NOT ALL MOTIVATED REASONING IS PARTISAN: PERCEIVED VULNERABILITY TO INFECTIOUS DISEASE AND PERCEIVED HARMFULNESS CONDITION THE INFLUENCE OF PARTISANSHIP ON REASONING ABOUT COVID 19

Abigail L. Cassario

A thesis submitted to the faculty at the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Arts in the Department of Political Science in the College of Arts and Sciences

Chapel Hill
2021

Approved by:

Pamela J. Conover

Timothy J. Ryan

Marc J. Hetherington

ABSTRACT

Abigail L. Cassario: Not All Motivated Reasoning is Partisan: Perceived Vulnerability to Infectious Disease and Perceived Harmfulness Condition the Influence of Partisanship on Reasoning About COVID 19
(Under the direction of Pamela J. Conover)

Citizens are biased information processors, perceiving the world in line with cues sent to them by elites. As such, citizens might be deficient in their ability to hold elite agents responsible for policy failures. In this paper, I argue that an exception to this general pattern is when citizens' personalities introduce accuracy goals into their reasoning and thus lead them to hold elites accountable. I test this argument in the context of the COVID 19 pandemic in a diverse sample of N = 1885 Americans, and a two-wave panel study of n = 650 Americans. I find that a personality construct, Perceived Vulnerability to Infectious Disease (henceforth PVD), structures partisans' perceptions of how harmful COVID 19 is, with those high in PVD being more likely to accept evidence that the disease is deadly. The effect is particularly strong for Republicans, for whom a factor of PVD moderates the effect of partisanship on perceptions of virus harmfulness. Harm perceptions in turn led voters to attribute responsibility for the crisis to political elites.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

COVID 19	Refers to the coronavirus that caused the 2019- 2021 pandemic
GA	Refers to the Germ Aversion factor of Perceived Vulnerability to Infectious Disease.
PI	Refers to the Perceived Infectability factor of Perceived Vulnerability to Infectious Disease.
PVD	Refers to the personality construct Perceived Vulnerability to Infectious Disease.

CHAPTER 1: INTRODUCTION

Citizens are not especially well versed in politics and most reason with partisan bias (Converse 1964; Jerit et al. 2006; Delli Carpini and Keeter 1993; Nyhan and Reifler 2010; Gaines et al. 2007; Bartels 2002; Taber and Lodge 2006). This combination can potentially undermine the citizenry's ability to hold elected officials responsible for their successes and failures in office. Intense periods of polarization, when partisans are especially motivated to reason with bias (e.g. Druckman et al. 2013; Hetherington and Rudolph 2015), further erode citizen ability to enforce accountability. Although Americans' response to COVID-19 would appear to be a perfect illustration of the perils of hyper-partisanship, I argue the reality is more complicated.

It is true that, despite over 200,000 dead from the virus at the time of the election, partisans differed substantially in their appraisal of President Trump,[1] but it is also noteworthy that twice as many Republicans disapproved of Trump's handling of Covid-19, specifically, then of his job performance overall (Bycoff et al. 2020). Furthermore, an even higher percentage of Republicans failed to reflect Trump's rhetoric about the virus, which consistently minimized its health threat (Roberts 2020). In June, a quasi-representative sample of American voters revealed that more than 60 percent of Republicans reported being either "somewhat" or "very" concerned about becoming seriously ill from COVID 19, and most acknowledged that the virus posed a

[1] In August, for example, 74 percent of Republicans indicated that they approved of his handling of the crisis, compared with 5 percent of Democrats (Kirzinger et al., 2020).

much more serious health threat than a cold or the flu.[2] In fact, over the course of 2020, a plurality of Republicans consistently expressed such high levels of concern despite strong partisan motivation to perceive things differently.

I argue that the pattern of who did and did not fall victim to partisan biases in reasoning about COVID is systematic and that the current hyper-focus on partisanship *alone* as the chief predictor of citizen response to the pandemic is not entirely warranted. My reasoning starts from the premise that not all motivated reasoning is partisan in nature. While some citizens will have directional (e.g. partisan) goals in their reasoning about COVID-19, others will have accuracy goals (Kunda 1990; Ditto and Lopez 1992; Taber and Lodge 2006). Indeed, when people perceive the issue in question may have life or death consequences, the number of people favoring accuracy over partisanship ought to be substantial. Moreover, I argue that partisans' personalities help explain who has accuracy goals in their reasoning about the coronavirus.

Which specific personality constructs are likely to promote accuracy goals? In addressing this question, it is important to note that not everyone responds to health concerns the same way. Whether it is the seasonal flu, the common cold, or a stomach bug, some people see themselves as invulnerable while others believe they are magnets for viruses and bacteria. Noting this pattern, scholars in the field of personality psychology have determined that there are relatively stable individual level characteristics relating to one's sensitivity to disease threats (Tybur et al.

[2] One question asked respondents to respond to the question, "Americans disagree about whether the COVID virus poses a serious health risk to those who catch it or whether it is no more harmful than the flu or a cold. How much do you think most people who catch the virus suffer because of their infection?" on a scale ranging from 1: Not noticeably to 10- Serious illness, with risk of death. Another question asked respondents, "How concerned are you that you will become seriously ill from the coronavirus outbreak?" Subjects rated their concern on a Likert scale ranging from 1- Very concerned to 4- Not at all concerned.

2009; Oosterhoff et al. 2018; Fan and Olatunji 2013; MacSwain et al. 2009). My focus here is on Perceived Vulnerability to Infectious Disease (PVD), which is related to general health anxiety and "disgust sensitivity" (Duncan et al. 2009). I posit that PVD, which emanates from outside the realm of politics (e.g. Wang et al. 2018) ought to be vital to determining which Americans' will possess accuracy goals in reasoning about the pandemic in addition to directional, partisan goals. Those high in PVD, compared to those who are lower in PVD should be more likely to perceive the coronavirus as harmful, in line with scientific evidence. Likewise, the effect of PVD should be particularly strong for Republicans, for whom directional, partisan goals in reasoning would encourage them to discount the scientific evidence as to the virus' seriousness.

Finally, this chain of relationships ought to lead to judgments of political responsibility, even against a citizen's favored party leaders. When innocent victims are perceived as being harmed (as is the case with the coronavirus when the virus is perceived as harmful), people are disposed towards holding an agent responsible for causing said harm (e.g. Gray et al. 2012; Schein and Gray 2018). I argue that when harm is perceived as a result of accuracy goals in reasoning, partisans should be more likely to hold party elites responsible for the harm caused by their policies (Kunda 1990; Redlawsk et al. 2010).

I test this theory both using a diverse sample of American voters conducted in June 2020 (N=1885) and a panel study of American citizens conducted in June 2020 and late October 2020 (n=650). Consistent with my theory, I find that PVD shapes partisans' perceptions of how harmful the virus is. Also, in line with my theory, PVD's Perceived Infectability (PI) factor moderates the impact of partisanship on harm perceptions. In fact, Republicans who score high in PI are as likely to say they perceive the virus as deadly (in line with scientific evidence) as

Democrats. Next, I show that perceptions of harm are integral in shaping blame attributions. Those who perceive the virus as more harmful are also more likely to attribute political blame to the president and other elites. Finally, consistent with the motivated reasoning literature, PVD was associated with increases in perceived harmfulness over time, such that PVD predicted which voters would adjust their subjective perceptions of harm upwards, bringing them closer to objective evidence (e.g. Kunda 1990; Ditto and Lopez 1992; Redlawsk et al. 2010).

In what follows, I further explicate the psychology undergirding the theory presented here. I next, discuss the methods used to test specific hypotheses associated with the theory, and finally present results and expand upon their implications. In sum, this paper demonstrates that the point at which accuracy wins out over directional goals in reasoning varies at the individual level and this variation is in part structured by voters' personalities. When led by their personalities as well as partisanship to accurately perceive the virus as harmful, voters are inclined to attribute blame for the crisis to political actors.

CHAPTER 2: THE ROLE OF PARTISANSHIP IN STRUCTURING VIRUS PERCEPTIONS

Reasoning is not purely "cognitive" in nature, motivated solely by a desire to make correct conclusions based on available data. Instead, affectively laden directional goals can influence information processing, and, in turn, the conclusions people reach (e.g. Kunda 1990). Kunda (1990) identifies two main motivations in reasoning. *Directional* goals refer to a desire to reach conclusions that people, *a priori*, want to reach, while *accuracy* goals venerate reaching the correct conclusion (Kunda 1990; Kruglanski 1980). When it comes to political thinking, partisanship tends to provide the affect that underlies directional goals (e.g. Kraft et al. 2015, Taber and Lodge, 2006).

Critically, accuracy driven, and directionally driven processing are qualitatively different processes. Directional goals — the desire to reach a particular outcome following a reasoning task — influences the interpretation of information as well as the memory search that people engage in to support their conclusions. People employing directional goals are likely to search for information from memory and interpret new information as to allow them to justify conclusions *as if* they are unbiased. In contrast, those employing accuracy goals engage in cognitive strategies associated with accurate interpretation of information. Accuracy and directional goals are not necessarily mutually exclusive (Petty and Cacioppo 1986). When circumstances trigger both directional and accuracy goals, people tend to process information in a way similar to those whose only goal was accuracy (see Kunda, 1990; Petty and Cacioppo, 1986).

Accuracy and directional goals need not produce different conclusions. Directional goals can push people toward accurate assessments, provided the directional goal is consistent with reality. Let us stipulate that schools are woefully underfunded. A liberal Democrat who is exposed to a message advocating increased educational spending may process the message with directional goals solely in mind and yet still reach the accurate conclusion that more spending is warranted, just as a person with only accuracy goals would. The ultimate outcome of the reasoning task does not always vary as a function of the cognitive strategies employed for all individuals, who have varying motivations and varying information available in memory. In the context of the COVID 19 pandemic, it is likely that many Democrats concluded that the coronavirus is deadly not because they were motivated by accuracy goals, but rather because in party elites established that their desired conclusion was that the virus *is* harmful (see Bisgaard and Slothus 2018). I do not mean to suggest that Democrats *wanted* the Coronavirus to be harmful, rather that partisan directional goals in information processing led many to perceive the virus as harmful because doing so was in line with their affectively driven partisan predilections because the Republican President was arguing otherwise.

Because Republican politicians, most notably President Trump tend to downplay the threat caused by the virus, often even suggesting the virus is no worse than the flu (Shabad 2020), a Republican's directional goal would be to reach the conclusion that Covid 19 is not harmful. Unlike for Democrats, for whom accuracy and (partisan) directional goals in reasoning about the Coronavirus lead to the same outcome, Republicans' accuracy, and directional goals in reasoning lead to disparate conclusions. Accuracy goals result in the conclusion that the virus is serious, whereas directional goals lead to the conclusion the virus is not particularly harmful.

Evidence in support of this mechanism is widespread in the extant literature. Previous studies on partisan attitudes about the Coronavirus indicated that Republicans overall perceived the virus as less serious a threat than Democrats (e.g. Alcott 2020), with Republicans and Independents showing more variability in their perceptions than Democrats (Alcott, 2020; Gadarian et al., 2020). This is consistent with the notion that directional and accuracy driven goals led Democrats to the same conclusion, but that for Republicans, these two goals in reasoning drove perceptions in opposite directions.

Based on the theory presented here, I propose that the impact of partisan motivated reasoning on rank-and-file voters' perceptions of COVID 19 harmfulness should be as follows:

H1: Overall, Democrats will perceive the virus as more harmful, and Republicans will see the virus as less harmful.

CHAPTER 3: ACCURACY GOALS AND HARM PERCEPTIONS

It is a well-established scientific fact that COVID 19 is much more harmful than a cold or the flu (Maragakis 2020). Moreover, as the pandemic has continued, the ability of Republicans in particular to use information in a manner consistent with directional goals has been constrained. Indeed, even *Fox News* host Tucker Carlson acknowledged the seriousness of the virus in June 2020 (Bursyztyn et al. 2020). Near capacity hospitals and ICUs throughout the country make believing the virus is harmless more difficult.

Directional goals in partisan motivated reasoning are undergirded by four cognitive processes, namely confirmation bias, prior attitude bias, disconfirmation bias, and polarization bias (Taber and Lodge 2006). Implicit here is that *individuals vary* in their ability to engage in these cognitive strategies. I argue that this individual level variation is systematic, and in part structured by partisan's personalities.

Some individuals perceive themselves to be susceptible to infectious diseases, while others feel they are invulnerable. Noting this variation, personality psychologists have long posited that relatively stable, meaningful individual differences exist with regard to perceived susceptibility to infectious disease. Early researchers identified constructs such as "disgust sensitivity," believed to be an evolved tendency towards to disease threats (e.g. Navarrete and Fessler 2006; Haidt et al. 1994; Olatunji et al. 2007; Schaller and Park 2011; Schaller 2015). Although the construct proved useful, its measurement and theoretical grounding proved

problematic, as the stereotypically "disgusting" stimuli scholars used to construct their measures failed to relate to disease threats in practice (Duncan et al. 2009).

Believing that individual differences in perceived susceptibility to disease were meaningful, but poorly measured, Duncan and her colleagues (2009) developed the construct Perceived Vulnerability to Infectious Disease (henceforth PVD), which they conceptualize as "beliefs about personal susceptibility to the transmission of infectious disease and emotional discomfort in the presence of potential disease transmission (2009, 541)." The construct is comprised of two distinct but moderately correlated factors. The first factor, Germ Aversion (GA), captures the *affective* discomfort that accompanies realistic disease threats, and is more closely related to disgust sensitivity (e.g. Haidt et al. 1994; Olatunki et al. 2007; Navarrete and Fessler 2006). The second factor, Perceived Infectability, is more closely related to the dispositional trait of Neuroticism and constructs such as health anxiety. It encompasses *beliefs* about one's susceptibility to infectious disease (e.g. Lucock and Morley 1996; Pilowsky 1967). Notably, to capture the construct Duncan and her colleagues (2009) use a measure comprised of items that correspond to actual infectious disease threats, rather than stereotypes.

Neither factor of PVD is *directly* related to partisanship in the US context scholars have argued that PVD should become *politically relevant* in the presence of a realistic disease threat in the environment (e.g. Wang et al. 2018). I argue that PVD has become politically relevant in the context of the COVID 19 pandemic by creating the presence of accuracy goals in reasoning about COVID harmfulness for those high in the construct. These accuracy goals in turn impede the ability of partisans, especially Republicans, to engage in the cognitive strategies necessary for directional goals in reasoning to prevail. In short, PVD makes partisans feel as though the stakes of their correct reasoning about COVID is higher, and thus those partisans high in PVD

are more likely to have accuracy goals win out in their reasoning. For Republicans, this effect should be particularly pronounced as partisan directional and accuracy goals in reasoning in this context lead to disparate conclusions. Based on this logic, I posit:

H2a: PVD will shape perceptions of COVID 19's harmfulness.

H2b: PVD will moderate the effect of Republican identity on perceiving harm.

CHAPTER 4: AFFECTIVE TIPPING POINTS

Throughout the course of the pandemic, new information has come to light about the virus and its effects on its victims. For instance, early in the pandemic, scientists and laypeople alike thought the virus was typically associated primarily with fever and dry cough. Later, it became apparent that the virus was associated with a range of symptoms ranging from loss of taste and smell to severe cognitive impairment (e.g. Moein et al. 2020; Morley 2020). Moreover, while initially it was thought that the victims that recover from COVID recovered fully and had some immunity to the virus, later it was found that many COVID survivors suffered from debilitating long-term symptoms after they had cleared the virus, and numerous reports emerged of people contracting the virus more than once (Torres et al. 2020).

This new information, which became widely publicized during the fall of 2020, as our understanding of the disease improved, paints the virus in a more threatening light. This then begs the question, if partisan's directional goals in reasoning are limited by their ability to construct a reasonable justification for directional conclusions, will some voters, namely those high in disease threat sensitivity, update their views of COVID in light of the new information (e.g. Kunda 1990; Redlawsk et al. 2010)? Following the logic of Kunda's (1990) original argument, they should. She asserted that people are not at liberty to believe whatever they want to believe and are limited by their ability to construct reasonable justifications for their beliefs considering the information they possess, a task that should be harder for partisans higher in PVD.

Applied to partisan motivated reasoning, David Redlawsk and his colleagues (2010) explored whether there comes a point at which partisans encounter enough contradictory information that they begin to update their stances in line with the evidence. And they find that this point does indeed exist. At first, their subjects doubled down on their initial attitudes in light of contrary evidence (e.g. Kunda, 1990; Taber and Lodge, 2006); but once enough contradictory information was presented, subjects began to update their attitudes in line with that information (Redlawsk et al., 2010). These authors termed the point at which people began to update their initial attitudes the "affective tipping point[3]."

I argue that individuals vary in the point at which they reach their "affective" tipping points and begin to update positions in line with evidence. Once again, I posit that this variation is systematic and determined in part by contextually relevant personality constructs. Like above, I argue that individuals higher in PVD should reach their affective tipping points sooner, because explaining away information regarding the severity of the virus to construct a justification for inaccurate beliefs is more difficult for those who feel vulnerable to infectious disease threats. Again, as Democrats also have partisan motivations to perceive the virus as seriously harmful, I argue that the effect of PVD should be stronger for Republicans compared to Democrats, who if they are lower in PVD could even double down in their original attitudes. Based on this logic I pose the following hypotheses:

H3a: As the pandemic progresses, partisans who are high in PVD will reach their affective tipping points sooner than those who are lower in PVD.

[3] I use the term "affective tipping point" to be consistent with the existing literature, but I am agnostic to the role of affect and discrete emotion concepts in this tipping point as the theoretical framework (e.g. Marcus et al., 2000) upon which the construct was built has been drawn into question in the past decade (see Barrett, 2017).

H3b: The effect will be particularly pronounced for Republicans.

CHAPTER 5: HARM PERCEPTIONS AND ELITE ACCOUNTABILITY

Why focus on subjective perceptions of COVID 19's *harmfulness* as opposed to other beliefs surrounding the virus? The answer lies in the role that perceiving harm and suffering plays in the activation of a basic moral prototype in which people seek to hold an agent accountable for the harm they perceive (e.g. Gray and Wegner 2009; 2010; 2011; Gray et al. 2012; Gray et al. 2014; Schein and Gray 2014; 2018). So, in the context of COVID 19, people who contract the virus are perceived as "*suffering* patients" if and only if the virus is perceived as posing the threat of serious harm to its victims. Crucially, once the virus is perceived as harmful, partisans will be inclined towards holding an agent responsible for the harm caused by the virus. Based on this logic, I posit:

H4a: As harm perceptions increase, rank and file partisans will attribute more blame for the crisis to political actors.

H4b: Republicans who perceive more harm will attribute more blame for the crisis to Trump compared to Republicans who perceive less harm.

CHAPTER 6: STUDY 1

Data and Methods

Study one is a cross sectional investigation testing the early effects of partisan motivated reasoning on harm perceptions and in turn, the influence of harm perceptions on blame attribution across partisan lines. In particular, this study tested hypotheses 1, 2a, 2b, 4a, and 4b. Hypotheses were tested in a diverse national sample (N = 1885) recruited through Qualtrics panels to meet national census benchmarks on demographic variables. Data were collected in early June 2020. The study was one of several included in a larger collection of studies fielded by researchers at (blinded for review) intended to understand the role of partisanship in shaping voters' responses to the COVID 19 pandemic.

All respondents completed measures of standard demographic control variables as well as standard measures of partisanship. Specific wording of the partisanship and control variables is provided in Appendix A. All individuals included in the present analyses also completed a brief measure of PVD, a measure of COVID 19 harm perception, and were given the choice to ascribe a degree of blame for the COVID 19 pandemic to a number of elite agents.

The PVD measure employed here was shortened from its original form to include three highly loading items that captured the construct of interest in the modern context (e.g. an item regarding phone booths was discarded because it was no longer contextually relevant). Three items were selected to capture PI:

- In general, I am very susceptible to colds, flus, and other infectious diseases."
- "My immune system protects me from most illnesses that other people get."
- "If an illness is going around, I will get it."

Respondents rated their agreement with these statements on a 7-point scale ranging from 1- Strongly agree to 7- Strongly disagree. Item number 2 was reverse coded (α= .65). Three items were selected to capture GA:

- "When possible, I avoid using public restrooms because of the risk I may catch something from the previous user."
- "I dislike wearing used clothes because you do not know what the last person who wore it was like."
- "I do not like to use a pencil someone else has obviously chewed on."

Again, respondents rated agreement with the statements on the same 7-point scale (α = .65)[4].

In line with the previous literature (Duncan et al. 2009; Makhanova and Shepherd 2020) the two factors of PVD were slightly to moderately correlated with each other (r = .19). Neither factor showed much of a relationship with partisanship in this sample (r PI/ Republican = -.07, r GA/ Republican= .004).

Once they completed the PVD measure, respondents were later posed the question, "Americans disagree about whether the COVID virus poses a serious health risk to those who catch it or whether it is no more harmful than the flu or a cold. How much do you think most people who catch the virus suffer because of their infection?" Respondents then rated their positions on a thermometer ranging from 1- Not noticeably to 10- Serious illness with risk of death, with a scale midpoint of 5- Like a bad flu (mean = 7.31, sd =1.94).

[4] Though alphas were lower than standard, given the brief three item nature of the measure for each factor, and previous guidance regarding deflation of alpha on brief measures (see Schmitt, 1996) I proceeded as usual with analyses.

Finally, respondents were given the opportunity to indicate whether they held a number of actors responsible for the harm caused by the virus. A set of six potential targets commonly given as scapegoats by out-party elites and media organizations were listed, as well as a seventh option subjects could select indicating that they did not hold anyone responsible for the harm caused by the virus. The six potential targets were the CDC, governors who refused to order social distancing measures in their states, people who refuse to social distance, US President Donald Trump, Chinese President Xi, and US President Barack Obama. Once subjects indicated whether they thought an agent bared responsibility for the crisis, they were led to a second question in which they indicated how much responsibility they felt was attributable to each selected actor on a scale ranging from zero percent of the responsibility to one hundred percent. Responsibility was not constrained to add to one hundred across targets as people lack the numeracy to limit how much responsibility they attribute to various agents based on the rules of percentages in everyday life. All targets were included in the analyses presented here aside from President Obama as too few subjects attributed blame for the crisis for a model to be adequately powered (though results are presented in Appendix B in the interest of full disclosure).

Results and Discussion

Results of the model are presented in Figure 1 below and full model results including demographic controls are presented in Appendix B. Overall, results supported the mechanism proposed here. Regardless of partisanship, the Germ Aversion factor of PVD had a significant effect on COVID harm perception (β GA Democrat = .07, $p < .001$; β GA*Independent = 0, $p > .05$; β GA*Republican = .03, $p > .05$). Moreover, in line with hypothesis 2 b the Perceived Infectability factor of PVD differentially impacted perceived harmfulness by party (β PI Democrat = .02 $p > .05$; β PI*Republican = .09, $p < .001$; β PI*Independent = .07 $p < .05$). As

displayed in Figure 1, going from the scale minimum (three) to the scale maximum (twenty-one) of PI exerted a stronger influence on perceptions of COVID harmfulness for Republicans (predicted value at scale minimum = 5.46, predicted value at scale maximum = 7.48) than for Democrats (min = 6.81, max = 7.21) and Independents (min = 5.7, max = 7.38). The influence of the Germ Aversion factor is also presented in Figure 1. Though partisan differences in the influence of Germ Aversion appear in the predicted pattern, Germ Aversion does not exert a significantly different impact on perceived harmfulness by party.

Figure 1: PVD Exerts a Stronger Influence on the Harm Perceptions of Republicans

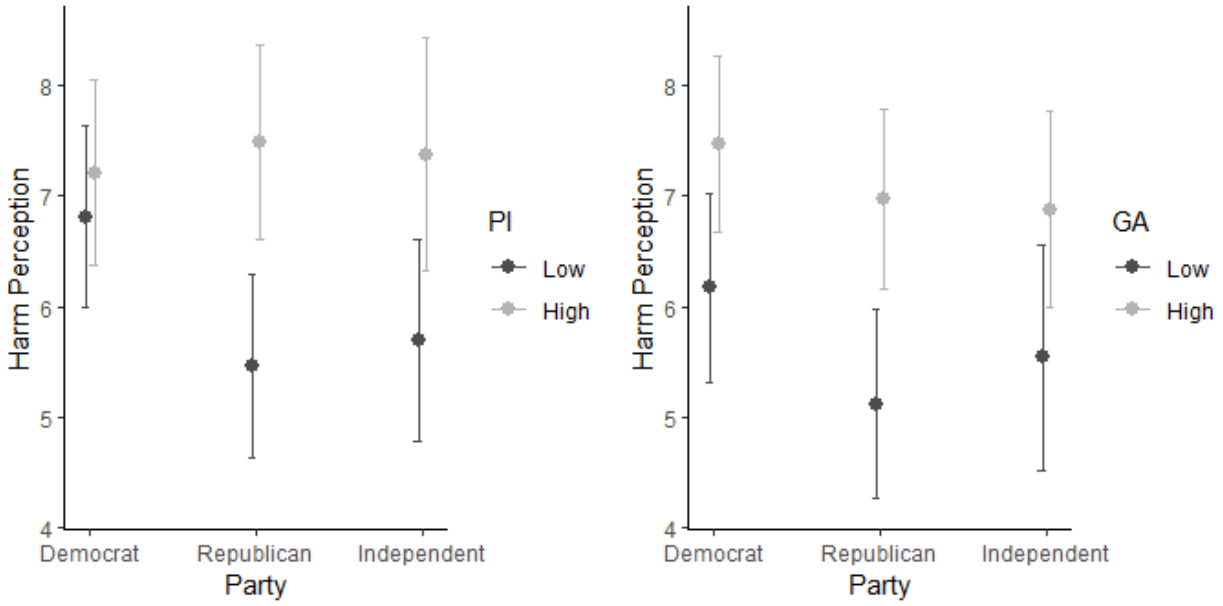

Figure one displays predicted harm perceptions by party at the scale minimum (three) and scale maximum (twenty-one) of Perceived Infectability (PI) and Germ Aversion (GA). Predicted harm perceptions were obtained with model 1. Whiskers represent 95 percent confidence intervals for the estimates. Full results of model one including ordinal control variables are provided in Appendix B.

A second set of linear regression models were run to test hypothesis 4a. The DV in the second set of models was the percentage of responsibility attributed to each elite agent in the question given above. The set of models illuminate the impact of harm perceptions on attributions of responsibility. Results of the models are presented in Figure 2 below as well as the table in Appendix C. Controlling for relevant covariates including partisanship, across all agents' subjects could blame, perceiving the virus as harmful was a significant predictor of attributing more responsibility to the agent in question, in line with the hypothesis posed here (β Harm Trump = 2.73, $p <. 001$; β Harm Xi/China = 1.16, $p < .01$; β Harm CDC = 2.51, $p <.01$; β Harm Governors = 3.56, $p <.001$; β Harm Those who do not social distance = 3.27, $p < .001$). Importantly as indicated by the standardized coefficients (Gelman, 2008) presented in Figure 2,

perceiving harm is consistently at least as strong of a predictor of attributing blame to an agent than partisanship.

Figure 2: Perceiving Harm Predicts Attributing More Responsibility

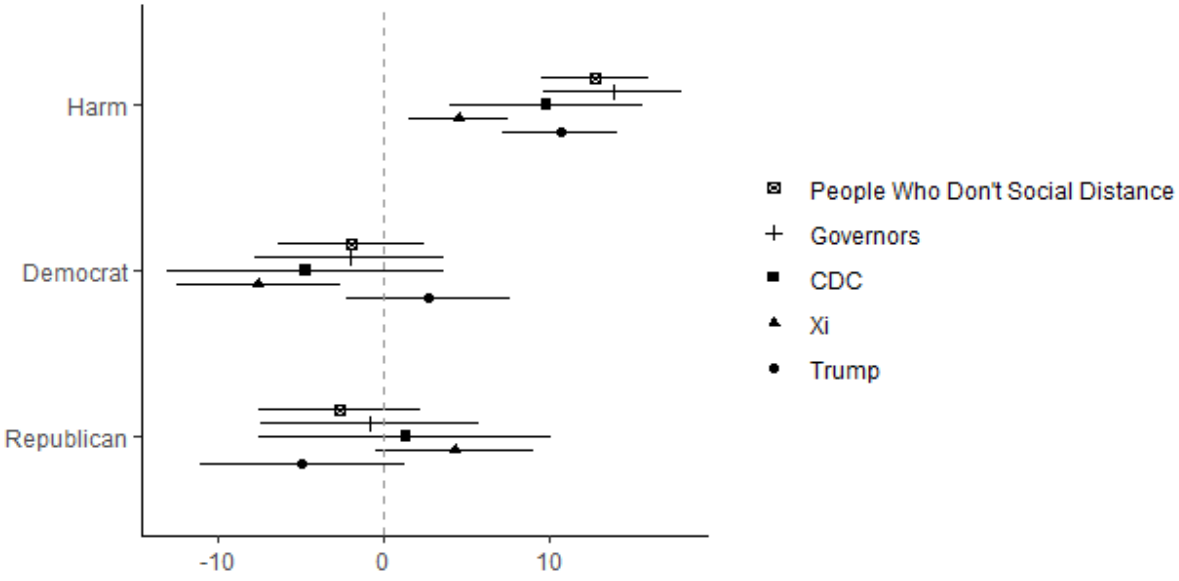

Figure Two displays regression coefficients for variables of interest in the five models run to test hypothesis 4a. Harm was standardized in line with Gelman (2008) by dividing by two times the standard deviation of the variable for visual comparison with the binary partisanship variables. Unstandardized coefficients are presented in the text. Full model results are provided in table form in Appendix C.

The main model of interest in testing hypothesis 4b was a model investigating the influence of perceiving harm on blaming President Trump for the pandemic by party. Results are presented in Table 1 below as well as Figure 3. Again, in line with hypotheses, the influence of harm on attributions of blame to Trump was greater for Republicans (β Harm*Republican = 3.37, $p < .01$) than Democrats (β Harm Democrat = 2.30, $p < .001$). Party alone was also a significant predictor of blaming Trump for the crisis, with Republicans (β Republican = -36.61, $p < .01$) attributing less blame for the crisis to Trump than Democrats (Intercept = 68.73). Results indicate that though party is an important predictor of attributing blame to Trump, so too are

harm perceptions, especially for those who have been led by their personalities to overcome partisan biases in reasoning and accurately perceive the virus as harmful.

Figure 3: Republicans Who Perceive COVID as Harmful Attribute More Blame to President Trump than Those Who Perceive Less Harm

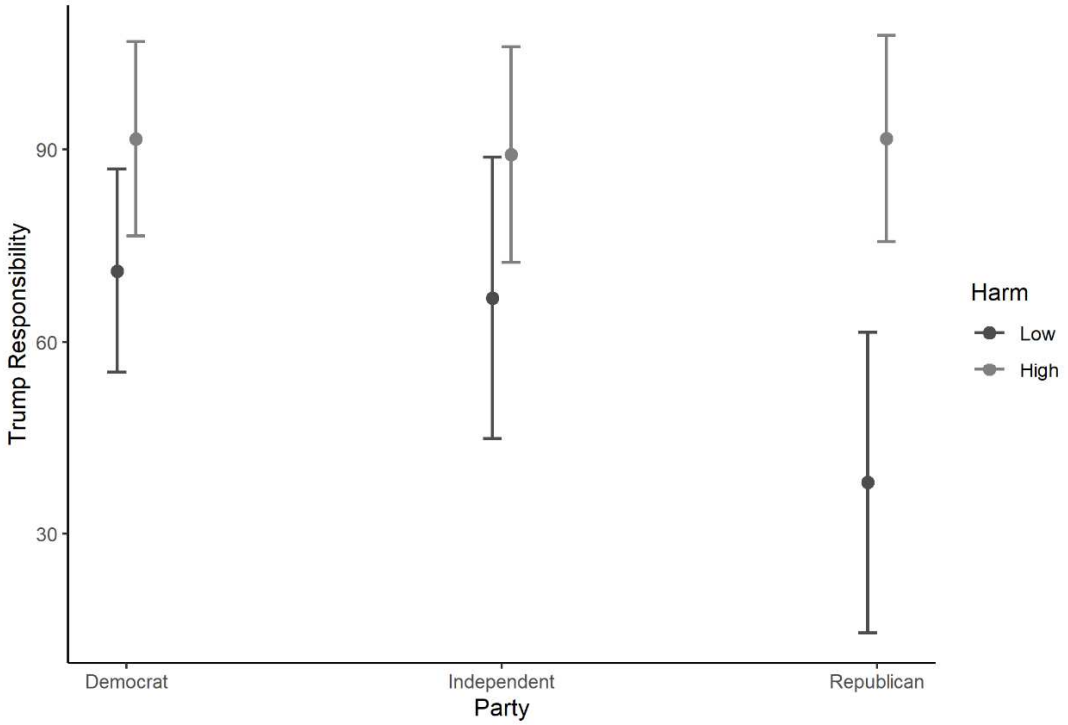

Figure three displays predicted attributions of responsibility to Donald Trump by party depending on the amount of harm perceived.

Table 1: Multiple Regression Results for Harm Perceptions and Degree of Responsibility Attributed to Trump

Variable	**Coefficient (Standard Error)**
Intercept (Baseline Democrat)	68.73 (8.113)
Independent	**-4.41 (10.73)**
Republican	**-36.61 (11.42)****
Harm	**2.30 (.50)*****
Independent*Harm	**.20 (1.41)**
Republican*Harm	**3.37 (1.42)****
Multiple R Squared: .12	Adjusted R Squared: .08
N: 797	Significance: * = p <.05, ** = p < .01, *** = p < .001

Table one above displays regression results for those citizens who chose to attribute some degree of blame for the COVID 19 crisis to Donald Trump (note, participants were not required to attribute blame to Trump). The full model including categorical demographic control variables is provided in the Appendix D.

In sum, study one provides evidence in support of hypotheses 1, 2, and 4. These findings demonstrate that though partisan perceptual biases are vital in shaping subjective perceptions of the world, other psychological characteristics can moderate their influence. There are important instances where contextually relevant personality variables condition the effect of partisanship on reasoning. In the following section, I build on these findings by examining panel data relating to harm perceptions over time. As constructing justifications in the face of competing evidence should be more difficult for those high in PVD, I argue that PVD should predict adjusting harm perceptions upwards over time, once again signaling the influence of *contextually relevant* personality variables on motivated reasoning processes. Again, I argue that the influence of PVD should be particularly meaningful for Republicans, whose partisan predilections should lead

them to double down in their prior beliefs in the face of competing evidence (Taber and Lodge, 2006).

CHAPTER 7: STUDY 2

Data and Methods

In this study, harm perceptions were examined across two waves of a panel study consisting of a diverse sample of American voters (n = 650). Wave 1 was conducted early in the pandemic, in early June 2020; wave 2 was conducting at the beginning of the pandemic's, second, and more severe fall wave in early November 2020. The panel study was conducted by researchers at (blinded for review), again through Qualtrics panels, to investigate the role of political attachments in structuring COVID-19 beliefs and behaviors. Wave 1 is synonymous with Study 1 above and thus all n = 650 citizens included in this panel investigation were also included in Study 1.

Harm perceptions were assessed with the same ten-point measure used in Study 1 (mean = 7.41, sd = 2.01). Likewise, partisanship, education, income, gender, and race were all measured as they were in Study 1 (see Appendix A for a discussion of measures).

Results and Discussion

Two regression models investigating the role of PVD and partisanship in predicting change in harm perceptions over time were run to investigate hypotheses 3a and 3b. The first model was a first order model with terms for partisanship, PVD, and control variables. The second model included additional interaction terms to test the hypothesized conditional impact of PVD on harm perceptions over time by party.

Results of the first model, with the coefficients for Perceived Infectability and Germ Aversion standardized in line with Gelman (2008) for visual comparison with partisanship, are presented in Figure 4 below. Full model results including coefficients for demographic control variables are provided in the table presented in Appendix E. Partisanship emerged as the strongest predictor of changes in harm perceptions over time such that Republicans (β Republican = -.87, $p < .001$) and Independents (β Independent = -.56, $p < .01$) updated their harm perceptions less overall than Democrats at baseline. More importantly, PVD subscales perform in line with hypothesis 3a: PI resulted in a .06 increase in harm perceptions per one unit change in PI ($p < .01$), whereas GA exerted a smaller, but still significant influence on change in harm perceptions (β GA = .04, $p < .05$). In sum, the model provides support for hypothesis 3a, over time, PVD measured at time 1 predicts updating harm perceptions in line with objective evidence between time 1 and time 2.

Figure 4: The Impact of Partisanship and Perceived Vulnerability to Infectious Disease on the Propensity to Update Harm Perceptions Over Time

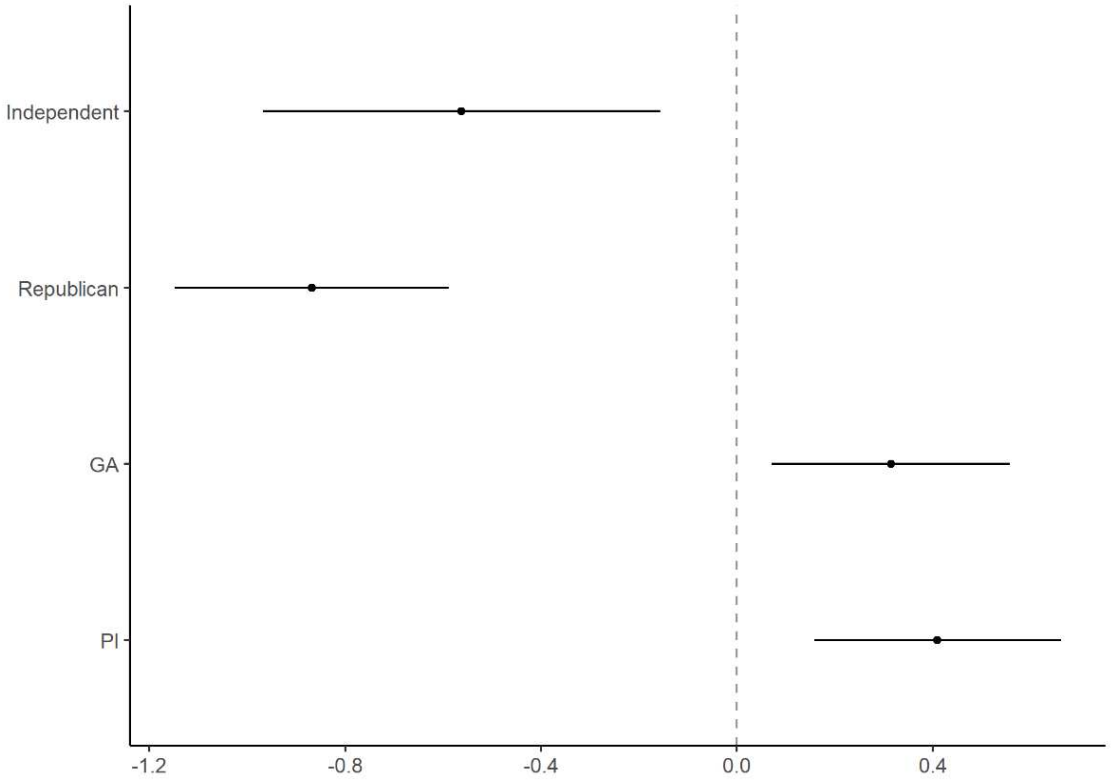

Figure Four displays the coefficients for variables of interest in the first order model conducted to test hypothesis 3a. PVD has again been standardized in line with Gelman (2008) for visual comparison with the binary partisanship variables, though unstandardized coefficients are presented in text. The full model along with demographic controls is provided in Appendix E.

The second model included the addition of PVD by Party interaction terms; PVD should exert a stronger influence on the propensity of Republicans to change their harm perceptions than Democrats, who also possess partisan motivations to update their harm perceptions. The results of the second model are presented in Table 2 below. Partisanship was a strong predictor of change in harm perceptions over time (β Republican = -1.96, $p < .001$; β Independent = - 2.32, $p < .01$). Perceived Infectability and Germ Aversion did not exert a significant influence on the propensity of Democrats to update their harm perceptions (β PI Democrats = .04, $p > .05$; β GA Democrats = -.005, $p > .05$). However, Germ Aversion significantly interacted with partisanship

such that for Republicans, Germ Aversion significantly predicted adjusting harm perceptions upwards in line with emerging evidence about COVID 19 (β GA* Republican = .08, $p < .05$). Other interaction terms with the factors of PVD and partisanship emerged in the hypothesized direction but did not reach statistical significance at a level of $\alpha = .05$ (β PI*Independent = .09, $p > .05$; β Republican*PI = .004, $p > .05$; β GA*Independent = .06, $p > .05$).

Table 2: Republicans High in PVD Are More Likely to Update Harm Perceptions Over Time Compared to Those Low in PVD

Variable	**Coefficient (Standard Error)**
Intercept	2.67 (.94)
Harm Wave 1	.48 (.03)***
Independent	**-2.32 (.76)****
Republican	**-1.96 (.533)*****
GA	**-.005 (.022)**
PI	**.04 (.02)**
Independent*PI	**.09 (.05)**
Republican*PI	**.004 (.04)**
Independent*GA	**.06 (.05)**
Republican*GA	**.08 (.03)***
R squared = .45	Adjusted R Squared = .41
N = 650	Significance: * = p < .05, ** = p <.01, *** = p <.001

Table two displays results for the second order model conducted to test hypothesis 3b. Values in parentheses represent standard errors. The full model including demographic controls is included in Appendix F.

In conclusion, study 2 provides evidence in support of the mechanism articulated here. Over time, PVD predicts the reaching of an affective tipping point, that requires citizens to update their perceptions of COVID harmfulness in line with relevant facts about the virus.

Evidence is also found in support of the hypothesis that PVD exerts a larger influence on the harm perceptions of Republicans, who have partisan, directional motives to double down in their existing harm perceptions in light of contradictory evidence. Though the theory articulated here is agnostic to specific roles for the two factors of PVD in shaping harm perceptions, it is possible that the affective nature of the GA factor (discussed above) was more influential in predicting the point at which Republicans would reach their affective tipping points than the arguably less affectively laden PI factor (see Duncan et al. 2009). Future research investigating the influence of PVD on motivated cognition surrounding the coronavirus pandemic should further explore this relationship (and for further reading on the topic see Makhanova and Shepherd 2020).

CHAPTER 8: DISCUSSION AND CONCLUSION

A key finding in political science is that partisans are largely unable to accurately perceive the objective conditions of the world and hold elites responsible for their policy failures that contributed to those conditions (e.g. Achen and Bartels 2017). Instead, they engage in biased processing of objective conditions in part through partisan motivated reasoning, selecting and interpreting information in line with their partisan predilections (e.g. Kunda 1990; Taber and Lodge 2006; Zaller 1992; Lenz 2013). This process has been only exacerbated by record levels of political polarization (see Druckman et al. 2013; Hetherington and Rudolph 2015).

Using the Coronavirus pandemic of 2020 as a test case, my theory adds a vital caveat to the general pattern depicted above. Across two studies, I demonstrate that though partisanship does shape perceptions of the pandemic (Hypothesis 1), the impact is moderated at the individual level by a contextually relevant personality construct which can lead partisans to perceive objective reality more accurately.

In the context of the COVID 19 pandemic, the personality construct of Perceived Vulnerability to Infectious Disease (Duncan et al. 2009; Makhanova and Shepherd 2020) exerts as strong of an influence as partisanship on perceptions of how harmful the Coronavirus ultimately is (Hypothesis 2a). Moreover, the PI factor of PVD moderates the influence of partisanship on harm perceptions. Indeed, going from the minimum to the maximum on the PI factor of PVD eliminates the influence of being a Republican on COVID 19 harm perceptions (Hypothesis 2b).

Likewise, I find strong evidence across two waves of a panel study, that PVD measured at time one predicts updating COVID harm perceptions at time two. Specifically, citizens higher in PVD are more likely to increase their perceptions of COVID harmfulness over time in line with objective evidence compared to those who are lower in PVD (Hypothesis 3a). This signals that voters who are high in PVD are led by their personalities to reach their affective tipping points, at which perceptions must begin to be updated in line with evidence, sooner than those who are lower in PVD.

Secondly, those who perceive COVID 19 as harmful are more likely to hold political actors responsible for the crisis (Hypothesis 4a). In particular, as Republicans in particular overcame directional goals in reasoning to accurately perceive COVID as harmful, they attributed more responsibility for the crisis to Donald Trump (Hypothesis 4b) for his clear and continued fumbling of the crisis than Republicans who did not perceive COVID as harmful.

This series of findings adds a critical caveat to the literature on politically motivated reasoning and elite accountability: voters can be led by their personalities to be more or less likely to engage in partisan motivated reasoning about an issue. When personality leads them to overcome partisan biases in motivated reasoning regarding harmfulness, partisans attribute blame for crises to political actors (see also Bisgaard, 2015).

Despite finding strong evidence in support of the central claims of this paper: that *contextually relevant* personality variables constrain the influence of partisanship on motivated reasoning, and that accurately perceiving harm can in turn lead rank and file voters to hold elites accountable for their role in crises, a few points of caution are worth mentioning. For one, future work should seek to further explore whether personality constrains motivated reasoning processes in a controlled experimental setting.

Likewise, while the reasoning processes depicted herein are likely domain general, I do test them in a single context: that of the COVID 19 pandemic of 2020-2021. So, future work should seek to expand the theory presented herein to other political events and policy issues. For instance, it is likely that other individual difference level constructs such as *Identification with All Humanity* (e.g. McFarland et al. 2012) would condition the influence of partisanship on motivated cognitive processes about events such as the War on Terror, particularly among Republicans. Similarly, other constructs such as *Belief in a Just World* and *Belief in an Unjust World* might condition the influence of partisanship on perceptions surrounding redistributive economic policies for Democrats and Republicans respectively (e.g. Lerner 1965; 1980; Lench and Chang 2007).

In conclusion, while citizens are certainly not the rational actors depicted in folk theories of democracy, neither are they always single minded partisan motivated reasoners, incapable of accurately perceiving the world and holding elites accountable, depicted in the political behavior literature. I find that at times, personality can influence politically motivated reasoning leading individual citizens to deviate in systematic ways from overarching partisan patterns. Indeed, when personality leads partisans to accurately perceive harm, perceptions of harm can, in turn, lead rank and file partisans to attribute some degree of responsibility to political actors.

APPENDIX A: WORDING OF DEMOGRAPHIC CONTROL QUESTIONS

Please respond to the following questions.

gender How would you describe your gender?

- ○ Male (1)
- ○ Female (2)
- ○ Other (specify) (3) _____

race How would you describe your race or ethnicity?

- ○ White, non-Hispanic (1)
- ○ Black or African American, non-Hispanic (2)
- ○ Latino, Latinx, or Hispanic (3)
- ○ Asian (4)
- ○ American Indian or Alaska Native (5)
- ○ Native Hawaiian or Pacific Islander (6)
- ○ other (7)

edu What is the highest level of school you have completed or the highest degree you have received?

- ○ Less than high school degree (1)
- ○ High school graduate (high school diploma or equivalent including GED) (4)
- ○ Some college but no degree (5)
- ○ Associate degree in college (2-year) (6)
- ○ Bachelor's degree in college (4-year) (7)
- ○ Master's degree (8)
- ○ Doctoral degree (9)
- ○ Professional degree (JD, MD) (10)

income Please indicate your yearly household income.

- ○ Less than $10,000 (1)
- ○ $10,000 - $19,999 (2)
- ○ $20,000 - $29,999 (3)
- ○ $30,000 - $39,999 (4)
- ○ $40,000 - $49,999 (5)
- ○ $50,000 - $59,999 (6)
- ○ $60,000 - $69,999 (7)
- ○ $70,000 - $79,999 (8)
- ○ $80,000 - $89,999 (9)
- ○ $90,000 - $99,999 (10)
- ○ $100,000 - $149,999 (11)
- ○ More than $150,000 (12)

age Please select your age.

- ○ Under 18 (1)
- ○ 18 - 24 (2)
- ○ 25 - 34 (3)
- ○ 35 - 44 (4)
- ○ 45 - 54 (5)
- ○ 55 - 64 (6)
- ○ 65 - 74 (7)
- ○ 75 - 84 (8)

○ 85 or older (9)

pid Generally speaking, do you usually think of yourself as a DEMOCRAT, a REPUBLICAN, an INDEPENDENT, or what?

○ Democrat (1)

○ Republican (2)

○ Independent (3)

○ No preference (4)

○ Other party (specify) (5) _____

lean Do you think of yourself as CLOSER to the Republican Party or the Democratic Party? (if independent selected)

○ Closer to Republican (1)

○ Closer to Democratic (2)

○ Neither (3)

APPENDIX B TABLE B-1: FULL RESULTS FOR MODEL 1

Variable	Coefficient (Std. Error)
	Model 1
(Intercept)	5.73 ***
	(0.48)
Independent	-1.36 *
	(0.55)
Republican	-2.05 ***
	(0.36)
Black	0.21
	(0.14)
Hispanic/Latinx/Latino	0.48 ***
	(0.13)
Asian	0.28
	(0.17)
American Indian or Alaska Native	0.08
	(0.55)
Native Hawaiian or Pacific Islander	0.77
	(1.27)
Other	0.28
	(0.38)
Female	0.27 **
	(0.09)
Other gender	2.65
	(1.84)

$10,000-19,999	0.49
	(0.26)
$20,000-29,999	0.59 *
	(0.25)
$30,000-39,999	0.35
	(0.25)
$40,000-49,999	0.33
	(0.25)
$50,000-59,999	0.39
	(0.26)
$60,000-69,999	-0.01
	(0.26)
$70,000-79,999	0.53 *
	(0.26)
$80,000-$89,999	0.32
	(0.28)
$90,000-99,999	0.22
	(0.27)
$100,000-$149,999	0.15
	(0.24)
$150,000 and up	0.15
	(0.25)
High school or equivalent	-0.29
	(0.32)
Some college	-0.20

	(0.32)
Associate’s degree	-0.26
	(0.36)
Bachelor’s degree	-0.37
	(0.33)
Master’s degree	-0.11
	(0.34)
Doctoral degree	0.13
	(0.48)
Professional degree	-0.21
	(0.42)
25-34	0.16
	(0.18)
35-44	0.37 *
	(0.18)
45-54	0.23
	(0.18)
55-64	0.51 **
	(0.18)
65-74	0.87 ***
	(0.18)
75-84	1.07 ***
	(0.24)
85 and older	0.98
	(0.59)

PI	0.02
	(0.02)
GA	0.07 ***
	(0.01)
Independent:PI	0.07 *
	(0.04)
Republican:PI	0.09 ***
	(0.03)
Independent:GA	0.00
	(0.03)
Republican:GA	0.03
	(0.02)
N	1885
R2	0.16

*** p < 0.001; ** p < 0.01; * p < 0.05.

APPENDIX C: TABLE C1: FULL RESULTS FOR HARM AND RESULTS FOR HARM AND RESPONSIBILITY ATTRIBUTIONS ACROSS TARGETS

	Trump	Xi	CDC	Governors	Non Social Distancers	Obama (underpowered)
(Intercept)	65.72 ***	66.86 ***	41.98 **	49.71 ***	37.28 ***	2.16
	(8.15)	(7.52)	(15.25)	(10.68)	(7.74)	(47.36)
Harm	2.73 ***	1.16 **	2.51 **	3.56 ***	3.27 ***	3.14
	(0.45)	(0.40)	(0.77)	(0.55)	(0.43)	(1.75)
Independent	-2.73	7.59 **	4.74	2.07	1.96	3.12
	(2.52)	(2.51)	(4.26)	(2.91)	(2.28)	(15.37)
Republican	-7.67 ***	11.92 ***	6.06	1.26	-0.75	38.67 ***
	(2.25)	(1.76)	(3.39)	(2.32)	(1.70)	(8.31)
25-34	3.33	7.68 *	11.84 *	2.95	1.51	22.46
	(3.03)	(3.60)	(5.49)	(3.75)	(3.03)	(16.80)

35-44	6.30 *	10.06 **	16.82 **	-1.85	4.07	14.77
	(3.09)	(3.64)	(5.66)	(3.75)	(3.07)	(16.73)
45-54	7.66 *	9.57 **	2.74	4.62	5.72	9.96
	(3.08)	(3.55)	(5.36)	(3.82)	(3.03)	(17.58)
55-64	10.79 ***	10.69 **	6.64	3.28	5.61	-8.21
	(3.16)	(3.61)	(5.96)	(3.82)	(3.07)	(16.26)
65-74	9.00 **	11.10 **	8.63	0.60	4.34	-0.30
	(3.03)	(3.59)	(5.62)	(3.77)	(3.02)	(18.00)
75-84	6.52	9.12 *	4.86	-0.84	7.07	
	(4.72)	(4.49)	(9.31)	(5.20)	(4.34)	
85 and up	5.89	17.11		-3.91	-4.06	-27.27
	(9.63)	(10.81)		(11.76)	(8.50)	(36.47)

$10,000-19,999	-6.58	-7.95	-21.11 *	-3.02	-0.88	9.21
	(4.61)	(4.74)	(8.66)	(6.80)	(5.27)	(20.51)
$20,000-29,999	-2.22	-7.10	-17.63 *	1.73	2.42	2.35
	(4.38)	(4.59)	(8.73)	(6.55)	(5.04)	(24.97)
$30,000-39,999	-7.39	-4.06	-13.83	3.61	-0.41	4.06
	(4.32)	(4.56)	(8.91)	(6.58)	(5.02)	(21.07)
$40,000-49,999	0.07	-5.64	-17.64 *	6.39	4.11	-1.98
	(4.44)	(4.61)	(8.38)	(6.55)	(5.04)	(20.44)
$50,000-59,999	-4.86	-6.64	-19.50	0.95	-2.20	-14.65
	(4.45)	(4.62)	(9.91)	(6.71)	(5.10)	(24.15)
$60,000-69,999	-1.94	-2.85	-20.32 *	4.15	2.85	4.76
	(4.49)	(4.80)	(9.21)	(6.70)	(5.13)	(22.14)
$70,000-79,999	-2.74	-2.82	-15.41	1.43	-1.57	4.93
	(4.47)	(4.91)	(8.80)	(6.69)	(5.04)	(20.91)
$80,000-89,999	1.17	-4.36	-24.26 **	5.41	-2.48	13.53
	(5.15)	(5.05)	(9.17)	(7.20)	(5.69)	(22.60)
$90,000-99,999	-4.82	-10.36 *	-29.54 **	5.67	-1.15	-16.32

	(4.82)	(4.97)	(9.06)	(6.96)	(5.37)	(19.08)
$100,000-$149,999	-4.31	-3.14	-22.37 **	4.50	-3.66	-4.89
	(4.21)	(4.46)	(8.56)	(6.47)	(4.87)	(19.32)
$150,000 and up	-3.57	-3.34	-21.56 *	6.29	-0.26	-8.17
	(4.50)	(4.68)	(9.05)	(6.71)	(5.09)	(19.44)
High school or equivalent	-6.63	-4.72	15.10	-10.36	3.14	12.44
	(6.20)	(5.47)	(11.85)	(7.78)	(5.36)	(35.09)
Some college	-6.54	-6.62	15.22	-11.53	5.97	22.38
	(6.29)	(5.72)	(12.31)	(7.90)	(5.48)	(35.61)
Associate’s degree	-5.46	-2.66	18.71	-16.08	4.47	18.94
	(7.00)	(6.34)	(13.50)	(8.70)	(6.23)	(35.88)
Bachelor’s degree	-8.94	-9.20	11.52	-20.67 **	2.15	14.11
	(6.30)	(5.65)	(12.25)	(7.91)	(5.51)	(36.36)
Master’s degree	-7.30	-9.25	19.72	-16.08 *	6.08	12.35
	(6.47)	(6.04)	(12.74)	(8.14)	(5.76)	(37.07)
Doctoral degree	-3.89	-6.86	9.89	-24.81 *	7.91	-1.23
	(8.92)	(8.30)	(17.89)	(9.70)	(7.56)	(39.07)

Professional degree	-13.86	-14.78 *	10.16	-17.24	-6.80	41.05
	(8.43)	(7.32)	(16.35)	(10.49)	(8.16)	(39.99)
Black	-0.53	6.53 *	-2.59	-2.36	-2.87	4.69
	(2.24)	(2.74)	(5.08)	(2.91)	(2.28)	(13.91)
Hispanic/Latino/Latinx	0.23	4.39	-0.14	5.71 *	5.38 *	-14.08
	(2.11)	(2.51)	(4.41)	(2.56)	(2.09)	(13.67)
Asian	0.32	-1.13	-2.61	3.05	3.85	-10.20
	(2.73)	(3.20)	(4.82)	(3.29)	(2.63)	(14.22)
American Indian or Alaska Native	2.53	2.39	-10.94	-2.14	7.46	11.10
	(8.61)	(9.43)	(12.28)	(16.29)	(15.40)	(21.58)
Other	4.34	-15.12	-18.94	-8.31	-4.93	35.33
	(6.74)	(7.86)	(17.86)	(7.75)	(7.30)	(35.01)
Female	-1.08	-0.27	-0.61	2.72	3.99 **	0.08
	(1.58)	(1.60)	(3.08)	(1.89)	(1.50)	(8.31)
Native Hawaiian or Pacific Islander		7.49		8.49	-5.28	
		(20.63)		(22.84)	(21.62)	
N	798	762	257	655	931	90

R2	0.11	0.12	0.18	0.14	0.12	0.53

*** p < 0.001; ** p < 0.01; * p < 0.05. Note: people were not forced to attribute blame to agents and could do chose to do so. The Obama model was omitted from the main text as it was underpowered to detect the hypothesized relationship.

APPENDIX D TABLE D 1 FULL MODEL FOR TRUMP HARM PERCEPTIONS

Variable	**Coefficient (Standard Error)**
Intercept (Baseline Democrat)	68.73
	(8.113)
Independent	**-4.41**
	(10.73)
Republican	**-36.61**
	(11.42)**
Harm	**2.30**
	(.50)***
Black	-.41
	(2.23)
Latino/Latinx/Hispanic	.21
	(2.10)
Asian	.13
	(2.72)
American Indian or Alaska Native	2.26
	(8.58)
Other	4.81
	(6.73)
$10,000-$19,999	-5.13
	(4.64)
$20,000-$29,999	-1.25
	(4.39)
$30,000-$39,999	-6.46
	(4.33)
$40,000-$49,999	.98
	(4.43)
$50,000-$59,999	-3.83
	(4.46)
$60,000-$69,999	-1.01
	(4.49)
$70,000-$79,999	-1.62
	(4.47)
$80,000-$89,999	1.92
	(5.15)
$90,000-$99,999	-3.39
	(4.83)
$100,000-$149,999	-3.52
	(4.21)
$150,000 and up	-2.28
	(4.51)
25-34	3.10
	(3.02)
35-44	5.79

	(3.09)
45-54	7.36
	(3.07)*
55-64	10.73
	(3.15)***
65-74	8.95
	(3.03)**
75-84	5.97
	(4.71)
85 and older	6.98
	(9.61)
High school or equivalent	-7.08
	(6.18)
Associates degree	-6.85
	(6.27)
Some college no degree	-6.05
	(6.99)
Bachelor's degree	-9.13
	(6.28)
Master's degree	-7.94
	(6.45)
Doctoral degree	-4.29
	(8.90)
Professional degree	-14.96
	(8.41)
Female	-1.00
	(1.57)
Independent*Harm	**.20**
	(1.41)
Republican*Harm	**3.37**
	(1.42)**
Multiple R Squared: .12	Adjusted R Squared: .08
N: 797	Significance: * = p <.05, ** = p < .01, *** = p < .001

Table one above displays regression results for those citizens who chose to attribute some degree of blame for the COVID 19 crisis to Donald Trump. Perceiving the virus as harmful, in addition to partisanship leads to a greater attribution of responsibility for the crisis to Trump. Not only do Republicans who perceive harm attribute more blame to Trump than those who don't in line with hypotheses, but harm is actually more influential for Republicans than other partisan groups.

APPENDIX E TABLE E1 CHANGE IN HARM PERCEPTIONS OVER TIME WITH NO INTERACTION TERM

Variable	Coefficient (Standard Error)
	Change in Harm Over Time
(Intercept)	1.75 *
	(0.88)
Harm	0.49 ***
	(0.04)
Independent	-0.56 **
	(0.21)
Republican	-0.87 ***
	(0.14)
GA	0.04 *
	(0.01)
PI	0.06 **
	(0.02)
25-34	1.48 *
	(0.59)
35-44	1.41 *
	(0.58)
45-54	1.37 *
	(0.57)
55-64	1.78 **

	(0.57)
65-74	1.91 ***
	(0.57)
75-84	2.11 ***
	(0.60)
85 and up	2.42 *
	(1.06)
$10,000-19,999	-0.32
	(0.49)
$20,000-29,999	-0.47
	(0.50)
$30,000-39,999	-0.80
	(0.48)
$40,000-49,999	-0.45
	(0.48)
$50,000-59,999	-0.31
	(0.48)
$60,000-$69,999	-0.67
	(0.48)
$70,000-79,999	-0.69
	(0.49)
$80,000-89,999	-0.59
	(0.51)
$90,000-99,999	-0.75

	(0.50)
$100,000-149,999	-0.80
	(0.46)
$150,000 and up	-0.20
	(0.49)
High school or equivalent	0.37
	(0.46)
Some college	0.41
	(0.48)
Associate's degree	0.77
	(0.55)
Bachelor's degree	0.33
	(0.49)
Master's degree	0.33
	(0.51)
Doctoral degree	1.02
	(0.73)
Professional degree	-1.33
	(0.68)
Female	-0.01
	(0.13)
Black	0.06
	(0.22)
Hispanic/Latinx/Latino	0.43

	(0.24)
Asian	-0.17
	(0.28)
American Indian or Alaska Native	-2.72 *
	(1.12)
Native Hawaiian or Pacific Islander	-1.63
	(1.55)
Other	-0.02
	(0.70)
N	651
R2	0.44

*** p < 0.001; ** p < 0.01; * p < 0.05.

APPENDIX F TABLE F1 FULL MODEL RESULTS INCLUDING CATEGORICAL CONTROLS FOR LONGITUDINAL PVD*PARTY INTERACTION

Variable	**Coefficient (Standard Error)**
Intercept	2.67
	(.94)
Harm Wave 1	.48
	(.03)***
Independent	**-2.32**
	(.76)**
Republican	**-1.96**
	(.533)***
GA	**-.005**
	(.022)
PI	**.04**
	(.02)
25-34	1.33
	(.59)*
35-44	1.27
	(.59) *
45-54	1.25
	(.58)*
55-64	1.67
	(.57)**
65-74	1.81
	(.57)**
75-84	1.99
	(.60)***
85 and up	2.29
	(1.05)*
$10,000-$19,999	-.45
	(.49)
$20,000-$29,999	-.52
	(.50)
$30,000-$39,999	-.55
	(.48)
$40,000-$49,999	-.38
	(.48)
$50,000-$59,999	-.78
	(.48)
$60,000-$69,999	-.76
	(.49)
$70,000-$79,999	-.70
	(.51)
$80,000-$89,999	.78
	(.50)
$90,000-$99,999	-.95

	(.46)*
$100,000-$149,999	-.95
	(.46)*
$150,000 and up	-.29
	(.48)
High school or equivalent	.42
	(.46)
Some college	.41
	(.48)
Associates degree	.80
	(.54)
Bachelor's degree	.44
	(.49)
Master's degree	.35
	(.51)
Doctoral degree	1.16
	(.73)
Professional degree	-1.24
	(.68)
Female	-.02
	(.13)
Black	.06
	(.22)
Latino/Latinx/Hispanic	.45
	(.24)
Asian	-.25
	(.28)
American Indian or Alaska Native	-2.84
	(1.12)*
Native Hawaiian or Pacific Islander	-1.52
	(1.54)
Other	-.32
	(.71)
Independent*PI	**.09**
	(.05)
Republican*PI	**.004**
	(.04)
Independent*GA	**.06**
	(.05)
Republican*GA	**.08**
	(.03)*
R squared = .45	Adjusted R Squared = .41
N = 650	Significance: * = p < .05, ** = p <.01, *** = p <.001

REFERENCES

Achen, Christopher H., and Larry M. Bartels. *Democracy for realists: Why elections do not produce responsive government*. Vol. 4. Princeton University Press, 2017.

Allcott, Hunt, Levi Boxell, Jacob Conway, Matthew Gentzkow, Michael Thaler, and David Y. Yang. "Polarization and public health: Partisan differences in social distancing during the Coronavirus pandemic." *NBER Working Paper* w26946 (2020).

Bartels, Larry M. "Beyond the running tally: Partisan bias in political perceptions." *Political behavior* 24, no. 2 (2002): 117-150.

Barrett, Lisa Feldman. "The theory of constructed emotion: an active inference account of interoception and categorization." *Social cognitive and affective neuroscience* 12, no. 1 (2017): 1-23.

Bisgaard, Martin, and Rune Slothuus. "Partisan elites as culprits? How party cues shape partisan perceptual gaps." *American Journal of Political Science* 62, no. 2 (2018): 456-469.

Bisgaard, Martin. "Bias will find a way: Economic perceptions, attributions of blame, and partisan-motivated reasoning during crisis." *The Journal of Politics* 77, no. 3 (2015): 849-860.

Bycoff, Aaron, Christopher Groskopf, and Dhrumil Mehta., "How Americans View the Coronavirus Crisis And Trump's Response." *Five Thirty Eight.* January 13, 2021. https://projects.fivethirtyeight.com/coronavirus-polls/ (accessed January 14, 2021).

Bursztyn, Leonardo, Aakaash Rao, Christopher Roth, and David Yanagizawa-Drott. "Misinformation during a pandemic." *University of Chicago, Becker Friedman Institute for Economics Working Paper* 2020-44 (2020).

Converse, Philip E. "The Nature of Belief Systems in Mass Publics." In David Apter, ed., Ideology and Discontent. New York: Free Press." (1964).

Carpini, Michael X. Delli, and Scott Keeter. "Measuring political knowledge: Putting first things first." *American Journal of Political Science* (1993): 1179-1206.

Ditto, Peter H., and David F. Lopez. "Motivated skepticism: Use of differential decision criteria for preferred and nonpreferred conclusions." *Journal of personality and social psychology* 63, no. 4 (1992): 568.

Druckman, James N., Erik Peterson, and Rune Slothuus. "How elite partisan polarization affects public opinion formation." *American Political Science Review* (2013): 57-79.

Duncan, Lesley A., Mark Schaller, and Justin H. Park. "Perceived vulnerability to disease: Development and validation of a 15-item self-report instrument." *Personality and Individual differences* 47, no. 6 (2009): 541-546.

Fan, Qianqian, and Bunmi O. Olatunji. "Individual differences in disgust sensitivity and health-related avoidance: Examination of specific associations." *Personality and Individual Differences* 55, no. 5 (2013): 454-458.

Gaines, Brian J., James H. Kuklinski, Paul J. Quirk, Buddy Peyton, and Jay Verkuilen. "Same facts, different interpretations: Partisan motivation and opinion on Iraq." *The Journal of Politics* 69, no. 4 (2007): 957-974.

Gelman, Andrew. "Scaling regression inputs by dividing by two standard deviations." *Statistics in medicine* 27, no. 15 (2008): 2865-2873.

Gray, Kurt, Adam Waytz, and Liane Young. "The moral dyad: A fundamental template unifying moral judgment." *Psychological Inquiry* 23, no. 2 (2012): 206-215.

Gray, Kurt, and Daniel M. Wegner. "Moral typecasting: divergent perceptions of moral agents and moral patients." *Journal of personality and social psychology* 96, no. 3 (2009): 505.

Gray, Kurt, Chelsea Schein, and Adrian F. Ward. "The myth of harmless wrongs in moral cognition: Automatic dyadic completion from sin to suffering." *Journal of Experimental Psychology: General* 143, no. 4 (2014): 1600.

Haidt, Jonathan, Clark McCauley, and Paul Rozin. "Individual differences in sensitivity to disgust: A scale sampling seven domains of disgust elicitors." *Personality and Individual differences* 16, no. 5 (1994): 701-713.

Hamblin, James., “Trump’s pathology is now clear.”, *The Atlantic.,* October 31, 2020. https://www.theatlantic.com/health/archive/2020/10/trump-covid-denial/616946/ (accessed November 13, 2020).

Hetherington, Marc J., and Thomas J. Rudolph. *Why Washington won't work: Polarization, political trust, and the governing crisis*. University of Chicago Press, 2015.

Jerit, Jennifer, Jason Barabas, and Toby Bolsen. "Citizens, knowledge, and the information environment." *American Journal of Political Science* 50, no. 2 (2006): 266-282.

Kirzinger, Ashley., Audrey Kearney, and Liz Hamel., “Voters are souring on President Trump’s handing of coronavirus, with implications for November.” *Keiser Family Foundation.* https://www.kff.org/policy-watch/voters-are-souring-on-president-trumps-handling-of-coronavirus-with-implications-for-november/ (accessed September 15, 2020).

Kruglanski, Arie W. "Lay epistemo-logic—process and contents: Another look at attribution theory." *Psychological review* 87, no. 1 (1980): 70.

Kraft, Patrick W., Milton Lodge, and Charles S. Taber. "Why people “don’t trust the evidence” motivated reasoning and scientific beliefs." *The ANNALS of the American Academy of Political and Social Science* 658, no. 1 (2015): 121-133.

Kunda, Ziva. "The case for motivated reasoning." *Psychological bulletin* 108, no. 3 (1990): 480.

Kushner Gadarian, Shana, Sara Wallace Goodman, and Thomas B. Pepinsky. "Partisanship, health behavior, and policy attitudes in the early stages of the COVID-19 pandemic." *Health Behavior, and Policy Attitudes in the Early Stages of the COVID-19 Pandemic (March 27, 2020)* (2020).

Lench, Heather C., and Esther S. Chang. "Belief in an unjust world: When beliefs in a just world fail." *Journal of Personality assessment* 89, no. 2 (2007): 126-135.

Lenz, Gabriel S. *Follow the leader?: how voters respond to politicians' policies and performance*. University of Chicago Press, 2013.

Lerner, Melvin J. "The belief in a just world." In *The Belief in a just World*, pp. 9-30. Springer, Boston, MA, 1980.

Lucock, Michael P., and Stephen Morley. "The health anxiety questionnaire." *British journal of health psychology* 1, no. 2 (1996): 137-150.

MacSwain, Kerry Lynn H., Simon B. Sherry, Sherry H. Stewart, Margo C. Watt, Heather D. Hadjistavropoulos, and Aislin R. Graham. "Gender differences in health anxiety: An investigation of the interpersonal model of health anxiety." *Personality and Individual Differences* 47, no. 8 (2009): 938-943.

Makhanova, Anastasia, and Melissa A. Shepherd. "Behavioral immune system linked to responses to the threat of COVID-19." *Personality and Individual Differences* 167 (2020): 110221.

Maragakis, L. L. "Coronavirus Disease: 2019 vs. the Flu. Johns Hopkins Medicine; 2020." (2020).

Marcus, George E., W. Russell Neuman, and Michael MacKuen. *Affective intelligence and political judgment*. University of Chicago Press, 2000.

McFarland, Sam, Matthew Webb, and Derek Brown. "All humanity is my ingroup: A measure and studies of identification with all humanity." *Journal of personality and social psychology* 103, no. 5 (2012): 830.

Moein, Shima T., Seyed MR Hashemian, Babak Mansourafshar, Ali Khorram□Tousi, Payam Tabarsi, and Richard L. Doty. "Smell dysfunction: a biomarker for COVID□19." In *International forum of allergy & rhinology*. 2020.

Morley, John E. "COVID-19—the long road to recovery." *The Journal of Nutrition, Health, and Aging.* (2020): 1-3.

Navarrete, Carlos David, and Daniel MT Fessler. "Disease avoidance and ethnocentrism: The effects of disease vulnerability and disgust sensitivity on intergroup attitudes." *Evolution and Human Behavior* 27, no. 4 (2006): 270-282.

Nyhan, B., & Reifler, J. (2010). When corrections fail: The persistence of political misperceptions. *Political Behavior*, *32*(2), 303-330.

Olatunji, Bunmi O., Nathan L. Williams, David F. Tolin, Jonathan S. Abramowitz, Craig N. Sawchuk, Jeffrey M. Lohr, and Lisa S. Elwood. "The Disgust Scale: item analysis, factor structure, and suggestions for refinement." *Psychological assessment* 19, no. 3 (2007): 281.

Oosterhoff, Benjamin, Natalie J. Shook, and Ravi Iyer. "Disease avoidance and personality: A meta-analysis." *Journal of Research in Personality* 77 (2018): 47-56.

Petty, Richard E., and John T. Cacioppo. "The elaboration likelihood model of persuasion." In *Communication and persuasion*, pp. 1-24. Springer, New York, NY, 1986.

Pilowsky, Issy. "Dimensions of hypochondriasis." *The British Journal of Psychiatry* 113, no. 494 (1967): 89-93.

Redlawsk, David P., Andrew JW Civettini, and Karen M. Emmerson. "The affective tipping point: Do motivated reasoners ever "get it"?." *Political Psychology* 31, no. 4 (2010): 563-593.

Roberts, David., "Partisanship is the strongest predictor of coronavirus response.", *Vox.,* May 14, 2020. https://www.vox.com/science-and-health/2020/3/31/21199271/coronavirus-in-us-trump-republicans-democrats-survey-epistemic-crisis (accessed June 3rd, 2020).

Schaller, Mark, and Justin H. Park. "The behavioral immune system (and why it matters)." *Current directions in psychological science* 20, no. 2 (2011): 99-103.

Schaller, Mark. "The behavioral immune system." *The handbook of evolutionary psychology* (2015): 1-19.

Schein, Chelsea, and Kurt Gray. "The prototype model of blame: Freeing moral cognition from linearity and little boxes." *Psychological Inquiry* 25, no. 2 (2014): 236-240.

Schein, Chelsea, and Kurt Gray. "The theory of dyadic morality: Reinventing moral judgment by redefining harm." *Personality and Social Psychology Review* 22, no. 1 (2018): 32-70.

Schein, Chelsea, and Kurt Gray. "The theory of dyadic morality: Reinventing moral judgment by redefining harm." *Personality and Social Psychology Review* 22, no. 1 (2018): 32-70.

Schmitt, Neal. "Uses and abuses of coefficient alpha." *Psychological assessment* 8, no. 4 (1996): 350.

Shabad, R. "It is what it is": Trump in interview on COVID-19 death toll in US." *NBC News. https://www. nbcnews. com/politics/donald-trump/it-what-it-trump-interview-covid-19-death-toll-u* 1235734 (2020).

Taber, Charles S., and Milton Lodge. "Motivated skepticism in the evaluation of political beliefs." *American journal of political science* 50, no. 3 (2006): 755-769.

Tybur, Joshua M., Debra Lieberman, and Vladas Griskevicius. "Microbes, mating, and morality: individual differences in three functional domains of disgust." *Journal of personality and social psychology* 97, no. 1 (2009): 103.

Torres, Danielle de Araujo, Luciana do Carmo Bueno Ribeiro, Anna Patrícia de Freitas Linhares Riello, Dafne Dain Gandelman Horovitz, Luis Felipe Ribeiro Pinto, and Julio Croda. "Reinfection of COVID□19 after 3 months with a distinct and more aggressive clinical presentation: Case report." *Journal of medical virology* (2020).

Wang, Iris M., Nicholas M. Michalak, and Joshua M. Ackerman. "Threat of infectious disease." (2018).

Zaller, John R. *The nature and origins of mass opinion*. Cambridge university press, 1992.