that is, both Republican and Democrats will be more supportive of conservative policies as exposure to COVID 19 rises..

Hypothesis 2 (Conservative Convergence): Higher levels of exposure to COVID-19 will correspond to more conservative views overall, but with a larger correlation between exposure and conservative view among Democrats than among Republicans.

Hypothesis 3 (Partisan Divergence): Higher levels of exposure to COVID-19 will correspond to greater partisan differences between Democrats and Republicans: that is, Republicans will be more supportive of conservative policies, and Democrats more supportive of liberal policies, as exposure to COVID 19 rises.

As a counterpart to these three main hypotheses, we also consider the fourth possibility, that greater exposure to COVID-19 will produce unconditional partisan convergence. None of the theoretical

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perspectives reviewed above directly imply partisan convergence, but it might emerge as a consequence of a pure rally-around-the-flag effect.

Hypothesis 4 (Partisan Convergence): Higher levels of exposure to COVID-19 will correspond to smaller differences between Democrats and Republicans, with Republicans converging towards liberal views and Democrats converging towards conservative views.

Finally, we note that the majority of current research on COVID-19 has emphasized the enduring partisan character of the crisis. We therefore also entertain the null hypothesis that there is no interactive effect between COVID-19 exposure and partisan trends in public opinion on pandemic response.

Hypothesis 5 (Unconditional Partisan Polarization [Null]): There is no relationship between COVID-19 exposure and the level of partisan differences in COVID-19.

Data and Methods

We explore the relationships between exposure to COVID-19 measured in three ways – numbers of deaths within a state, number of positive diagnoses within a state, and having a family member or oneself suffered from COVID-19 – and attitudes toward policies and measures to deal with the pandemic in the context of the partisan polarization. Our study draws on three waves of a nationally-representative panel survey of Americans, conducted by the polling company YouGov ($n = 2104$). Wave 1 of the survey was fielded between March 20-23, 2020, as the COVID-19 crisis had begun to produce state-wide lockdowns in the United States. Wave 2 was fielded between April 20 and May 5, as mass fatigue with social distancing and stay-at-

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home orders began to ensue and states began to ease restrictions. Wave 3 was fielded from June 6-25, in the wake of the mass protests following the murder of George Floyd and as cases began to spike once again in states such as Arizona, California, and Florida. The three waves therefore capture Americans' views on responding to COVID-19 at three very different moments in the course of the pandemic.

The surveys also capture Americans living at very different local conditions. State-level cases and deaths were low outside of New York and Washington in Wave 1, but these figures grew in other states as the pandemic proceeded over time. This allows us to distinguish between state-level factors that shape policy preferences and the objective conditions of the pandemic as experienced locally.

Participants

Our first survey wave (Wave 1) included 3000 participants. Respondents were matched to a sampling frame on gender, age, race, and education and were weighted to the sampling frame using propensity scores. The same respondents were invited to complete a second survey (Wave 2), obtaining 2,401 complete interviews (response rate 80%). Finally, the same respondents were contacted for a third survey (Wave 3), obtaining 2,104 complete responses (response rate 87.6%).

Measures

COVID-19 exposure. We measure exposure to COVID-19 using three different metrics. First, using publicly available data provided by the *New York Times*, we calculated (1) the cumulative number of deaths due to COVID-19 in the respondent's state and (2) the cumulative

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number of positive cases of coronavirus infection for each state during the time of data collection for each wave. Additionally, Waves 2 and 3 of the survey included two questions of direct exposure to the disease, whether the respondent had been diagnosed (Have you had COVID-19, either currently or in the past?) or whether a friend or family member had been diagnosed (Do you have a friend or family member affected by COVID-19?). Responses were (3) collapsed in a dichotomous item, aggregating all participants that responded “yes” to either one of the questions in each wave. Between a fourth and a third of participants reported having direct contact with COVID-19 (Wave 2 = 23.78%; Wave 3 = 29.37%).

Party identification. As part of the YouGov demographics inventory, participants were asked to situate themselves in a 7-level party identification item, ranging from “Strong Democrat” to “Strong Republican”. Respondents indicating the two outer alternatives – e.g., “Strong Democrat” and “Not very strong Democrat” – were collapsed into one category for each party (39.28% Democrats, 25.83% Republicans, 26.70% Independents, 4.33% Other, 3.93% Not sure). Respondents identified with a third party, or as independents leaning toward either party were not considered in the analyses.

Policy statements. We presented respondents with a list of various policy statements, thematically ranging from topics like health to trade and immigration, each of which was based on proposals and opinions that emerged in the public debate in the United States. The number of statements varied by wave (Wave 1 = 21, Wave 2 = 30; Wave 3 = 19, see Table S1 for the complete list and question wordings). Respondents were asked to indicate their agreement in a 5-level Likert scale. All statements were directly or indirectly related to the way federal or state

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authorities were handling the coronavirus crisis and its consequences (for example, “The government should waive insurance costs and hospital fees for treating COVID-19”; “The government should mobilize the National Guard to enforce quarantines”). Exploratory factor analyses yielded three clusters of statements that focus on welfare policies, national control, and a third group that we provisionally label “extreme” policies. So while there are substantive differences in policies by theme, factor analysis reveals a distinct clustering along an individual’s expectations of the role of government—assistive (welfare), concentrated power (national control), and the exercise of nontraditional or extreme measures (see Factor Analysis below). Respondents’ scores for each factor were computed based on the factor analytic models.

Results

We conducted our analyses in two steps. First, we explored the underlying structure of the policy statements using exploratory and confirmatory factor analyses. This creates a set of policy preference clusters to serve as our outcome variables. Then, we modelled the endorsement for policies of each cluster over time, using multi-level models.

Factor Analysis

To model the latent structure of the list of policies, we first ran an exploratory factor analysis on the scores of Wave 1. To make sure that the factor structure was robust, we conducted an exploratory factor analyses using a random subset of participants from Wave 2. Then, we ran confirmatory factor analyses on the rest of participants of Wave 2 and with the whole sample on Wave 3.

(insert Table 1 about here)

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Exploratory factor analysis. Using the scores from Wave 1, the policy 21 statements were factor analyzed using oblique rotation, which allows for the factors to partially correlate. Solutions for 2, 3 and 4 factors were estimated, yielding a three-factor structure as the most plausible result (see Table S2 for complete factor loadings). As can be seen in Table 1, factor loadings for each policy statement clustered with other thematically similar items, suggesting the existence of three loosely correlated factors. First, a set of policy statements related to governmental support in terms of health care and unemployment (“The government should waive insurance costs and hospital fees for treating coronavirus”; “The government should grant paid leave to anyone diagnosed with coronavirus to encourage them to stay home until they are fully healthy”), and measures actively involving federal government in minimizing the risk of contagion (“The government should ban public events in order to contain the spread of coronavirus”). We label this factor *Welfare*, and find that it shows good reliability (Cronbach’s $\alpha = .78$). Second, a factor including measures and policies focused on immigration (“The United States should impose entry restrictions at the US-Mexico border to control the spread of the coronavirus in the United States.”), on empowering the executive, overseeing accountability (“The President should be given more powers to address the crisis quickly, without Congressional oversight or other Washington politics”) and on protectionist economic measures (“The United States must increase taxes on foreign imports in order to stimulate the growth of our own domestic industry.”). We label this factor *National Control* and find that it also showed good reliability (Cronbach’s $\alpha = .77$). Third, a set of statements related to unprecedented measures to fight COVID-19, that would involve suspending several fundamental rights, such as free internal movement (“The United States should impose a domestic travel ban between US states.) or private property (“The federal government should take over businesses and private

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property, where necessary, to safeguard American public health”). We label this factor *Extreme Measures*: with a Cronbach’s $\alpha = .66$, this factor is less reliable than the first two factors, but its scores are still acceptable.

Since Wave 2 introduced new policy statements untested in Wave 1, a new exploratory factor analysis was conducted to see whether the new items loaded onto any of the factors and as a means to check the robustness of the factor structure. We factor analyzed a random sample of a third of the respondents ($n = 800$) following the same strategy as in Wave 1. The analysis replicated the same three-factor structure, suggesting a robust clustering of the items across waves (see Table S3 and Supplemental Materials for a detailed discussion of the factor analyses).

Confirmatory factor analysis. Finally, to check the consistency of the factor structure, we conducted a confirmatory factor analysis on the rest of the dataset from Wave 2 ($n = 1601$). Moreover, the confirmatory analysis helped to refine the items that were associated to each factor, allowing us to test multiple structures in order to find the most adequate fit. The final model selected provided a marginally good fit ($TLI = .694$, $CFI = .720$, $RMSEA = .098$, $SMSR = .115$).

Finally, we ran a confirmatory factor analysis on the data from Wave 3, comparing a model restricted to only those variables present across the three waves against a three-factor model including policy statements that were only present on waves 2 and 3. The final model selected showed a good fit ($TLI = .819$, $CFI = .850$, $RMSEA = .098$, $SMSR = .079$; see Table S4 and Supplemental Materials for rationale and model selection criteria).

Modelling Policy Preferences

Equipped with our three dependent variables of *Welfare*, *National Control*, and *Extreme Measures*, we now proceed to model the relationship between partisan identity and policy preferences across states and survey waves. We employ on a multilevel modeling approach that allows us to flexibly capture both individual and contextual factors, as well as the interactions among them.

Statistical framework. Our main estimating equation is a multilevel random effects model with cross-level interactions. We start with a level-1 model in which individual responses Y_{ist} , where i indexes individuals, s indexes states, and t indexes time (or wave), are a function of partisanship and wave, plus covariates X_{ist} (age, gender, ethnicity and education) and error:

$$Y_{ist} = \beta_{0j} + \beta_{1j}Partisanship_{ist} + \beta_{2j}Wave_{ist} + \beta_{3j}Partisanship_{ist} \times Wave_{ist} + X_{ist} + \varepsilon_{ist} \quad (1)$$

The intercept and each of the slope parameters, in turn, are a function of state-level COVID prevalence:

$$\begin{aligned} \beta_{0j} &= \gamma_{00} + \gamma_{01}COVID + \eta_{0j} \\ \beta_{1j} &= \gamma_{10} + \gamma_{11}COVID + \eta_{1j} \\ \beta_{2j} &= \gamma_{20} + \gamma_{21}COVID + \eta_{2j} \\ \beta_{3j} &= \gamma_{30} + \gamma_{31}COVID + \eta_{3j} \end{aligned} \quad (2)$$

Substituting (2) into (1), we then have

$$\begin{aligned} Y_{ist} &= \gamma_{00} + \gamma_{01}COVID + \eta_{0j} + \\ &(\gamma_{10} + \gamma_{11}COVID + \eta_{1j})Partisanship_{ist} + \\ &(\gamma_{20} + \gamma_{21}COVID + \eta_{2j})Wave_{ist} + \\ &(\gamma_{30} + \gamma_{31}COVID + \eta_{3j})Partisanship_{ist} \times Wave_{ist} + \\ &X_{ist} + \varepsilon_{ist} \end{aligned} \quad (3)$$

$$\begin{aligned}
= & \gamma_{00} + \gamma_{01}COVID + \gamma_{10}Partisanship_{ist} + \gamma_{11}COVID \times Partisanship_{ist} \\
& + \eta_{1j}Partisanship_{ist} + \gamma_{20}Wave_{ist} + \gamma_{21}COVID \times Wave_{ist} \\
& + \eta_{2j}Wave_{ist} + \gamma_{30}Partisanship_{ist} \times Wave_{ist} \\
& + \gamma_{31}COVID \times Partisanship_{ist} \times Wave_{ist} \\
& + \eta_{3j}Partisanship_{ist} \times Wave_{ist} + X_{ist} + \eta_{0j} + \varepsilon_{ist}
\end{aligned}$$

Welfare Policies

(insert Table 2 and Figure 2 about here)

Time and party effects. First, we model support for policy statements focusing on the federal government actively providing protection and health care in the wake of the pandemic, using alternatively our three operationalizations of exposure to COVID-19. Results for the three regressions can be found in Table 2 (see Table S5 for complete estimates for all models). For the sake of brevity, we focus on the models that operationalize exposure using State death tolls. Across models, there is a main effect of time ($b = .13$, $t_{(483)} = 2.80$, $p < .001$, 95% CI [.04, .22]). This suggests that support for welfare policies, on average, increased from Wave 1 to Wave 3. As expected, the analyses also yield a main effect for party identity ($b = -.44$, $t_{(483)} = -5.35$, $p < .001$, 95% CI [-.61, -.28]), meaning that Republicans reported, in average, less support for welfare policies. However, this effect is qualified by a time $\times$ party interaction, suggesting that support for welfare policies over the three waves increased for Democrats, but decreased for Republicans ($b = -.23$, $t_{(483)} = -3.47$, $p < .001$, 95% CI [-.36, -.10]). This result is broadly consistent with the partisan divergence hypothesis.

Exposure to COVID. The number of deaths due to COVID-19 is correlated with support for welfare policies ($b = .02$, $t_{(483)} = 2.25$, $p = .025$, 95% CI [.00, .03]), suggesting that participants in a state with more deaths reported slightly higher support for welfare policies. The size of this correlation also increases over time, as shown by the time $\times$ death interaction term (b

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= -.01, $t_{(483)} = -2.20$, $p = .028$, 95% $CI [-.02, -.00]$). However, we find no significant differences of this effect by party ($b = -.01$, $t_{(483)} = -1.18$, $p = .239$, 95% $CI [-.04, .01]$), nor does this effect vary over time ($b = .01$, $t_{(483)} = 1.55$, $p = .121$, 95% $CI [-.00, .03]$). Visual inspection of plotted margins (see Figure 2) reveals that the variation in slopes over time is subtle, but leans towards convergence (time $\times$ death interaction). Also, party differences increase over time, as the gap between the lines widens (time $\times$ party interaction).

Number of confirmed cases of COVID-19 by the time of the survey is not significantly correlated with welfare policy support ($b = .02$, $t_{(483)} = 1.86$, $p = .063$, 95% $CI [-.00, .03]$), neither alone or in interaction with party identity ($b = -.01$, $t_{(483)} = -.87$, $p = .385$, 95% $CI [-.04, .01]$) or time ($b = -.01$, $t_{(483)} = -1.94$, $p = .052$, 95% $CI [-.02, .00]$). Figure 2 shows the marginal effects by wave, which suggest, however, that the pattern of influence of COVID-19 cases on welfare policies, though not statistically significant, resembles the trend describe by death toll.

Finally, the experience of being sick of COVID-19 or having a close friend or family member sick is correlated with support for welfare policies ($b = .28$, $t_{(4493)} = 3.52$, $p < .001$, 95% $CI [.13, .44]$), yet this correlation decreases over time ($b = -.08$, $t_{(4493)} = -2.92$, $p = .004$, 95% $CI [-.14, -.03]$). We find no differences in experience by partisan identification, either alone or in three three way interaction with time (time $\times$ party $\times$ exposure). As suggested by Figure 2, the effects seem to be driven by the differences in exposure between Democrats in Wave 2 and in Republicans in Wave 3.

(insert Table 3 and Figure 3 about here)

National Control Policies

Time and party effects. When modelling endorsement for policies that emphasize nationalist and economically protectionist measures, we find variation across the three waves,

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suggesting that average support for national control measures has decreased over time ($b = -.10$, $t_{(483)} = -2.41$, $p < .016$, 95% $CI [-.18, -.02]$, again focusing on models using Death toll). However, there are considerable party differences: Republicans hold in general more views related to national control ($b = .48$, $t_{(483)} = 5.94$, $p < .001$, 95% $CI [.32, .64]$), and this effect increases marginally in size over time ($b = .11$, $t_{(483)} = 1.74$, $p = .082$, 95% $CI [-.01, .22]$), consistent with a finding of partisan divergence.²

Exposure to COVID. We find a negative main effect for COVID deaths ($b = -.10$, $t_{(438)} = -10.86$, $p < .001$, 95% $CI [-.11, -.08]$) which, in turn, is qualified by time ($b = .04$, $t_{(438)} = 7.16$, $p < .001$, 95% $CI [.03, .05]$) and differs by party ($b = .20$, $t_{(438)} = 15.31$, $p < .001$, 95% $CI [.17, .22]$). These coefficients suggest that as state-level death numbers increase, support for national control policies decrease, but this association loses strength over time (death $\times$ time interaction). Also, the large interaction term (death $\times$ party interaction) suggest that for Republicans, the slope is positive. Finally, the 3-way interaction term is also significant ($b = -.07$, $t_{(438)} = -9.35$, $p < .001$, 95% $CI [-.09, -.06]$), which implies that the interaction of party and death is being curbed over time. Figure 3 shows how the patterns for Democrats and Republicans evolved over the three waves.

Prevalence statistics of COVID-19 showed a similar pattern of associations as death toll: the increase in cases correlated with lower support for national control ($b = -.11$, $t_{(438)} = -10.84$, $p < .001$, 95% $CI [-.13, -.09]$), but this correlation shrinks over time ($b = .04$, $t_{(438)} = 7.51$, $p < .001$, 95% $CI [.03, .06]$) and differs for Republicans ($b = .24$, $t_{(438)} = 15.68$, $p < .001$, 95% $CI [.20,$

² When using State-level cases as the measure of exposure, we find a negative coefficient on party identification. This is the result of extreme extrapolation: this coefficient represents a Wave 1 Republican in a state with zero COVID cases.

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.26]). Similarly, the 3-way interaction term suggest that this pattern evolves over the three waves ($b = -.08$, $t_{(438)} = -9.20$, $p < .001$, 95% $CI [-.10, -.06]$), as Figure 3 reveals.

We find no relationship between individual experience and support for national control policies ($b = -.02$, $t_{(2957)} = -.61$, $p = .543$, 95% $CI [-.09, .05]$), nor do the interactions suggest any type of conditional relationship (all $bs < .04$; all $ps > .500$; see Table 3 for brief regression summary, and Table S6 for complete coefficients).

Extreme Measures

(insert Table 4 and Figure 4 about here)

Time and party effects. Endorsing of extreme measures to fight COVID-19, such as the government deploying the National Guard, banning domestic traveling or using cell phones to monitor people's movement, did not vary over time, but differs by party. Across the three waves, support for extreme measures did not vary significantly ($b = -.01$, $t_{(2957)} = -.29$, $p = .774$, 95% $CI [-.11, .08]$ using Death count as exposure). However, party identification did influence support for these measures, being in average higher for Republicans than Democrats ($b = .27$, $t_{(483)} = 3.11$, $p = .002$, 95% $CI [.10, .44]$). These party differences decrease over time ($b = -.15$, $t_{(483)} = -2.15$, $p = .032$, 95% $CI [-.29, -.01]$), suggesting that endorsement of extreme policies decreased significantly only for Republicans.

Exposure to COVID-19. State-level COVID-19 deaths are correlated with the support for extreme measures ($b = .04$, $t_{(483)} = 4.06$, $p < .001$, 95% $CI [.02, .05]$), and this correlation does not vary across waves (death $\times$ time interaction: $b = -.01$, $t_{(483)} = -1.32$, $p = .185$, 95% $CI [-.02, .00]$). This correlation does vary by party ($b = -.11$, $t_{(483)} = -8.95$, $p < .001$, 95% $CI [-.14, -.09]$) and changed over time, as the 3-way interaction shows ($b = .04$, $t_{(483)} = 4.70$, $p < .001$, 95% $CI [.02, .06]$). The margins plots from Figure 4 reveal that in Wave 1 Democrat supported extreme

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measures in the context of higher numbers of COVID cases, but by Wave 3 partisan differences have disappeared: for both parties, the higher the death count the more support for extreme measures.

We find similar results using state-level cases as the measure of exposure: as cases increase, support for extreme measures, in average, increases ($b = .04$, $t_{(483)} = 4.26$, $p < .001$, 95% CI [.02, .06]). This effect does not vary over time ($b = -.01$, $t_{(483)} = -1.08$, $p = .279$, 95% CI [-.02, .01]), but it does by party ($b = -.13$, $t_{(483)} = -9.09$, $p < .001$, 95% CI [-.16, -.10]). The 3-way interaction is also significant, suggesting that the differences in the slopes change over time.

Experiencing the disease in oneself or a loved one is associated with higher support for extreme measures to fight COVID-19 ($b = .19$, $t_{(2957)} = 2.10$, $p = .036$, 95% CI [.01, .37]), and this correlation did not vary over time (exposure $\times$ time interaction: $b = -.11$, $t_{(2957)} = -.69$, $p = .491$, 95% CI [-.42, .20]). The effect of direct exposure was larger for Democrats than for Republicans ($b = -.07$, $t_{(2957)} = -2.04$, $p = .042$, 95% CI [-.14, -.00]) and this relationship did not vary over time ($b = .07$, $t_{(2957)} = 1.09$, $p = .278$, 95% CI [-.05, .18]). Visual inspection of the predicted values reveals that between Waves 2 and 3, both parties tended to converge, but Republicans respondents without direct exposure to COVID-19 were the ones with lower endorsement for extreme measures.

Discussion

Taken together, these results paint a complex picture of how experience and exposure moderate the partisan politics of COVID-19 in the United States. Results are not wholly consistent with any single hypothesis derived from the theoretical frameworks elaborated previously: our inferences depend on how we measure exposure or experience, and the types of policies in question.

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Our results for support for welfare policies are broadly consistent with the null hypothesis (Hypothesis 5). Taken as a whole we find no strong relationship between COVID-19 exposure and the strength of partisan differences over welfare policies. We do find that over time, partisan differences in support for welfare policies grow, which is consistent with partisan divergence (Hypothesis 3) but does not appear to be driven by exposure to or experience with COVID-19.

Results for national control policies show strong support for the partisan divergence hypothesis. But this finding shrinks over time towards a purely partisan model in which exposure is unrelated to support for national control. Instead, partisan differences dominate, although we do find that Democrats' support for these policies increases across waves in the states that have been least affected by COVID-19.

Results for extreme measures also differ over time: in the earliest waves the strong differences across parties associated with high rates of COVID-19 deaths are consistent with partisan divergence, but by later waves we find no partisan differences at all, which is broadly consistent with a version of conservative convergence (Hypothesis 2). We note however that the moderating effect of COVID-19 cases, diagnoses, or experience is very small, suggesting that these policies are so extreme as to lack any partisan flavor.

This pattern of results also suggests that the effects of exposure are conditional on the policies involved and the time period in which they are measured: exposure is more polarizing in the cases of welfare policies, but has little or no effect on national control policies or extreme measures. Although none of these results should be given a strong causal interpretation given that our data are observational and the contextual factors such as risk are not randomly assigned, these results are inconsistent with an account in which exposure or experience with COVID-19 has consistent effects on policy preferences.

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In terms of the theoretical perspectives that motivated our inquiry, our results are more consistent with TMT and effects of mortality salience than with a focus on conservative shifts and a BIS response. This study contributes to the broader debate about the tension between these two approaches. Researchers have criticized the concept of conservative shift for suggesting that uncertainty would lead to ‘political conservatism’, rather than a politically unspecific ‘psychological conservatism’ (Kosloff et al., 2016). Moreover, studies have shown that the effects of death anxiety and uncertainty leading towards conservatism are overridden by making salient personal and social identities (Burke et al., 2013). This is consistent with our results, in the sense that the influence of party on the policies showed the greatest effect sizes in almost all of our models. In an electoral year and a highly polarized environment, it is arguable that people’s political identities are constantly salient. Interpreting partisanship as the core identity dimension in conflict reveals that outgroup antipathy and ingroup favoritism dominate in the case of COVID-19. But it also reveals the limits of exposure and experience in shaping attitudes: our most consistent finding is that Democrats support welfare and Republicans support national control, regardless of survey wave or how exposed they are to COVID-19. This conclusion has troubling implications for the state of American democracy: even in the context of the worst global pandemic in a century, Americans’ understanding of and reaction to policies designed to mitigate it are thoroughly, utterly partisan.

References

- Aaroe, L., Petersen, M. B., & Arceneaux, K. (2017). The behavioral immune system shapes political intuitions: Why and how individual differences in disgust sensitivity underlie opposition to immigration. *American Political Science Review*, 111(2), 277–294.
<https://doi.org/10.1017/S0003055416000770>
- Abramowitz, A. I. (2010). Transformation and polarization: The 2008 presidential election and the new American electorate. *Electoral Studies*, 29(4), 594–603.
<https://doi.org/10.1016/j.electstud.2010.04.006>
- Abrams, D., Wetherell, M., Cochrane, S., Hogg, M. A., & Turner, J. C. (1990). Knowing what to think by knowing who you are: Self-categorization and the nature of norm formation, conformity and group polarization. *British Journal of Social Psychology*, 29(2), 97–119.
<https://doi.org/10.1111/j.2044-8309.1990.tb00892.x>
- Allcott, H., Boxell, L., Conway, J., Gentzkow, M., Thaler, M., & Yang, D. Y. (2020). Polarization and Public Health: Partisan Differences in Social Distancing during COVID-19. *SSRN Electronic Journal*, eProtocol 42883, 1–49. <https://doi.org/10.2139/ssrn.3570274>
- Arndt, J., Greenberg, J., & Cook, A. (2002). Mortality salience and the spreading activation of worldview-relevant constructs: Exploring the cognitive architecture of terror management. *Journal of Experimental Psychology: General*, 131(3), 307–324. <https://doi.org/10.1037/0096-3445.131.3.307>

EXPOSURE TO COVID-19 AND PARTISAN RESPONSES

- Arrowood, R. B., Cox, C. R., Kersten, M., Routledge, C., Shelton, J. T., & Hood, R. W. (2017). Ebola salience, death-thought accessibility, and worldview defense: A terror management theory perspective. *Death Studies*, 41(9), 585–591. <https://doi.org/10.1080/07481187.2017.1322644>
- Baker, P. (2020, March 10). For Trump, Coronavirus Proves to Be an Enemy He Can't Tweet Away. *The New York Times*.
<https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:5YCV-HDY1-JC85-N1XF-00000-00&context=1516831>.
- Barrios, J. M., & Hochberg, Y. v. (2020). Risk Perception Through the Lens of Politics in the Time of the COVID-19 Pandemic. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3568766>
- Bassett, J. F., van Tongeren, D. R., Green, J. D., Sonntag, M. E., & Kilpatrick, H. (2015). The interactive effects of mortality salience and political orientation on moral judgments. *British Journal of Social Psychology*, 54(2), 306–323. <https://doi.org/10.1111/bjso.12086>
- Bonanno, G. A., & Jost, J. T. (2006). Conservative Shift Among High-Exposure Survivors of the September 11th Terrorist Attacks. *Basic and Applied Social Psychology*, 28(4), 311–323.
<https://doi.org/10.1207/s15324834basp2804>
- Briki, W., & Dagot, L. (2020). “Liberate !” – Republicans Are More Willing to Get Back to Social Life Because They Are Less Scared of COVID-19. (*Preprint*), 1–16.
- Burke, B. L., Martens, A., & Faucher, E. H. (2010). Two decades of terror management theory: A meta-analysis of mortality salience research. *Personality and Social Psychology Review*, 14(2), 155–195. <https://doi.org/10.1177/1088868309352321>
- Castano, E., Yzerbyt, V., Paladino, M. P., & Sacchi, S. (2002). I belong, therefore, I exist: Ingroup identification, ingroup entitativity, and ingroup bias. *Personality and Social Psychology Bulletin*, 28(2), 135–143. <https://doi.org/10.1177/0146167202282001>

EXPOSURE TO COVID-19 AND PARTISAN RESPONSES

- Chatard, A., Arndt, J., & Pyszczynski, T. (2010). Loss shapes political views? Terror management, political ideology, and the death of close others. *Basic and Applied Social Psychology*, 32(1), 2–7. <https://doi.org/10.1080/01973530903539713>
- Davis, N. T., & Dunaway, J. L. (2016). Party Polarization, Media Choice, and Mass Partisan-Ideological Sorting. *Public Opinion Quarterly*, 80(S1), 272–297. <https://doi.org/10.1093/poq/nfw002>
- Druckman, J. N., Peterson, E., & Slothuus, R. (2013). How Elite Partisan Polarization Affects Public Opinion Formation. *American Political Science Review*, 107(1), 57–79. <https://doi.org/10.1017/S0003055412000500>
- Feinberg, M., Antonenko, O., Willer, R., Horberg, E. J., & John, O. P. (2014). Gut check: Reappraisal of disgust helps explain liberal-conservative differences on issues of purity. *Emotion*, 14(3), 513–521. <https://doi.org/10.1037/a0033727>
- Fiorina, M. P., & Abrams, S. J. (2008). Political Polarization in the American Public. *Annual Review of Political Science*, 11(1), 563–588. <https://doi.org/10.1146/annurev.polisci.11.053106.153836>
- Gadarian, S. K., Goodman, S. W., & Pepinsky, T. B. (2020). Partisanship, Health Behavior, and Policy Attitudes in the Early Stages of the COVID-19 Pandemic. *SSRN Electronic Journal*. <https://ssrn.com/abstract=3562796>
- Garrett, R. K., & Stroud, N. J. (2014). Partisan paths to exposure diversity: Differences in pro- and counterattitudinal news consumption. *Journal of Communication*, 64(4), 680–701. <https://doi.org/10.1111/jcom.12105>
- Gelfand, M. J. (2019). Universal and culture-specific patterns of tightness-looseness across the 31 Chinese provinces. *Proceedings of the National Academy of Sciences of the United States of America*, 116(14), 6522–6524. <https://doi.org/10.1073/pnas.1902401116>

EXPOSURE TO COVID-19 AND PARTISAN RESPONSES

- Gelfand, M. J., Raver, J. L., Nishii, L., Leslie, L. M., Lun, J., Lim, B. C., Duan, L., Almaliach, A., Ang, S., Arnadottir, J., Aycan, Z., Boehnke, K., Boski, P., Cabecinhas, R., Chan, D., Chhokar, J., D'Amato, A., Ferrer, M., Fischlmayr, I. C., ... Yamaguchi, S. (2011). Differences between tight and loose cultures: A 33-nation study. *Science*, 332(6033), 1100–1104.
<https://doi.org/10.1126/science.1197754>
- Greenberg, J., & Arndt, J. (2012). Terror Management Theory. In P. A. M. van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of Theories of Social Psychology* (Vol. 1, pp. 398–415). SAGE Publications. <https://doi.org/10.4135/9781446249215>
- Greenberg, J., & Kosloff, S. (2008). Terror Management Theory: Implications for Understanding Prejudice, Stereotyping, Intergroup Conflict, and Political Attitudes. *Social and Personality Psychology Compass*, 2(5), 1881–1894. <https://doi.org/10.1111/j.1751-9004.2008.00144.x>
- Greenberg, J., Pyszczynski, T., Solomon, S., Rosenblatt, A., Veeder, M., Kirkland, S., & Lyon, D. (1990). Evidence for Terror Management Theory II: The Effects of Mortality Salience on Reactions to Those Who Threaten or Bolster the Cultural Worldview. *Journal of Personality and Social Psychology*, 58(2), 308–318. <https://doi.org/10.1037/0022-3514.58.2.308>
- Greenberg, J., Simon, L., Pyszczynski, T., Solomon, S., & Chatel, D. (1992). Terror management and tolerance: Does mortality salience always intensify negative reactions to others who threaten one's worldview? *Journal of Personality and Social Psychology*, 63(2), 212–220.
<https://doi.org/10.1037/0022-3514.63.2.212>
- Harrington, J. R., & Gelfand, M. J. (2014). Tightness-looseness across the 50 united states. *Proceedings of the National Academy of Sciences of the United States of America*, 111(22), 7990–7995. <https://doi.org/10.1073/pnas.1317937111>

EXPOSURE TO COVID-19 AND PARTISAN RESPONSES

- Helzer, E. G., & Pizarro, D. A. (2011). Dirty liberals!: Reminders of physical cleanliness influence moral and political attitudes. *Psychological Science*, 22(4), 517–522.
<https://doi.org/10.1177/0956797611402514>
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52(12), 1280–1300.
<https://doi.org/10.1037/0003-066X.52.12.1280>
- Inbar, Y., Pizarro, D., Iyer, R., & Haidt, J. (2012). Disgust Sensitivity, Political Conservatism, and Voting. *Social Psychological and Personality Science*, 3(5), 537–544.
<https://doi.org/10.1177/1948550611429024>
- Iyengar, S., Sood, G., & Lelkes, Y. (2012). Affect, not ideology: A social identity perspective on polarization. *Public Opinion Quarterly*, 76(3), 405–431. <https://doi.org/10.1093/poq/nfs038>
- Jackson, J. C., Egmond, M. van, Choi, V. K., Ember, C. R., Halberstadt, J., Balanovic, J., Basker, I. N., Boehnke, K., Buki, N., Fischer, R., Fulop, M., Fulmer, A., Homan, A. C., van Kleef, G. A., Kreemers, L., ScheiI, V., Szabo, E., Ward, C., & Gelfand, M. J. (2019). Ecological and cultural factors underlying the global distribution of prejudice. *PLoS ONE*, e0221953.
- Janoff-Bulman, R., & Sheikh, S. (2006). From National Trauma to Moralizing Nation. *Basic and Applied Social Psychology*, 28(4), 325–332. <https://doi.org/10.1207/s15324834basp2804>
- Kosloff, S., Landau, M. J., & Burke, B. (2016). Terror Management and Politics. Comparing and Integrating the “Conservative Shift” and “Political Worldview Defense” Hypotheses. In L. A. Harvell & G. S. Nisbett (Eds.), *Denying death: An interdisciplinary approach to terror management theory* (pp. 28–46). Routledge/Taylor & Francis Group.
<https://doi.org/10.4324/9781315641393-3>
- Lelkes, Y. (2016). Mass Polarization: Manifestations and Measurements. *Public Opinion Quarterly*, 80(S1), 392–410. <https://doi.org/10.1093/poq/nfw005>

EXPOSURE TO COVID-19 AND PARTISAN RESPONSES

- Makridis, C. A., & Rothwel, J. T. (2020). The real cost of political polarization: Evidence from the COVID-19 pandemic. *Covid Economics: Vetted and Real-Time Papers*, 3(34), 166.
- McKay, D., Minaya, C., & Storch, E. A. (2020). Conducting exposure and response prevention treatment for contamination fears during COVID-19: The behavioral immune system impact on clinician approaches to treatment. *Journal of Anxiety Disorders*, 74(July), 102270.
<https://doi.org/10.1016/j.janxdis.2020.102270>
- Mead, W. R. (2020, June 29). The Global Political Pandemic . *Wall Street Journal*.
<https://www.wsj.com/articles/the-global-political-pandemic-11593469913?mod=searchresults&page=1&pos=6>
- Murray, D. R., Trudeau, R., & Schaller, M. (2011). On the origins of cultural differences in conformity: Four tests of the pathogen prevalence hypothesis. *Personality and Social Psychology Bulletin*, 37(3), 318–329. <https://doi.org/10.1177/0146167210394451>
- Olivera-La Rosa, A., Chuquichambi, E. G., & Ingram, G. P. D. (2020). Keep your (social) distance: Pathogen concerns and social perception in the time of COVID-19. *Personality and Individual Differences*, 166(June), 110200. <https://doi.org/10.1016/j.paid.2020.110200>
- Pew Research Center. (2014). *Political Polarization in the American Public. How Increasing Ideological Uniformity and Partisan Antipathy Affect Politics, Compromise and Everyday Life*. U. S. Politics and Policy. <http://www.people-press.org/2014/06/12/political-polarization-in-the-american-public/>
- Porat, R., Tamir, M., Wohl, M. J. A., Gur, T., & Halperin, E. (2019). Motivated emotion and the rally around the flag effect: liberals are motivated to feel collective angst (like conservatives) when faced with existential threat. *Cognition and Emotion*, 33(3), 480–491.
<https://doi.org/10.1080/02699931.2018.1460321>

EXPOSURE TO COVID-19 AND PARTISAN RESPONSES

- Pyszczynski, T., Solomon, S., & Greenberg, J. (1999). A dual-process model of defense against conscious and unconscious death-related thoughts: An extension of terror management theory. *Psychological Review*, 106(4), 835–845. <https://doi.org/10.1037/0033-295X.106.4.835>
- Reiss, S., & Jonas, E. (2018). The cycle of intergroup conflict: Terror management in the face of terrorism and war. In C. Routledge & M. Vess (Eds.), *Handbook of Terror Management Theory* (pp. 449–484). Academic Press. <https://doi.org/10.1016/B978-0-12-811844-3.00019-6>
- Rodriguez, C. G., Moskowitz, J. P., Salem, R. M., & Ditto, P. H. (2017). Partisan selective exposure: The role of party, ideology and ideological extremity over time. *Translational Issues in Psychological Science*, 3(3), 254–271. <https://doi.org/10.1037/tps0000121>
- Rosenblatt, A., Greenberg, J., Solomon, S., Pyszczynski, T., & Lyon, D. (1989). Evidence for terror management theory: I. The effects of mortality salience on reactions to those who violate or uphold cultural values. *Journal of Personality and Social Psychology*, 57(4), 681–690. <https://doi.org/10.1037/0022-3514.57.4.681>
- Safford, T. G., Hamilton, L. C., & Whitmore, E. H. (2017). The Zika Virus Threat How Concerns About Scientists May Undermine Efforts to Combat the Pandemic Thomas. *Carsey Research*, 49, 6.
- Schaller, M. (2006). Parasites, Behavioral Defenses, and the Social Psychological Mechanisms Through Which Cultures are Evoked. *Psychological Inquiry*, 17(2), 96–101.
- Schaller, M., & Park, J. H. (2011). The behavioral immune system (and why it matters). *Current Directions in Psychological Science*, 20(2), 99–103. <https://doi.org/10.1177/0963721411402596>
- Solomon, S., Greenberg, J., & Pyszczynski, T. A. (1991). Terror Management Theory of Self-Esteem. In *Handbook of Social and Clinical Psychology: The Health Perspective* (pp. 21–40).

EXPOSURE TO COVID-19 AND PARTISAN RESPONSES

- Stroud, N. J. (2010). Polarization and partisan selective exposure. *Journal of Communication*, 60(3), 556–576. <https://doi.org/10.1111/j.1460-2466.2010.01497.x>
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In *Psychology of Intergroup Relations: Vol. 2nd ed.* (pp. 7–24). <https://doi.org/10.1111/j.1751-9004.2007.00066.x>
- Terrizzi, J. A., Shook, N. J., & McDaniel, M. A. (2013). The behavioral immune system and social conservatism: A meta-analysis. *Evolution and Human Behavior*, 34(2), 99–108. <https://doi.org/10.1016/j.evolhumbehav.2012.10.003>
- Terrizzi, J. A., Shook, N. J., & Ventis, W. L. (2010). Disgust: A predictor of social conservatism and prejudicial attitudes toward homosexuals. *Personality and Individual Differences*, 49(6), 587–592. <https://doi.org/10.1016/j.paid.2010.05.024>
- Trémolière, B., de Neys, W., & Bonnefon, J. F. (2014). The grim reasoner: Analytical reasoning under mortality salience. *Thinking and Reasoning*, 20(3), 333–351. <https://doi.org/10.1080/13546783.2013.823888>
- Tybur, J. M., Merriman, L. A., Hooper, A. E. C., McDonald, M. M., & Navarrete, C. D. (2010). Extending the behavioral immune system to political psychology: Are political conservatism and disgust sensitivity really related? *Evolutionary Psychology*, 8(4), 599–616. <https://doi.org/10.1177/147470491000800406>
- van de Vyver, J., Houston, D. M., Abrams, D., & Vasiljevic, M. (2016). Boosting Belligerence: How the July 7, 2005, London Bombings Affected Liberals' Moral Foundations and Prejudice. *Psychological Science*, 27(2), 169–177. <https://doi.org/10.1177/0956797615615584>
- Wu, B. P., & Chang, L. (2012). The social impact of pathogen threat: How disease salience influences conformity. *Personality and Individual Differences*, 53(1), 50–54. <https://doi.org/10.1016/j.paid.2012.02.023>

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Figure 1. Visual representation of the hypotheses. The Y-axis represents the support for policies typically endorsed by Democrats.

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Figure 2. Predicted values for Welfare policies by party, exposure and waves.

Figure 3. Predicted values for National Control policies by party, exposure and waves.

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Figure 4. Predicted values for Extreme measures by party, exposure and waves.

Table 1. Means, standard deviations, pattern matrix (factor loadings) and structure matrix (factor correlations) for all policy statements assuming three factors (Wave 1; $n = 3,000$)

Policy Statement	Mean	SD	Factor loadings			h^2
			F1	F2	F3	
The government should make all testing for coronavirus free for all Americans.	4.45	.95	.73	.07	-.04	.53
The government should grant paid leave to anyone diagnosed with coronavirus to encourage them to stay home until they are fully healthy.	4.26	1.04	.72	.07	-.02	.52
The government should waive insurance costs and hospital fees for treating coronavirus	4.23	1.06	.68	.01	.03	.47
The government should ban public events in order to contain the spread of coronavirus	4.07	1.09	.57	.04	.28	.51
The government should close all schools in order to contain the spread of coronavirus	4.04	1.10	.57	.00	.33	.54
We have enough coronavirus tests in my state.	2.08	1.16	-.51	.23	.19	.31
Sporting and other public events should continue to take place. Cancelling hurts local businesses and is bad for morale.	2.11	1.30	-.50	.14	.05	.26
The United States must strengthen its economic ties and increase trade with other countries in order to strengthen our economy.	3.65	1.08	.31	-.18	.05	.13
The United States should impose entry restrictions at the US-Mexico border to control the spread of the coronavirus in the United States.	3.94	1.22	-.04	.71	.05	.53
The US should not be so reliant on other countries, but should make more things at home	4.03	1.12	.05	.71	-.21	.43
The United States must continue to ban the entry of citizens of [China/Italy/Great Britain] into the United States. [randomize choice]	3.86	1.20	.05	.57	.16	.44
The United States must increase taxes on foreign imports in order to stimulate the growth of our own domestic industry.	2.98	1.17	-.21	.53	.16	.39
The United States should keep interest rates as low as possible, which will encourage more spending and will support the American economy.	3.96	1.05	.24	.48	-.05	.28
The United States must halt all international air travel	3.82	1.22	.15	.42	.36	.48

EXPOSURE TO COVID-19 AND PARTISAN RESPONSES

The United States should impose a domestic travel ban between US states.	3.00	1.38	.05	.00	.72	.54
The government should mobilize the National Guard to enforce quarantines that prevent people from spreading coronavirus.	3.16	1.30	.19	-.04	.60	.44
The United States should quarantine [Chinese/Italians] in the United States, including [Chinese/Italian] Americans.	2.36	1.38	-.25	.21	.50	.35
Elections should be delayed [if it means protecting people][because a crisis is not the time for politics]	3.27	1.46	.08	.15	.40	.26
The government should provide bailouts, or financial compensation, to American companies to recover losses from coronavirus.	3.43	1.21	.17	.26	.20	.20
State governments and governors should lead policy responses and decide how best to fight coronavirus in their state.	3.84	1.08	.19	.24	.09	.13
The government should rescue US citizens from abroad and bring them back home.	3.46	1.17	.21	.11	-.02	.06
Proportion Variance Explained			.15	.12	.10	
Structure Matrix						
F1			1.00			
F2			.06	1.00		
F3			.29	.38	1.00	

NOTE: SD = Standard deviation. h^2 = Uniqueness estimate. Mean and factor analysis were calculated using population weights. Factor loadings estimated using oblique rotation (*oblimin*). See Supplemental materials for further details

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Table 2. Multilevel linear mixed models predicting support for Welfare policies by waves, party identity and type of exposure to COVID-19 (controlling for individual and state-level random effects and adjusted population weights)

<i>Predictors</i>	Death Toll (State)				COVID-19 Cases (State)				Direct Exposure			
	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>p</i>
(Intercept)	.20	.06	.09 – .31	<.001	.14	.08	-.02 – .30	.093	.26	.04	.17 – .34	<.001
Wave	.13	.05	.04 – .22	.005	.17	.07	.03 – .31	.016	.06	.01	.03 – .09	<.001
Party (1 = Republican)	-.44	.08	-.61 – -.28	<.001	-.40	.12	-.63 – -.16	.001	-.53	.06	-.66 – -.41	<.001
Party × Wave	-.23	.07	-.36 – -.10	.001	-.29	.11	-.50 – -.08	.007	-.15	.02	-.19 – -.11	<.001
Deaths(log)	.02	.01	.00 – .03	.025								
Deaths(log) × Wave	-.01	.01	-.02 – -.00	.028								
Deaths(log) × Party	-.01	.01	-.04 – .01	.239								
Deaths(log) × Party × Wave	.01	.01	-.00 – .03	.121								
Cases(log)					.02	.01	-.00 – .03	.063				
Cases(log) × Wave					-.01	.01	-.02 – .00	.052				
Cases(log) × Party					-.01	.01	-.04 – .01	.385				
Cases × Party × Wave					.01	.01	-.00 – .03	.149				
Direct Exposure (1 = Yes)									.28	.08	.13 – .44	<.001
Exposure × Wave									-.08	.03	-.14 – -.03	.004
Exposure × Party									-.09	.14	-.35 – .18	.512

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Exposure $\times$ Party $\times$ Wave			.08	.05	-.02 – .17	.103
Observations	4845	4845	4506			
Marginal R^2 / Conditional R^2	.268 / .844	.268 / .842	.301 / .836			

EXPOSURE TO COVID-19 AND PARTISAN RESPONSES

Table 3. Multilevel linear mixed models predicting support for National Control policies by waves, party identity and type of exposure to COVID-19 (controlling for individual and state-level random effects and adjusted population weights)

<i>Predictors</i>	Death Toll (State)				COVID-19 Cases (State)				Direct Exposure			
	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>p</i>
(Intercept)	-.11	.06	-.22 – .00	.055	.37	.09	.20 – .54	<.001	-.48	.02	-.52 – -.44	<.001
Wave	-.10	.04	-.18 – -.02	.016	-.29	.06	-.42 – -.17	<.001	.18	.02	.14 – .23	<.001
Party (1 = Republican)	.48	.08	.32 – .64	<.001	-.49	.12	-.73 – -.24	<.001	1.11	.03	1.05 – 1.17	<.001
Party × Wave	.11	.06	-.01 – .22	.082	.42	.10	.22 – .61	<.001	-.47	.03	-.53 – -.41	<.001
Deaths (log)	-.10	.01	-.11 – -.08	<.001								
Deaths (log) × Wave	.04	.01	.03 – .05	<.001								
Deaths (log) × Party	.20	.01	.17 – .22	<.001								
Deaths (log) × Party × Wave	-.07	.01	-.09 – -.06	<.001								
Cases (log)					-.11	.01	-.13 – -.09	<.001				
Cases (log) × Wave					.04	.01	.03 – .06	<.001				
Cases (log) × Party					.23	.01	.20 – .26	<.001				
Cases × Party × Wave					-.08	.01	-.10 – -.06	<.001				
Direct Exposure (1 = Yes)									-.02	.03	-.09 – .05	.543
Exposure × Wave									.02	.04	-.06 – .10	.570
Exposure × Party									-.00	.06	-.12 – .11	.955
Exposure × Party × Wave									.04	.07	-.09 – .18	.547

EXPOSURE TO COVID-19 AND PARTISAN RESPONSES

Observations	4845	4845	2968
Marginal R^2 / Conditional R^2	.285 / .797	.285 / .799	.405 / .779

EXPOSURE TO COVID-19 AND PARTISAN RESPONSES

Table 4. Multilevel linear mixed models predicting support for Extreme Measures by waves, party identity and type of exposure to COVID-19 (controlling for individual and state-level random effects and adjusted population weights)

<i>Predictors</i>	Death Toll (State)				COVID-19 Cases (State)				Direct Exposure			
	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>p</i>
(Intercept)	.02	.06	-.10 – .15	.713	-.14	.09	-.32 – .04	.136	.27	.05	.18 – .36	<.001
Wave	-.01	.05	-.11 – .08	.774	-.01	.07	-.15 – .14	.932	-.07	.02	-.10 – -.03	<.001
Party (1 = Republican)	.27	.09	.10 – .44	.002	.83	.13	.57 – 1.08	<.001	-.63	.07	-.76 – -.49	<.001
Party × Wave	-.15	.07	-.29 – -.01	.032	-.36	.11	-.58 – -.14	.002	.17	.03	.12 – .22	<.001
Deaths(log)	.04	.01	.02 – .05	<.001								
Deaths(log) × Wave	-.01	.01	-.02 – .00	.185								
Deaths(log) × Party	-.11	.01	-.14 – -.09	<.001								
Deaths(log) × Party × Wave	.04	.01	.02 – .06	<.001								
Cases(log)					.04	.01	.02 – .06	<.001				
Cases(log) × Wave					-.01	.01	-.02 – .01	.279				
Cases(log) × Party					-.13	.01	-.16 – -.10	<.001				
Cases × Party × Wave					.05	.01	.03 – .07	<.001				
Direct Exposure (1 = Yes)									.19	.09	.01 – .37	.036
Exposure × Wave									-.07	.03	-.14 – -.00	.042
Exposure × Party									-.11	.16	-.42 – .20	.491

EXPOSURE TO COVID-19 AND PARTISAN RESPONSES

Exposure $\times$ Party $\times$ Wave			.07	.06	-.05 – .18	.278
Observations	4845	4845	2968			
Marginal R^2 / Conditional R^2	.059 / .611	.015 / .776	.126 / .733			