The Moral Foundations of Knowledge: Seeking and Avoiding COVID-19 Information

By

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Abstract

An abundance of work in social and political psychology suggests a positive relationship between political conservatism, disgust sensitivity, and disease avoidance. Yet, despite this link, recent research suggests that political conservatism is negatively associated with attention to, and knowledge about, COVID-19. The current work draws on the intersection of moral foundations theory and modernization theory to investigate this paradoxical relationship between political conservatism and knowledge about COVID-19. Study 1 provided correlational evidence that individualizing foundations (i.e., moral concerns regarding individual rights and freedom) and binding foundations (i.e., moral concerns about ingroup values, norms, and respect for established ties between the group members/institutions) mediate the relationship between political conservatism and knowledge about COVID-19 ($N = 205$). Binding foundations were negatively, and individualizing foundations were positively related to COVID-19 knowledge. Study 2 experimentally manipulated the emphasis on different sets of moral foundations (i.e., individualizing and binding; $N = 205$). The results suggested that emphasizing binding foundations led to target-specific (i.e., COVID-19) information avoidance, and emphasizing individualizing foundations led to general knowledge-seeking behavior. Self-reported endorsement of the two sets of moral foundations, knowledge-seeking, and information avoidance measures also mostly replicated the patterns in Study 1; the effect of individualizing foundations was stronger than binding foundations. To my knowledge, this work is the first to apply the morality perspective to knowledge engagement. By providing a cultural psychological analysis on moral foundations, this work could serve as an intellectual spark for future research on political ideology and moral foundations from a cultural stance.

Keywords: *moral foundations, knowledge, avoidance, individualizing, binding*

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Introduction

In December 2019, the World Health Organization detected a novel version of coronavirus (COVID-19) that caused over a million deaths worldwide. The subsequent pandemic has been particularly serious in the U.S., which ranks first globally with over 700.000 deaths from COVID-19 as of October 20, 2021. Explanations for the heavy death toll of the pandemic in the U.S. have focused not only on the biological properties of disease but also compliance with the public health guidelines.

One influence on pandemic-relevant behaviors in the U.S. was political ideology. Research showed that political conservatism was negatively related to COVID-19 public health compliance (Xu & Cheng, 2021; Plohl & Musil, 2020; Rosenfeld, 2020; Rothgerber et al., 2020), as well as perceived vulnerability to COVID-19 and severity of the disease (Calvillo et al., 2020: Pennycook et al., 2020). Political conservatism was also positively associated with a lack of accuracy in distinguishing fake from factual information/headlines regarding the pandemic, misinformation, conspiracy theories about COVID-19, and COVID-19 skepticism (i.e., trivialization of the severity of the COVID-19; Calvillo et al., 2020; Pennycook et al., 2020; Roozenbeek et al., 2020).

These relationships of conservatism with COVID-19 health behaviors and with knowledge are not merely coincidental. Instead, research suggested that political conservatism was negatively related to public health compliance through its negative relationship with COVID-19 knowledge. That is, knowledge mediated the relationship between political ideology and behavioral outcomes (Birdir & Adams, 2020). The implication was that political conservatism was negatively related to public health behaviors, in part because it was negatively related to accurate knowledge about COVID-19.

The negative relationship of conservatism with COVID-19 knowledge and public health behaviors is particularly noteworthy given a tradition of theory and research that associates political conservatism with heightened attention and perceived vulnerability to disease. For example, research demonstrated that conservatism is positively associated with disgust sensitivity and disease avoidance with concerns of, for example, preserving purity (e.g., Brenner & Inbar, 2015; Inbar et al., 2009; Navarrette & Fessler, 2006; Terrizzi et al., 2013, Terrizzi et al., 2010). Based on this body of work, one would anticipate that political conservatism would be positively related to COVID-19 knowledge and adoption of protective measures.

In summary, two perspectives on health-related correlates of conservatism suggest competing hypotheses. On one hand, recent research shows that conservatism is positively related to dismissing the severity of the pandemic. On the other hand, research suggests conservatism is positively related to heightened concerns about contamination and illness in general. This paradoxical relationship is inspirational for the investigation of potential variables playing a role in the process of engagement with knowledge. Accordingly, informed by the contradicting health-related correlates of conservative ideology, this paper aims to provide some insight for this dilemma through the investigation of the morality of knowledge engagement.

Political Ideology and Knowledge

One way to think about the negative relationship between conservatism and accurate COVID-19 knowledge is through processes that operate for any identity group. Identity-protective cognition refers to the tendency to credit (or discredit) evidence based on the commitment to ingroup cultural practices and moral beliefs (Sherman & Cohen 2002, 2006). According to this perspective, threats to ingroup beliefs or understandings of truth are potential challenges to positive social identity, and ultimately, personal well-being (Kahan et al., 2007).

Therefore, individuals are motivated to process information in ways that confirm ingroup beliefs and eliminate the threat to ingroup practices (Cohen et al., 2000; Cohen, 2003).

Beyond general processes informing engagement with knowledge for people, researchers also proposed tendencies of less faithful engagement with authoritative knowledge among political conservatives in particular (Federico et al., 2012; Jost, 2017; Jost & Krochik, 2014; Jost et al., 1999; Jost et al., 2003; Webster & Kruglanski, 1994). For example, researchers have proposed a positive association between political conservatism and the need for cognitive closure: an orientation characterized by close-mindedness, desire for order and structure, and discomfort with ambiguity (NFCC; Jost et al., 2003; Webster & Kruglanski, 1994). In turn, NFCC is positively associated with tendencies, such as willingness to reach conclusions rapidly or to resist information that would make a situation ambiguous (Federico et al., 2012; Jost, 2017; Jost & Krochik, 2014).

Rather than denying either account, this work is informed by both of these perspectives at the intersection of morality of knowledge. That is, culturally situated identities reinforce varying moral practices, which could explain less faithful engagement with authoritative knowledge among conservatives compared to liberals. To test this account, this work relies on moral foundations theory, which suggests a relationship between varieties of political engagement and dimensions of moral sensibility. This consideration extends this work by considering the implication of different moral foundations for pursuit or avoidance of authoritative knowledge.

Moral Foundations Theory

Moral foundations theory (Haidt & Joseph, 2004) suggests that the human experience of morality is based on five psychological mechanisms that co-evolve with cultural practices. According to Haidt and Joseph (2004), these five psychological mechanisms—what they refer to

as moral foundations—define morality and serve as bases for moral judgments. Even though these foundations serve as building blocks of morality, researchers note that individuals and communities differ in their emphases of each foundation (Graham et al., 2009). One critical distinction between communities in this regard is whether morality is centered around the individual or the group.

Two of these mechanisms, which Graham and colleagues (2009) name as individualizing foundations, refer to moral concerns regarding individual rights and freedom (Napier & Luguri, 2013). The first individualizing foundation, *harm avoidance,* refers to concerns about care, kindness, and welfare. The second individualizing foundation, *fairness*, is related to equity, justice, and fair treatment, resulting in everyone getting what they deserve.

Individualizing foundations are related to individual-centered morality: harm to any individual should be prevented, and fair treatment to every individual should be ensured to preserve and establish a moral society (Graham et al., 2011). In this respect, they are similar to Shweder's (1997) ethics of *autonomy*. In Shweder's (1997) formulation, ethics of autonomy correspond to the Euro-American individualistic definition of morality that emphasizes the autonomy of the individual. That autonomy is represented by the notions of justice, avoidance of harm, and individual rights.

The remaining three mechanisms, which Graham and colleagues (2009) name as binding foundations, refer to moral concerns about ingroup values, norms, and respect for established ties between the group members and institutions (Napier & Luguri, 2013). The first binding foundation, *authority,* is about obedience and respect for traditional authority together with injunctions to maintain hierarchical structures of that authority. The second binding foundation, *loyalty* is about the defense of ingroup, readiness to sacrifice oneself for ingroup goals, and

aggression toward out-groups or ingroup deviants. The third binding foundation, *purity*, is about preservation of the sanctity of body (from pathogens, diseases) and mind (from non-traditional ideas).

Binding foundations emphasize the importance of the ties between people that create communities and respect for established power structures (Graham et al., 2011). In that sense, binding foundations are similar to Shweder's (1997) ethics of *community* (authority and loyalty) and *divinity* (purity). According to Shweder (1997), ethics of community centers around the concerns of interdependency, responsibilities, and obligations. Ethics of divinity concerns sanctity, avoidance of pollution and contamination, and preservation of sacredness.

Moral Sensibilities of Political Conservatism

One point of relevance for the current work concerns the relationship between political engagement and moral sensibilities. Research in U.S. settings suggests that political conservatism is positively related to endorsement of binding foundations, but negatively related to endorsement of individualizing foundations (e.g., Frimer et al., 2013; Graham et al., 2009; Graham et al., 2011; Kivikangas et al., 2021; Weber & Federico, 2013). Conservatism is closely associated with the construction of tightly ordered social spaces. Authority, loyalty, and purity (i.e., binding) foundations are critical to establish these spaces in accordance with the traditional norms and responsibilities to God. Binding foundations also concern family, institutions, and groups, which emphasize mutual obligations and responsibilities (Graham et al., 2011; Haidt & Hersh, 2001). In contrast, liberalism is closely associated with enlightenment ethics that focus on the individual rather than the group. Harm and fairness (i.e., individualizing) foundations are critical for establishing democratic systems with autonomous and independent individuals.

Therefore, individualizing foundations are positively related to modernity and individual-focused morality (Haidt & Graham, 2007: Graham et al., 2011).

Moral Foundations of Knowledge Engagement

The other point of relevance for the current work concerns the relationship between endorsement of moral foundations and engagement with knowledge. Although I am unaware of empirical research that directly considers this relationship, a clue comes from work on "individual modernity" (Inkeles, 1975). In his definition of individual modernity, Inkeles (1975) wrote that,

> The modern man's character … may be summed up under four major headings: (1) He is an informed participant citizen; (2) he has a marked sense of personal efficacy; (3) he is highly independent and autonomous in his relations to traditional sources of influence, especially when he is making basic decisions about how to conduct his personal affairs; and (4) he is ready for new experience and ideas; that is, he is relatively open-minded and cognitively flexible.

Setting aside some of its problematic features (e.g., a pathologizing interpretation of cultural difference; for a critique, see Adams & Estrada-Villalta, 2017), the theory suggests a relationship between individualizing foundations and tendencies of curiosity, open-mindedness, cognitive flexibility, independent reasoning, and informed decision making that recognizes learned authority as a consequence of "reasoned action."

This perspective suggests that fairness and harm avoidance are "individualizing" foundations in the sense that they rely on abstract principles rather than embeddedness in people, place, or tradition. Liberated from traditional authority, people find a guide for action in reasoned

consideration of the evidence, which is a process that requires accurate information. From this perspective, liberalism is associated with knowledge-seeking as a moral virtue.

In contrast, purity, loyalty, and respect for authority are "binding" foundations in the sense that they rely on embeddedness, interdependence, and ties to social networks. They are associated with incuriosity, closed-mindedness, rigidity, and acceptance of power-based traditional authority. From this perspective, curiosity, openness, and independent reasoning can be dangerous to the extent that they threaten hierarchical networks and social ties.

In support of this theoretical framework, empirical research has positively associated individualizing foundations with modern "analytic" rationality. Further, this research has negatively associated individualizing foundations with intuitive and emotional thinking, lack of tolerance for uncertainty, and preservation of ingroup values and doctrines of traditional authority (Federico et al., 2016; Garvey & Ford, 2014). In contrast, this research has negatively associated binding foundations with modern "analytic" rationality. Further, this research has positively associated binding foundations with intuitive and emotional thinking (Garvey & Ford, 2014). In line with these results, another study showed that tolerance of uncertainty was higher for people who endorse binding foundations (Federico et al., 2016). The activation of "analytic" thinking increased endorsement of individualizing foundations, but it did not affect the endorsement of binding foundations (Yilmaz & Saribay, 2017). Similarly, abstract thinking led individuals to put more emphasis on individualizing foundations and less emphasis on binding foundations (Napier & Liguri, 2013).

Although the preceding discussion presents individualizing and binding foundations as contrasting opposites, the implications for engagement with knowledge are not completely symmetrical. To the extent that individualizing foundations require accurate information, they

(ideally) should promote an openness to whatever information is relevant to the domain from any authoritative source. In other words, theory and research suggest a positive relationship between individualizing foundations and pursuit of knowledge in general as a moral way of engaging with the world and social reality. However, despite the conceptual opposition between different moral foundations, the relationship between individualizing foundations and general pursuit of knowledge does not imply a relationship between binding foundations and general avoidance of knowledge. Instead, theory and research suggest that binding foundations should promote selective avoidance of information.

One way to understand this ambivalent stance concerns implications of a knowledge domain for ingroup purity, loyalty, or authority. To the extent that a knowledge domain enhances or protects ingroup interests, endorsement of binding foundations will be associated with tendencies to seek knowledge in service of ingroup purity, loyalty, and authority. To the extent that a knowledge domain threatens ingroup interests or authority, endorsement of binding foundations will be associated with avoidance of information. Indeed, people who endorse binding foundations may perceive some domains of knowledge to be so dangerous to ingroup interests that they come to understand pursuit of knowledge about these domains as treacherous or sinful.

Another way to understand this ambivalence to knowledge focuses on a concern with the source and the distinction between authoritative and authoritarian expressions of authority. Individualizing foundations afford a respect for authoritative knowledge that arises from an "objective" observation process, ideally in the form of "positionless" truth (e.g., scientific knowledge). Binding foundations afford a respect for the *authority* part of authoritative knowledge—knowledge that takes precedence by virtue of who proclaims it. From this

perspective, an emphasis on binding foundations can motivate knowledge-seeking from the "right" authority (e.g., sacred texts) but not the others.

Aim and Hypotheses

To my knowledge, there is no empirical research on the relationship between moral foundations and engagement with knowledge. The COVID-19 pandemic provided a fruitful context in which to address this intellectual gap. Despite the association between political conservatism, motivations to preserve purity, and heightened disease avoidance (e.g., Brenner & Inbar, 2015; Terrizzi et al., 2013), researchers note a negative link between political conservatism and attention to COVID-19 (e.g., Calvillo et al., 2020; Pennycook et al, 2020). The politicization of COVID-19 affords the observation of these competing hypotheses that are useful for understanding the morality of knowledge. Further, this dilemma is an intellectually interesting spark for conceptions of morality and the extent to which they relate to navigating information ecologies.

Stated in formal terms, the empirical evidence and theoretical analysis of morality suggest the hypothesis that endorsement of individualizing and binding foundations is associated with epistemological orientations, which vary as a function of partisan political engagement, and mediate the relationship between political identity and accurate COVID-19 knowledge. Individualizing foundations are constructions of morality in line with enlightenment ethics and modernity. They positively relate to openness to experience and democratic rights. Therefore, they afford general tendencies to seek knowledge to achieve "the truth." This suggests the hypothesis that individualizing foundations will positively relate to knowledge-seeking and accurate scientific knowledge regarding COVID-19, and negatively relate to information avoidance.

Binding foundations, in contrast, are constructions of morality in line with what Keller (2019) refers to as hierarchical relationality. They relate to ingroup loyalty, preservation of ideological and physical purity, and deference to traditional authority rather than empirical evidence or pursuit of scientific "truth". Therefore, they afford selective tendencies to avoid information when it has a potential to threaten ingroup authority, as was the case for the conservative movement regarding scientific knowledge during the COVID-19 pandemic in the U.S. Concerns about traditional authority and prevention of psychological contamination from threatening ideas suggests that endorsement of binding foundations will be associated with tendencies to selectively avoid information about COVID-19, but not other types of information (as long as they are not politicized). However, concerns about ingroup well-being, prevention of physical contamination from threatening pathogens, and the guidelines of the traditional authority suggest that endorsement of binding foundations could be associated with tendencies to seek information (from non-conventional sources). This interpretation suggests an ambiguity regarding the relationship between knowledge-seeking and binding foundations, and therefore, does not lead to a directional hypothesis regarding binding foundations and knowledge-seeking in general.

To test these hypotheses, I conducted two studies in the early days of the COVID-19 pandemic. In Study 1, I conducted a correlational study to investigate the relationships between endorsement of different moral foundations and engagement with COVID-19 knowledge. I further considered whether endorsement of moral foundations would mediate the relationship between political conservatism and COVID-19 knowledge engagement. In Study 2, I experimentally manipulated engagement with moral foundations and assessed the effect of this

manipulation on both behavioral and self-report indicators of engagement with COVID-19

knowledge.

Study 1

Method

Participants

G Power (3.1.9.4) analyses indicated a sample size of $N = 211$ for desired statistical

power given the design of the study (linear multiple regression F-test, effect size = 0.05, α =

0.05, power = 0.80). I recruited Amazon Mechanical Turk workers via Cloud Research.[1] All

participants were U.S. citizens, and they received $1.00 for their time to complete measures.

I excluded data from participants who indicated that they consulted external sources to

complete the knowledge test. I proceeded to analyze data from the remaining 205 participants.

The participants ranged in age from 18 to 75 years ($M = 39.73$, $SD = 12.91$). The sample

consisted of 116 men, 88 women, and one who indicated nonbinary gender. In terms of ethnicity,

73% of the participants identified as White/Caucasian ($n = 150$), 7.3% as Asian ($n = 15$), 6.8% as

Black ($n = 14$), 5.9% as Latinx ($n = 12$), and 2.4% as mixed ($n = 5$). Seven participants did not

indicate their ethnic/racial identity.

Measures

Complete versions of all measures appear in the Appendices.

Political Ideology

Participants indicated their endorsement of economic and social conservatism using

separate, 6-point Likert-type scales from -3 (*very liberal*) to 3 (*very conservative*) without a 0

point. For the purposes of analyses and readability, I coded responses on a scale from 1 to 6. I

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[1] Cloud Research is an online data collection platform linked to Amazon Mechanical Turk, which allows researchers to monetarily compensate their participants for their time and participation.

created a composite score for political conservatism by computing the mean of responses to the two scales ($M = 3.03$, $SD = 1.45$; $\alpha = .90$).

Moral Foundations

Participants completed the 20-item Moral Foundations Questionnaire (MFQ20; Graham et al., 2011).[2] The MFQ20 consists of two parts, which both have two items for each of the five subfactors: harm avoidance, fairness, ingroup loyalty, authority, and purity. In Part I, participants used a scale from 0 (not relevant at all) to 5 (extremely relevant) to indicate the *moral relevance* of items representing different moral foundations (e.g., "whether or not someone suffered emotionally" as an item for the harm foundation). In Part II, participants used a scale from 0 (strongly disagree) to 5 (strongly agree) to indicate the extent to which they agree with different *moral judgments* (e.g., "people should be loyal to their family members, even when they have done something wrong" as an item for loyalty foundation). For the purposes of analyses and readability, I coded the responses from 0 to 5 into 1 to 6. To create a composite score for individualizing foundations, I computed the mean of the items that measure harm and fairness dimensions ($M = 4.92$, $SD = .70$; $\alpha = .78$). To create a composite score for binding foundations, I computed the mean of the items that measure authority, loyalty, and purity dimensions ($M = 3.56$, $SD = 1.05$; $\alpha = .90$).

Engagement with Knowledge

Information Avoidance and Knowledge Seeking. Participants responded to two items on a 7-point Likert-type scale from -3 (*strongly disagree*) to 3 (*strongly agree*) to indicate their engagement with COVID-19 knowledge (adapted from Conway et al., 2020). For purposes of analyses and readability, I coded the responses from -3 to 3 into 1 to 7. One item served as a

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[2] According to the guidance provided on moralfoundations.org, I used the 20-item measure of MFQ in Study 1 instead of MFQ30 (30-item MFQ) to decrease the total survey time.

measure of COVID-19 information avoidance: "I purposefully try NOT to watch/read the news on Coronavirus (COVID-19)." (*M* = 2.97, *SD* = 1.79). The other item served as a measure of COVID-19 knowledge-seeking: "I watch/read a lot of news about the Coronavirus (COVID-19)." (*M* = 4.71, *SD* = 1.61).

Information Contamination. Participants responded to two items on a 7-point Likert-type scale from -3 (*strongly disagree*) to 3 (*strongly agree*) to indicate their beliefs regarding the extent to which political or self-serving biases contaminate public health information about COVID-19 (Conway et al., 2020). For purposes of analyses and readability, I coded the responses from -3 to 3 into 1 to 7. The items were "I distrust the information I receive about the Coronavirus (COVID-19) from public health officials." and "I think public health officials have an agenda that's causing them not to give the whole story to the populace." (*M* = 3.21, *SD* = 1.63).

COVID-19 True/False Knowledge Test. Participants responded to eight true/false quiz items to indicate their knowledge about COVID-19. An example of a true item is "High blood pressure is a risk factor for COVID-19 (i.e., it causes people to experience the disease in a more severe way)." An example of a false item is "If a person infected with COVID-19 does not have a cough, then that person cannot transmit the virus to other people."

As an indicator of reality attunement or accurate engagement with knowledge, I computed the discrimination index (d'), a measure of a participants' ability to distinguish factual items (i.e., hit rate or proportion of yes responses to true items) from fictitious information (i.e., false alarm rate or proportion of yes responses to false items; Green & Swets, 1966; Nelson et al., 2013). Higher scores indicate better reality attunement, and therefore, better performance (*M* = 1.35, *SD* = .73).

Relative Perceived Vulnerability to Disease

As an exploratory measure, participants completed a measure of perceived vulnerability to disease (PVD; Duncan et al., 2009). Participants responded to 14 items on a 7-point Likert-type scale from -3 (*strongly disagree*) to 3 (*strongly agree*) to indicate the extent to which they felt vulnerable to disease, both in general and during the COVID-19 pandemic. For purposes of analyses and readability, I coded the responses from -3 to 3 into 1 to 7.[3] Then, I created a measure of relative COVID-19 vulnerability by subtracting the mean score of PVD in general from the mean score of PVD for COVID-19 (RPVD; $M = 0.83$, $SD = 1.06$).

Demographics

After completing the measures above, participants responded to items about their gender, age, ethnic/racial background, and monthly income.

Results and Discussion

Multiple Regression Analyses

The first purpose of Study 1 was to assess the relationships between endorsement of different moral foundations and various indicators of engagement with COVID-19 knowledge. Table 1 shows bivariate correlations between variables. Endorsement of individualizing foundations was positively related to COVID-19 knowledge test performance, knowledge-seeking, and relative perceived vulnerability to disease, and negatively related to information avoidance and information contamination. Endorsement of binding foundations were positively related to information contamination, and negatively related to COVID-19 knowledge test performance.

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[3] Similarly, participants completed a short, exploratory measure of behavioral compliance with public health guidance. However, I did not report the results here because it is beyond the scope of this thesis.

Table 1

Study 1: Descriptive Statistics, Internal Consistency Coefficients, and Zero-Order Correlations Between Variables

	M	SD	1	2	3	4	5	6	7	8
1. Conservatism	3.03	1.45	---							
2. d' T/F	1.35	.73	-.15*	---						
3. Info Avoidance	2.97	1.79	.25**	-.21**	---					
4. Knowledge-Seeking	4.71	1.61	-.29**	.07	-.65**	---				
5. Info Contamination	3.21	1.63	.37**	-.12	.30**	-.22**	(.84)			
6. Individualizing	4.92	.69	-.24**	.29**	-.26**	.26**	-.21**	(.78)		
7. Binding	3.56	1.05	.54**	-.21**	.13	-.08	.37**	-.02	(.90)	
8. RPVD	.83	1.06	-.16*	.18**	-.14*	.10	-.21**	.20**	-.18*	---

Notes. Conservatism = Political conservatism from 1 to 6, higher scores indicate more conservativeness. d' T/F = Performance on the true/false COVID-19 knowledge test from -2.30 (not getting any of the questions correct) and 2.30 (getting all of the questions correct). Info Avoidance = Information avoidance from 1 to 7, higher scores indicate more information avoidance. Knowledge-Seeking = Knowledge seeking from 1 to 7, higher scores indicate more knowledge seeking. Info Contamination = Perceived information contamination of the information ecology related to COVID-19 from 1 to 7, higher scores indicate higher perceptions of information contamination. Individualizing = Individualizing foundations, mean score of harm (avoidance) and fairness, ranging from 1 to 6. Binding = Binding foundations, mean score of ingroup, authority, and purity, ranging from 1 to 6. RPVD = relative perceived vulnerability to disease, COVID-19 minus general, ranging from 1 to 7. The internal consistency coefficients (Cronbach α's) are presented in parentheses in the diagonal.
** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

To assess independent relationships of individualizing and binding foundations, I conducted a series of multiple regression analyses with self-reported endorsement of individualizing and binding foundations as simultaneous predictors of the outcome variables (Table 2). Results indicated that endorsement of individualizing foundations was negatively related to COVID-19 information avoidance and perceptions of information contamination, but positively related to COVID-19 knowledge-seeking and performance on the COVID-19 knowledge test (d'). In contrast, endorsement of binding foundations was positively related to COVID-19 information avoidance and perceptions of information contamination, but negatively related to performance on the COVID-19 knowledge test (d'). In line with the hypotheses, endorsement of binding foundations was not statistically significantly associated with COVID-19 knowledge-seeking.

Table 2

Study 1: Multiple Regression Models

Outcome	Predictors	*B*	*SE*	*t*	*p*	LLCI – ULCI
Information Avoidance	Constant	5.46	.94	5.83	<.01	3.61 – 7.31
	Indv	-.67	.17	-3.93	<.01	-1.01 - -.34
	Bind	.23	.11	2.04	.04	-.01 - .46
Knowledge-Seeking	Constant	2.23	.85	2.62	<.01	.55 – 3.91
	Indv	.60	.16	3.84	<.01	.29 - .91
	Bind	-.13	.10	-1.28	.20	-.34 - .07
COVID-19 Knowledge	Constant	.41	.37	1.10	.27	-.32 – 1.14
	Indv	.30	.07	4.43	<.01	.17 - .44
	Bind	-.15	.05	-3.35	<.01	-.24 - -.06
Information Contamination	Constant	3.71	.81	4.57	<.01	2.11 – 5.31
	Indv	-.52	.15	-3.50	<.01	-.81 - -.23
	Bind	.58	.10	5.87	<.01	.39 - .77

Note. CIs (95%) are presented for *B,* unstandardized coefficients. Indv = Individualizing foundations, mean score of harm (avoidance) and fairness. Bind = Binding foundations, mean score of ingroup, authority, and purity.

Mediation Analyses

The second purpose of Study 1 was to investigate whether endorsement of moral foundations mediate relationships between political conservatism and various indicators of engagement with COVID-19 knowledge. As indicated in Table 1, political conservatism was

negatively associated with individualizing foundations, COVID-19 knowledge test performance, knowledge-seeking, and relative perceived vulnerability to disease, but positively related to binding foundations, COVID-19 information avoidance, and information contamination. To investigate the mediation hypothesis, I used PROCESS (Hayes, 2013) with 5000 bootstrap samples to conduct several tests with endorsement of individualizing and binding foundations as simultaneous mediators of the relationship between political conservatism and each knowledge engagement outcomes. Table 3 shows the direct and indirect effects in the mediation tests.

Table 3

Study 1: The Summary of Indirect and Direct Effects in Mediation Model

Outcome		Effect	LLCI - ULCI
Information Avoidance	Direct Effect	.22*	.03 - .40
	Indirect Effect 1	.07**	.02 - .12
	Indirect Effect 2	.03	-.06 - .13
Knowledge-Seeking	Direct Effect	-.30**	-.48 - -.12
	Indirect Effect 1	-.05*	-.10 - -.01
	Indirect Effect 2	-.03	-.05 - .12
COVID-19 Knowledge	Direct Effect	.03	-.04 - .10
	Indirect Effect 1	-.04**	-.07 - -.01
	Indirect Effect 2	-.07**	-.11 - -.03
Information Contamination	Direct Effect	.20*	.03 - .37
	Indirect Effect 1	-.04**	-.01 - -.09
	Indirect Effect 2	.17**	.08 - .24

Notes. Direct Effect = direct effect of political conservatism. Indirect Effect 1 = indirect effect of individualizing foundations. Indirect Effect 2 = indirect effect of binding foundations. CIs (95%) are presented for the effects. All tests were run by using PROCESS Model. The pattern of findings for the indirect effects was unearthed when I standardized the variables.

* indicates $p < .05$ and ** indicates $p < .01$

Consistent with hypotheses, negative endorsement of individualizing foundations partially mediated the relationship between political conservatism and COVID-19 information avoidance (Figure 1). In contrast, there was no evidence that endorsement of binding foundations mediated this relationship.

Figure 1

Study 1: Mediation Test for Information Avoidance
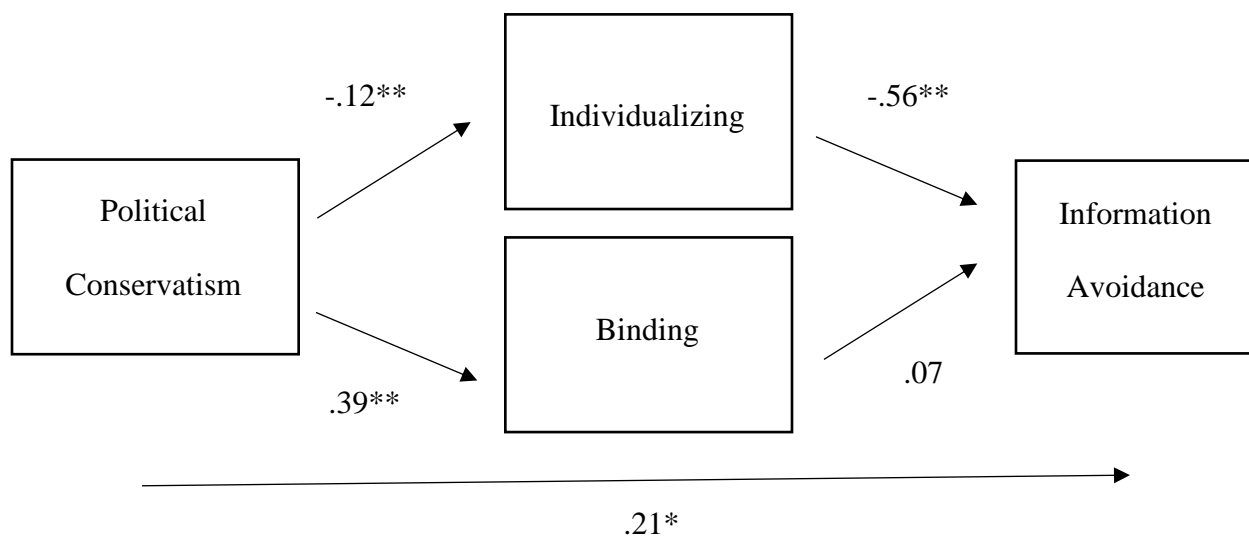
Note. * indicates $p < .05$. ** indicates $p < .01$.

Similarly, consistent with hypotheses, positive endorsement of individualizing foundations partially mediated the relationship between political ideology and COVID-19 knowledge-seeking (Figure 2). Again, there was no evidence that endorsement of binding foundations mediated this relationship.

Figure 2

Study 1: Mediation Test for Knowledge-Seeking

-.12**   Individualizing   .44*

Political

Conservatism

Binding

Knowledge

Seeking

.39**   .09

-.30**
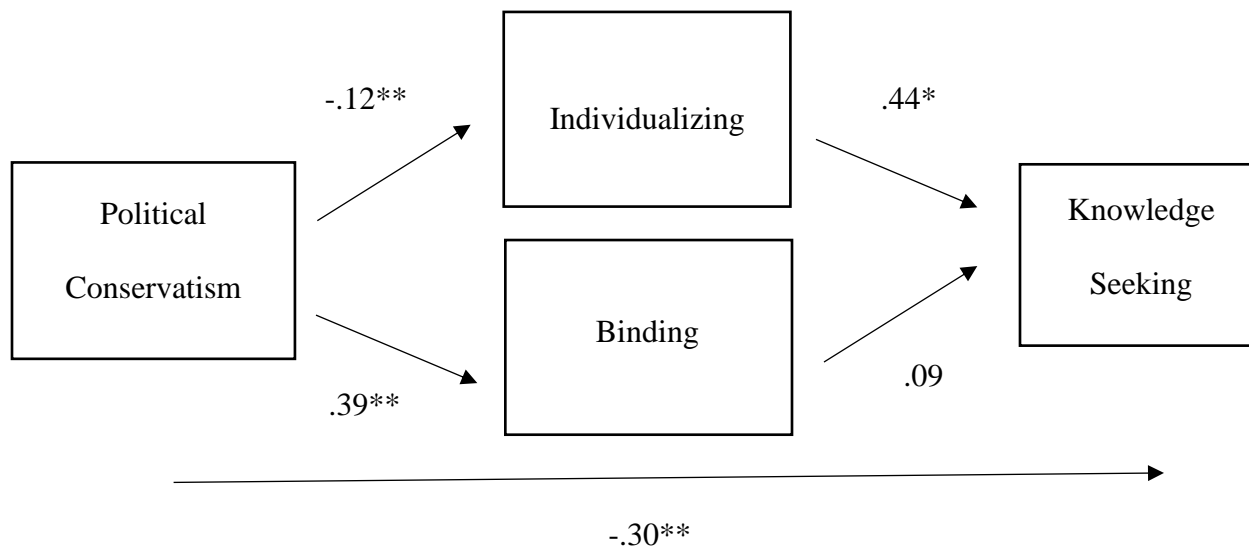
Note. * indicates *p* < .05. ** indicates *p* < .01.

In contrast, and consistent with hypotheses, results indicated that both endorsement of individualizing foundations and (negative) endorsement of binding foundations simultaneously mediated the relationship between political conservatism and COVID-19 knowledge (Figure 3).

Figure 3

Study 1: Mediation Test for COVID-19 Knowledge
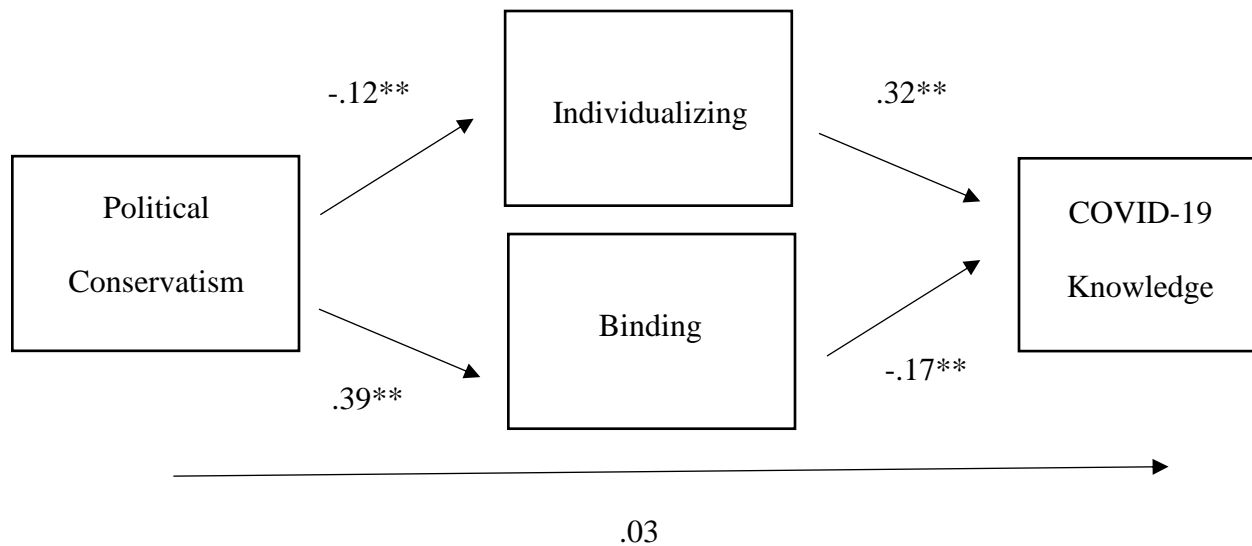
Note. ** indicates *p* < .01.

Likewise, consistent with hypotheses, results indicated that both (negative) endorsement of individualizing foundations and endorsement of binding foundations partially mediated the relationship between political conservatism and perceptions of informational contamination (Figure 4).

Figure 4

Study 1: Mediation Model for Information Contamination
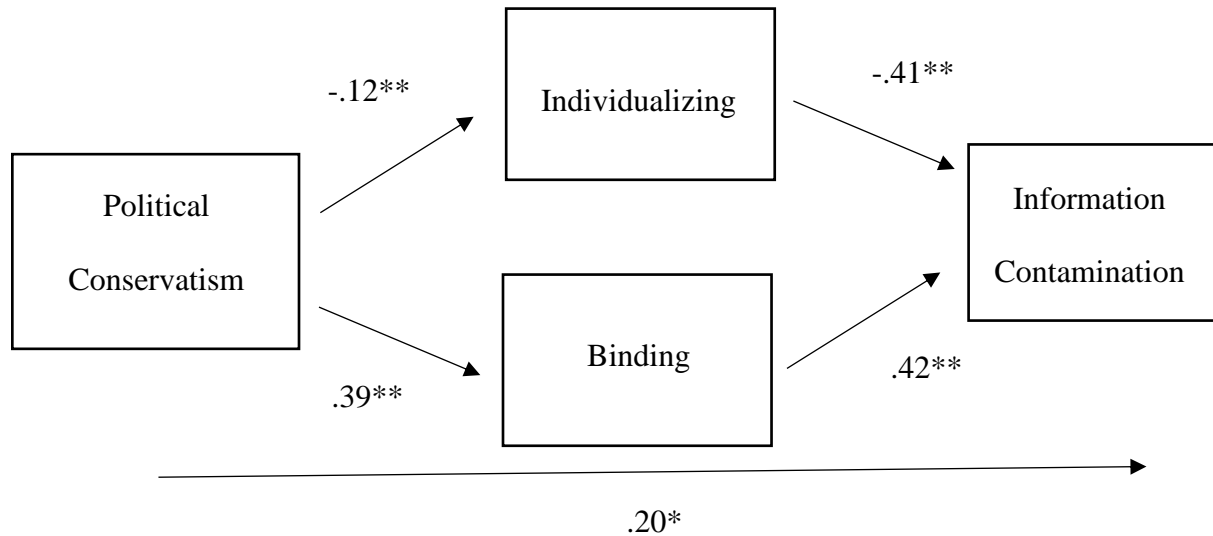
Note. * indicates $p < .05$. ** indicates $p < .01$.

Relative Perceived Vulnerability to Disease

As simultaneous predictors, binding foundations were negatively ($B_1 = -.18$, $p < .01$), and individualizing foundations were positively ($B_2 = .32$, $p < .01$) related to RPVD, $R^2 = .07$, $F(2, 202) = 7.97$, $p < .01$. At the bivariate correlation level, political conservatism was negatively related to RPVD, $r(205) = -.16$, $p = .02$. The mediation analysis using PROCESS (Hayes, 2013) with 5000 bootstrap samples provided evidence that endorsement of individualizing foundations mediated the relationship between political conservatism ($E = -.01$, 95% $CI = [-.13 - .11]$; $B_1 = -.01$, $p = .82$) and RPVD ($IE_1 = -.03$, 95% $CI = [-.07 - -.01]$; $B_2 = .30$, $p < .01$). However, the

evidence regarding the mediating role for endorsement of binding foundations was equivocal

($IE_2 = -.07$, 95% $CI = [-.14 - .01]$; $B_3 = -.17$, $p = .04$), $R^2 = .07$, $F(3, 201) = 5.30$, $p < .01$.[4]

Summary

Results of Study 1 revealed hypothesized association between endorsement of moral

foundations and engagement with authoritative knowledge about COVID-19. Individualizing

foundations were positively associated with COVID-19 knowledge-seeking, accurate COVID-19

knowledge, and negatively associated with COVID-19 information avoidance and information

contamination. Despite the lack of evidence for binding foundations regarding information

avoidance, binding foundations were negatively related to COVID-19 knowledge and positively

related to information contamination. These relationships between moral foundations and

knowledge engagement not only were independent of political conservatism, but also partially

accounted for relationships between political conservatism and engagement with knowledge.

To my knowledge, Study 1 is the first empirical study to provide evidence regarding the

moral foundations of engagement with knowledge. However, evidence in Study 1 is correlational

in character. Accordingly, it is unclear whether moral foundations afford different patterns of

knowledge engagement or whether their observed association is a product of mutual

relationships with some unobserved, third variable. Evidence for a causal relationship between

moral foundations and knowledge engagement requires an experimental design. This is the

purpose of Study 2.

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[4] Even though the p value is <.01, the confidence interval includes 0. Considering the confidence interval uses bootstrapping method and provides a more robust interpretation, I did not conclude that binding foundations statistically significantly mediate the relationship between political ideology and RPVD.

Study 2

Aim and Hypotheses

In Study 2, I conducted an experiment to test the hypothesis that variation in emphasis on different moral foundations can be sufficient to afford different patterns of knowledge-seeking or information avoidance behavior. The theoretical framework I articulated in the introduction and the results of Study 1 suggest the hypothesis that an emphasis on individualizing foundations will promote tendencies to seek and engage with authoritative knowledge in general, including scientific information about COVID-19. In contrast, this framework suggests the hypothesis that an emphasis on binding foundations will selectively increase information avoidance regarding COVID-19, but not the other subjects.

Method

Participants

G Power (3.1.9.4) analyses indicated a sample size of $N = 207$ for desired statistical power given the design of the study (ANOVA: Fixed effects, omnibus, one-way; effect size = 0.25, $\alpha = 0.05$, power = 0.90, number of groups = 3). I recruited participants via Cloud Research. All participants were U.S. citizens, and they received $1.00 for their time to complete measures. I used panel features of Cloud Research to make the study accessible to participants only with non-extreme scores on political ideology. The reason for this restriction was the expectation of politically moderate people to be relatively more open to the potential effects of the manipulation.

Study 2 was an experiment, which required additional considerations regarding data quality. For instance, I had to make sure that participants engaged sufficiently with experimental treatments, and the treatments had to be strong enough that their effects would last for the

duration of the procedure. Therefore, I eliminated data from participants who spent less than 10 minutes or more than 40 minutes to complete the survey. To eliminate potential confounding effects of individual experiences with COVID-19 on engagement with COVID-19 knowledge, I also excluded data from participants who indicated that they had been diagnosed with COVID-19 or had exhibited coronavirus-like symptoms in the past two months. For the same reason, I excluded data from participants who knew or were in close proximity to someone diagnosed with or exhibiting symptoms of COVID-19 in the last two months (Conway et al., 2020). [5] These exclusions reduced the effective sample size to 205 participants.

The age of the participants (135 women and 70 men) ranged from 19 to 89 years ($M =$ 42.95, $SD = 13.82$). Majority of the participants (146) reported White race/ethnicity. The remaining participants reported East Asian, African American, mixed or did not indicate any ethnic/racial background. With respect to education, 31% of participants had a high-school degree, 49% of participants had a bachelor's degree, and 17% had a master's degree. The rest of the participants indicated that their degree is either higher than a Ph.D. or lower than a high-school degree. Almost half of the participants were religious. One hundred eight participants reported that they are religious (90% of them were Christians), and 97 participants reported non-religious.

Manipulation of Moral Foundations

As far as I can tell from my review of published research, no study to date has manipulated the emphasis on moral foundations to test effects on outcomes of interest. Accordingly, I had to design my own manipulation of moral foundations. I assigned participants

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[5] Participants also reported the extent to which they feel anxious about COVID-19 on a single-item measure for exploratory purposes. When controlled for this variable, it did not have any significant effect on the presented analyses.

to one of three conditions at random. In the *binding* condition, participants read a passage about the importance of binding foundations to human survival. In the *individualizing* condition, participants read a passage about the importance of individualizing foundations to human survival. In the *control* condition, participants read a passage about cooking rice. All participants responded to two open-ended questions and a multiple-choice question for attention check purposes. All 205 participants passed this attention check.

Procedure

After the manipulation of moral foundations, participants completed a self-report measure of COVID-19 information avoidance and knowledge-seeking. They then had the opportunity to read four short texts, after which they responded to multiple-choice questions to assess their engagement with the material and self-report measures of interest in learning more about the topic of each text. Finally, participants completed a moral foundations questionnaire (MFQ30) and items concerning political ideology, COVID-19 experiences, and demographic information. See appendices for the materials.

Measures

Information Avoidance

Self-Report Measure. Participants responded to five items on a 7-point Likert-type scale from -3 (*strongly disagree*) to 3 (*strongly agree*) to indicate their avoidance of COVID-19 information (adapted from Conway et al., 2020, and Howell & Shepperd, 2016). I coded the responses from -3 to 3 into 1 to 7 for the purposes of analyses and readability. An example item was "I would avoid learning COVID-19 and public health guidelines." ($M = 2.30$, $SD = 1.30$; α = .88).

Behavioral Measure. Participants encountered four short texts with time tracking, which indicated the time spent on each text, to capture tendencies to avoid COVID-19 information. The instructions directed participants to spend as much time as they wanted reading each text. Two of those texts were related to COVID-19: the number of cases and approved vaccines in the U.S. The other two texts were about subjects that were not related to COVID-19: types of paper and weather forecasts. I used the timer function of Qualtrics to measure the time participants spent on each page. I created in index of COVID-19 information avoidance by calculating the mean time spent on the two COVID-19-related texts ($M = 15.47$, $SD = 14.70$). I also created an index of alternative-subjects information avoidance by calculating the mean time spent on alternative-subject texts ($M = 15.19$, $SD = 12.40$). Shorter time spent indicated higher avoidance.

Knowledge-Seeking

Self-Report Measures. I used two self-report indicators to measure interest in knowledge regarding COVID-19 and other subjects.

COVID-19 Knowledge-Seeking. Participants responded to five 7-point Likert-type items from -3 (*strongly disagree*) to 3 (*strongly agree*) to measure COVID-19 knowledge-seeking (adapted from Conway et al., 2020, and Howell & Shepperd, 2016). I coded the responses from -3 to 3 into 1 to 7 for the purposes of analyses and readability. An example item was "Even if it might upset me, I would want to seek information about COVID-19." ($M = 5.41$, $SD = 1.27$; $\alpha = .93$).

Interest in Subjects of Short Texts. After encountering all four short texts, participants indicated the extent to which they would like to learn more about the subjects of each text on a scale from -3 (*not interested at all*) to 3 (*very interested*). I coded the responses from -3 to 3 into

1 to 7 for the purposes of analyses and readability. I created a total interest score by computing the mean of interest ratings across the four subjects ($M = 4.26$, $SD = 1.23$).

Behavioral Measures (Quality Engagement). Participants responded to four multiple choice items about the content of the passages. I computed the sum of current responses to create a measure of quality of engagement ($M = 3.00$, $SD = .95$). Higher scores indicated better performance.

Moral Foundations

Participants completed the 30-item Moral Foundations Questionnaire (MFQ30; Graham et al., 2011), which was the extended version of the MFQ20 that I used in Study 2. I measured self-reported MFQ30 as an exploratory measure to teste the hypotheses in a different way than experimental manipulation. Like MFQ20, MFQ30 consists of two parts, moral relevance (Part I) and moral judgments (Part II), each with three items for five subfactors: harm (avoidance), fairness, ingroup, authority, and purity.

In Part I, participants used a scale from 0 (not relevant at all) to 5 (extremely relevant) to indicate the *moral relevance* of items representing different moral foundations. An example item for harm foundation in Part I is, "whether or not someone suffered emotionally." In Part II, participants used a scale from 0 (strongly disagree) to 5 (strongly agree) to indicate their agreement with different *moral judgments*. An example item for loyalty in Part II is, "people should be loyal to their family members, even when they have done something wrong." I coded the responses from 0 to 5 into 1 to 6 for the purposes of analyses and readability. I applied the same procedure in Study 1 to create composite scores for individualizing (harm and fairness

items; *M* = 4.70, *SD* = .68; α = .78) and binding (loyalty, authority, and purity items; *M* = 3.72,

SD = .83; α = .89) foundations.[6]

Political Ideology

Participants completed the same political ideology measure as Study 1. Again, I created a

composite political ideology score for each participant by computing the mean of the scores for

economic and social conservatism (from 1 to 7). Higher scores indicated more conservatism (*M*

= 3.87, *SD* = 1.40; α = .78).[7]

Demographics

Participants responded to a series of questions regarding their demographic information.

Similar to Study 1, they indicated their gender, age, ethnicity, religious affiliation, and the

frequency with which they watched different TV channels (i.e., information ecology).

Results and Discussion

The main purpose of Study 2 was to investigate the effects of manipulation on the

dependent variables. I also examined relationships of dependent variables with self-report

measures of endorsement of different moral foundations.

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[6] Cronbach's alpha scores for the subscales of moral foundations as harm (*M* = 4.76, *SD* = .75), fairness (*M* = 4.62, *SD* = .72), loyalty (*M* = 3.48, *SD* = .88), authority (*M* = 3.97, *SD* = .81), and purity (*M* = 3.69, *SD* = 1.20), were α = .70, .65, .74, .67, and .86, respectively.

[7] Participants indicated their political party preference on a 7-point spectrum from Democrat to Republican. Higher scores indicated higher identification with the Republican Party, and lower scores indicated higher identification with the Democrat Party (*M* = 3.70, *SD* = 1.83). Because the tendencies of political party affiliation and political ideology were almost the same, I proceeded with the analyses by using political ideology for the sake of simplicity. Participants also indicated the candidate they voted for in the 2020 presidential elections. Similar to political party affiliation, voting preference of the participants were corresponding to their political standing in both the ideology and party affiliation measures. Therefore, for the sake of simplicity, I did not include voting preference in the analyses either.

Effects of the Experimental Conditions

I conducted the primary tests of hypotheses using planned contrasts in one-way ANOVA.[8] The hypotheses and corresponding contrast codes differed depending on whether the outcome was related to knowledge-seeking or information avoidance. As I mentioned earlier, individualizing foundations concern finding the truth as an epistemic orientation. In other words, individualizing foundations afford the motivation for seeking knowledge in any domain. This motivation is rooted in enlightenment ethics and modernity. From the perspective of enlightenment ethics and modernity, curiosity and "being an informed citizen" are desirable characteristics (Inkeles, 1975). Therefore, knowledge-seeking tendencies associated with individualizing foundations are not target-specific. In line with the corresponding hypothesis, I aimed to compare the individualizing group to the other groups for outcomes related to knowledge-seeking. To test the hypothesized effect of individualizing foundations on general knowledge-seeking, I conducted planned contrasts with contrast set A. Contrast set A consists of a pair of contrasts: respective codes of (2, -1, -1) for individualizing, binding, and control conditions (contrast A_1), and respective codes of (0, -1, 1) for individualizing, binding, and control conditions (contrast A_2).

However, binding foundations concern selective avoidance of information that could be threatening the legitimacy of the traditional authority, the image of the ingroup, and ideological purity. In line with the corresponding hypothesis, I aimed to compare the binding group to the

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[8] A series of Levene's tests indicated no evidence for violation of the assumption of homogeneity of variance across conditions. The only exception was the time spent on COVID-19 related texts, which is the variable I use to measure COVID-19 avoidance. Due to this violation of homogeneity of variances, I ran Kruskal-Wallis test for this variable to compare the results with the one-way omnibus ANOVA. The Kruskal-Wallis test and the one-way ANOVA showed the same patterns across two tests in both direction and strength. Therefore, I decided to report the results of one-way ANOVA for the time spent on COVID-19 related texts instead of the Kruskal-Wallis test for the sake of simplicity.

other two groups (i.e., individualizing and control) for outcomes related to information avoidance. To test the hypothesized effect of individualizing foundations on knowledge-seeking, I conducted planned contrasts with contrast set B. Contrast set B consists of a pair of contrasts: respective codes of (-1, 2, -1) for individualizing, binding, and control conditions (contrast B_1), and respective codes of (-1, 0, 1) for individualizing, binding, and control conditions (contrast B_2).

Knowledge-Seeking

Means and standard deviations for each outcome as a function of condition appear in Table 4.

Table 4

Study 2: Results of One-Way ANOVA

Variable	Indv (N = 57)		Bind (N = 72)		Control (N = 76)		ANOVA		
	M	SD	M	SD	M	SD	F	df	η^2
Self-Report IA (C)	2.49	1.39	2.15	1.27	2.30	1.27	1.12	2,202	.011
Self-Report KS (C)	5.21	1.31	5.54	1.18	5.44	1.32	1.11	2,202	.011
Self-Report KS (G)	4.14	1.51	4.36	1.10	4.26	1.11	.49	2,202	.005
Behavioral COVID-19	16.83	16.06	12.69	7.22	17.09	18.28	2.01	2,202	.019
Behavioral Alternative	15.08	13.77	14.48	10.15	15.95	13.34	.26	2,202	.003
Behavioral KS (G)	3.26	.95	3.00	.92	2.83	.94	3.49*	2,202	.033
Binding	3.75	.88	3.72	.84	3.67	.79	.13	2,202	.001
Individualizing	4.72	.72	4.73	.64	4.64	.68	.41	2,202	.004

Notes. Indv = individualizing group. Bind = binding group. Control = control group. Self-Report IA (C) = Self-reported COVID-19 information avoidance ranging from 1 to 7, higher scores indicate higher avoidance. Self-Report KS (C) = Self-reported COVID-19 knowledge seeking ranging from 1 to 7, higher scores indicate higher COVID-19 knowledge-seeking. Self-Report KS (G)= Self-reported general interest in learning more about the subjects the participants encountered via short texts they read ranging from 1 to 7, higher scores indicate higher knowledge-seeking in general. Behavioral COVID-19= time spent on COVID-19 related texts, lower scores indicate more avoidance. Behavioral Alternative = time spent on alternative texts, lower scores indicate more avoidance. Behavioral KS (G)= behavioral knowledge seeking ranging from 1 to 4, measured by the performance on multiple-choice test items related to the presented texts, higher scores indicate more knowledge-seeking. Binding = Self-reported binding foundations, mean score of ingroup, authority, and purity, ranging from 1 to 6. Individualizing = Self-reported individualizing foundations, mean score of harm (avoidance) and fairness, ranging from 1 to 6.

* indicates that the *F* score is significant at the 0.05 level (2-tailed).

The omnibus test for the one-way ANOVA of self-reported COVID-19 knowledge-seeking was not statistically significant, $F(2, 202) = 1.11$, $p = .33$. Neither the first contrast nor the second contrast in contrast set A reached conventional levels of statistical significance, $t(202) = -1.41$, $p = .16$ (contrast A$_1$), $t(202) = -.48$, $p = .64$ (contrast A$_2$). Similarly, the omnibus ANOVA of self-reported general interest was not statistically significant, $F(2, 202) = .49$, $p = .61$. Again, neither the first contrast nor the second contrast in contrast set A reached conventional levels of statistical significance, $t(202) = -.88$, $p = .38$ (contrast A$_1$), $t(202) = -.47$, $p = .64$ (contrast A$_2$).

In contrast to self-report measures, the omnibus test for the one-way ANOVA for the behavioral measure of knowledge-seeking, which I operationalized by performance on the multiple choice test, was statistically significant, $F(2, 202) = 3.49$, $p = .03$. More importantly, first contrast in contrast set A revealed the hypothesized pattern. That is, performance on the multiple-choice test was better among participants in the individualizing condition than the binding and control conditions, $t(202) = 2.38$, $p = .018$ (contrast A$_1$), which did not differ from each other, $t(202) = -1.11$, $p = .27$ (contrast A$_2$).

Information Avoidance

The omnibus test for the one-way ANOVA of self-reported COVID-19 information avoidance was not statistically significant, $F(2, 202) = 1.12$, $p = .33$. Moreover, neither the first contrast nor the second contrast in contrast set B for this measure reached conventional levels of statistical significance, $t(202) = 1.34$, $p = .18$ (contrast B$_1$), $t(202) = -.87$, $p = .39$ (contrast B$_2$).

The omnibus test for one-way ANOVA of behavioral COVID-19 information avoidance was not statistically significant either, $F(2, 202) = 2.01$, $p = .13$. However, the contrast tests

provided some evidence in the hypothesized direction.[9] Behavioral COVID-19 information avoidance, measured by the time spent on COVID-19 related short texts, was higher among participants in the binding condition than the individualizing and control conditions (contrast B$_1$), $t(188.38) = 2.48$, $p = .014$. Participants in the individualizing condition did not differ from control group in this measure (contrast B$_2$), $t(127.68) = .10$, $p = .92$.

As seen in Table 5, the omnibus test for one-way ANOVA was not statistically significant for behavioral avoidance of alternative-subjects, measured by the time spent on short texts about alternative subjects, $F(2,202) = .26$, $p = .79$. Neither the first contrast nor the second contrast in contrast set B reached the conventional level of statistical significance either, $t(202) = -.07$, $p = .95$ (contrast B$_1$), $t(202) = .40$, $p = .70$ (contrast B$_2$). Patterns for behavioral avoidance of alternative subjects provided some evidence for the selective information avoidance, which I theoretically associated with binding foundations.

Individualizing and Binding Foundations

The omnibus test for the one-way ANOVA was not statistically significant for self-reported individualizing foundations, $F(2, 202) = .41$, $p = .67$. Neither the first contrast nor the second contrast in contrast set A was statistically significant for this measure either, $t(202) = .29$, $p = .78$ (contrast A$_1$), $t(202) = -.87$, $p = .39$ (contrast A$_2$). Similarly, the omnibus test for the one-way ANOVA was not statistically significant for self-reported binding foundations, $F(2, 202) = .13$, $p = .88$. Neither the first nor the second contrast in contrast set B was statistically significant either, $t(202) = .39$, $p = .70$ (contrast B$_1$), $t(202) = -.49$, $p = .62$ (contrast B$_2$).

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[9] When I conducted the contrast t-tests, I again conducted Kruskal-Wallis test for comparison. This time, however, Kruskal-Wallis test revealed different results for the time spent on COVID-19 related texts. Given that the homogeneity of variance is violated for this variable, I reported the results of the Kruskal-Wallis test instead of the t-test.

These results suggested that the manipulation did not affect the self-reported moral foundations, which I included for purposes of hypothesis testing in a different way than the experimental manipulation. Accordingly, I proceeded to investigate these patterns at correlational level.

Relationships with Self-Report Measures of Moral Foundations

Table 5 shows the bivariate correlations.

Table 5

Study 2: Descriptive Statistics, Internal Consistency Coefficients, and Zero-Order Correlations Between Variables

	M	SD	1	2	3	4	5	6	7	8	9
1. Conservatism	3.87	1.40	---								
2. Binding	3.71	.83	.50**	(.89)							
3. Individualizing	4.70	.68	-.33**	.06	(.78)						
4. Self-Report IA (C)	2.30	1.30	.31**	.03	-.28**	(.88)					
5. Self-Report KS (C)	5.41	1.27	-.38**	.02	.39**	-.86**	(.93)				
6. Self-Report KS (G)	4.26	1.23	-.23**	.06	.18*	-.47**	.53**	---			
7. Behavioral COVID-19	15.47	14.70	.30	.11	.07	-.04	.06	.07	---		
8. Behavioral Alternative	15.19	12.40	-.09	-.03	.11	-.11	.12	.17*	.57**	---	
9. Behavioral KS (G)	3.01	.94	-.06	-.05	.16*	-.17*	.18*	.07	.25**	.24**	---

Notes. Conservatism = Political conservatism from 1 to 7, higher scores indicate more conservativeness. Binding = Self-reported binding foundations, mean score of ingroup, authority, and purity, ranging from 1 to 6. Individualizing = Self-reported individualizing foundations, mean score of harm (avoidance) and fairness, ranging from 1 to 6. Self-Report IA (C) = Self-reported COVID-19 information avoidance ranging from 1 to 7, higher scores indicate higher avoidance. Self-Report KS (C) = Self-reported COVID-19 knowledge seeking ranging from 1 to 7, higher scores indicate higher COVID-19 knowledge-seeking. Self-Report KS (G)= Self-reported general interest in learning more about the subjects the participants encountered via short texts they read ranging from 1 to 7, higher scores indicate higher knowledge-seeking in general. Behavioral COVID-19= time spent on COVID-19 related texts, lower scores indicate more avoidance. Behavioral Alternative = time spent on alternative-subject texts, lower scores indicate more avoidance. Behavioral KS (G)= behavioral knowledge seeking ranging from 1 to 4, measured by the performance on multiple-choice test items related to the presented texts, higher scores indicate more knowledge-seeking.

The internal consistency coefficients (Cronbach α's) are presented in parentheses in the diagonal.

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Self-reported binding foundations were not related to any self-reported or behavioral measures of engagement with knowledge. In contrast, individualizing foundations showed patterns in support of the hypotheses. Consistent with the hypotheses, individualizing foundations were related to behavioral knowledge-seeking (i.e., performance on the multiple-choice test), self-reported COVID-19 and general knowledge-seeking positively, and self-reported COVID-19 information avoidance negatively. Similar to Study 1, political conservatism was positively related to self-reported measures of binding foundations and COVID-19 information avoidance, and negatively related to self-reported COVID-19 knowledge-seeking.

Endorsement of moral foundations reflects a long process of engagement with particular cultural ecologies and social products. Therefore, I was not expecting to observe significant differences of self-reported moral foundations as a function of the manipulation. Instead, I included the MFQ30 to test hypotheses regarding moral foundations and knowledge outcomes in a different way. To assess independent relationships of individualizing and binding foundations, I conducted a series of multiple regression analyses with self-reported endorsement of individualizing and binding foundations as simultaneous predictors of the outcome variables. Table 6 shows the results of the multiple regression tests.

Table 6

Study 2: Multiple Regression Models

	Predictors	*B*	*SE*	*t*	*p*	LLCI – ULCI
Self-Report IA (C)	Constant	4.57	.71	6.43	<.01	3.17 – 5.97
	Indv	-.54	.13	-4.18	<.01	-.80 - -.29
	Bind	.08	.11	.73	.47	-.13 - .29
Self-Report KS (C)	Constant	1.98	.67	2.98	<.01	.67 – 3.29
	Indv	.74	.12	6.06	<.01	.50 - .98
	Bind	-.01	.10	-.09	.93	-.20 - .19
Self-Report KS (G)	Constant	2.51	.69	3.65	<.01	1.15 – 3.87
	Indv	.32	.12	2.52	.01	.07 - .56
	Bind	.07	.10	.70	.49	-.13 - .27
Behavioral COVID-19	Constant	2.11	8.29	.25	.80	-14.23 – 18.44
	Indv	1.35	1.52	.89	.37	-1.64 – 4.34
	Bind	1.89	1.23	1.53	.13	-.55 – 4.31
Behavioral Alternative	Constant	7.27	6.99	1.04	.30	-6.52 – 21.05
	Indv	2.15	1.28	1.68	.09	-.38 – 4.67
	Bind	-.58	1.04	-.56	.58	-2.63 – 1.47
Behavioral KS (G)	Constant	2.17	.53	4.08	<.01	1.12 – 3.21
	Indv	.24	.10	2.43	.02	.04 - .43
	Bind	-.07	.08	-.90	.37	-.23 - .09

Notes. Self-Report IA (C) = Self-reported COVID-19 information avoidance. Self-Report KS (C)

= Self-reported COVID-19 knowledge-seeking. Self-Report KS (G)= Self-reported general

interest in learning more about the subjects the participants encountered via short texts they read. Behavioral COVID-19= time spent on COVID-19 related texts, lower scores indicate more avoidance. Behavioral Alternative = time spent on alternative-subject texts, lower scores indicate more avoidance. Behavioral KS (G)= behavioral knowledge seeking. Indv = Self-reported individualizing foundations, mean score of harm (avoidance) and fairness. Bind = Self-reported binding foundations, mean score of ingroup, authority, and purity.

CIs (95%) are presented for *B,* unstandardized coefficients.

* indicates *p* < .05, ** indicates *p* < .01.

Binding foundations did not have a significant relationship with any of the behavioral or self-reported measures of engagement with knowledge. However, the results still provided some evidence that replicates the results of Study 1. For instance, individualizing foundations were related to all of the self-reported and behavioral measures of knowledge-seeking positively, and self-reported COVID-19 avoidance negatively.[10]

Summary

Study 2 provided some evidence in support of the hypotheses. The experimental manipulation affected behavioral measures in the expected directions. Moral emphasis on individualizing foundations increased knowledge-seeking behavior, and moral emphasis on binding foundations increased selective (i.e., COVID-19) information avoidance behavior.

The manipulation did not affect the self-report measures of knowledge engagement. One potential reason for this lack of effect concerns the motivation to be identity-consistent while responding to these measures. In contrast to self-report measures, behavioral measures are unfamiliar, and highly structured. Therefore, behavioral measures do not afford the expression of this motivation while self-reported measures do.

Another reason why the experimental manipulation did not impact self-reported measures of knowledge engagement, which is somewhat related to the previous reason, concerns implications of the classic tension between personal habits and situational affordances. These

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[10] At bivariate correlation level, political conservatism had statistically significant relationships with knowledge outcomes. To determine whether the relationships of moral foundations with knowledge engagement are independent of the relationships with political ideology, I conducted multiple regression analyses with political ideology in the model. The patterns remained the same, except for self-reported knowledge-seeking and general interest scores. In the presence of political conservatism, binding foundations were positively related to these two measures. These results were in line with the idea of a potentially complex relationship of knowledge-seeking with binding foundations, as I mentioned earlier. Binding foundations were positively related to self-reported knowledge-seeking and interest, once one accounts for the impact of conservatism. See Table 7 in Appendices for the results of these exploratory tests.

affordances are closely related to the distinction between relatively deliberate self-report outcomes and less deliberate behavioral responses. Participants inhabit cultural ecologies that promote different moral virtues, and these cultural ecologies afford various patterns of behaviors that have deep and habitual roots in an individual's life. An experimental manipulation of situational emphasis may only have little impact on conscious reflection about one's habitual patterns. I elaborate on this issue further in the general discussion section.

Although the experimental manipulation did not impact self-reported knowledge engagement, multiple regression models provided some evidence for the hypothesized relationships. This evidence was limited to endorsement of individualizing foundations. Similar to Study 1, there was no evidence that endorsement of binding foundations was related to self-reported knowledge engagement. Moreover, although results revealed evidence of hypothesized relationships between endorsement of individualizing foundations and the behavioral measure of knowledge seeking (i.e., performance on the multiple-choice test), they did not reveal such evidence for the behavioral measure of information avoidance (i.e., time spent on short texts).

General Discussion

Moral foundations are psychological adaptations to different cultural ecologies. Cultural ecologies that afford a modern-individualist sense of abstraction from context promote an emphasis on individualizing moral foundations of fairness and avoidance of harm. Cultural ecologies that afford an experience of embedded interdependence and associated tendencies of hierarchical relationality (Keller, 2019) promote an emphasis on binding moral foundations of authority, loyalty, and purity. The purpose of this project was to investigate implications of moral foundations for engagement with knowledge. The guiding idea is that individualizing moral foundations are associated with the open pursuit of knowledge as a basis for reasoned

action, but binding foundations promote a more selective engagement with knowledge in deference to traditional authority.

Study 1 considered patterns of association between endorsement of different moral foundations and engagement with COVID-19 knowledge. A series of multiple regression and mediation analyses in Study 1 showed that self-reported endorsement of individualizing foundations was positively related to accurate COVID-19 knowledge and self-reported COVID-19 knowledge-seeking, but negatively related to self-reported COVID-19 information avoidance and perception of informational contamination. Self-reported endorsement of binding foundations was negatively related to accurate COVID-19 knowledge, but positively related to perceived informational contamination and (more modestly) to self-reported COVID-19 information avoidance. These patterns were not just independent of mutual relationships with political conservatism, but instead accounted for (i.e., mediated) relationships between political conservatism and knowledge engagement.

The purpose of Study 2 was to test the causal effect of engagement with the cultural discourses that emphasize different moral virtues on engagement with knowledge. Results of Study 2 suggested that, consistent with hypotheses, an emphasis on cultural discourse about the importance of binding foundations promoted target-specific (i.e., COVID-19) information avoidance, which I operationalized via time spent on COVID-19 related texts. In contrast, but also consistent with hypotheses, an emphasis on cultural discourse about the importance of individualizing foundations afforded a general tendency to seek knowledge, which I operationalized via performance on the multiple-choice test. The experimental manipulation did not produce hypothesized effects on self-reported information avoidance or knowledge-seeking. However, multiple regression analyses with self-reported endorsement of individualizing and

binding foundations as predictor variables provided some support for the hypotheses. In particular, and replicating the results of Study 1, endorsement of individualizing foundations was positively related to self-reported and behavioral (i.e., performance on the multiple-choice test) knowledge-seeking, and negatively related to self-reported COVID-19 information avoidance.

Limitations

This work investigated the role of moral sensibilities on engagement with knowledge and provided some evidence in support of the hypotheses. However, this investigation is not without limitations. One of these limitations would be the data collection method I used in this work. In both studies, I collected data from Amazon MTurk workers. Even though Amazon MTurk is a cost-efficient and convenient platform for data collection (Paolacci et al. 2010), it has its own limitations with regards to data quality and sample characteristics. I took some precautions to address these limitations the best I could, such as setting upper and lower thresholds for survey completion time (for example, 10 to 40 minutes as in Study 2; Smith, 2013), eliminating computer bots by using CAPTCHAs, or using open-ended questions for purposes of attention check and detection of human bots (Yarrish, 2019).[11] However, these precautions did not account for all of the potential shortcomings of Amazon MTurk. For instance, MTurk workers from the U.S. are relatively educated and young compared to the general population in the U.S. (Paolacci & Chandler, 2014; Paolacci et al. 2010; Ross et al. 2010). Additionally, MTurk workers are not naïve participants. They frequently participate in survey studies including the ones that investigate social psychological phenomena (Chandler et

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[11] CAPTCHA is a brief task which is easy for humans but difficult for computers, such as clicking the images that contain a bus or a car. It can also include functions such as tracking the movements of the mouse to ensure the respondent is a human (Yarrish, 2019).

al., 2014). These sampling limitations suggest a cautious interpretation of the results in terms of generalizability.

Another shortcoming of this work is the discrepancy between self-reported and behavioral measures in Study 2. As I briefly discussed in the previous sections, the behavioral and self-reported measures of the same constructs were not related to each other, and the manipulation only affected the behavioral responses (not the self-reported measures of the outcome variables). Scholars suggest some potential explanations for this discrepancy with regards to the response processes. For instance, behavioral measures aim to capture responses to uncommon stimuli in a particularly structured situation. In contrast, self-report measures aim to capture reflections on behaviors across many unstructured situations in real-life. Behavioral measures capture the "actual" behavior or performance while self-report measures capture subjective reflections of behaviors (Dang et al., 2020; Van Hiel et al., 2016). However, it is not clear whether these reasons explain the discrepancy between behavioral and self-reported measures in this work. Some other potential reasons could be related to lack of an effective manipulation, or a potential third variable that accounts for variance in the outcome variables, which the manipulation texts impacted.

Spencer and colleagues (2005) warn researchers regarding the overuse of mediation models. They argue that a series of experimental designs, which test the proposed causal chain between the variables, are superior to correlational evidence. In Study 2, I aimed to investigate a part of the mediation chain in Study 1 (from political ideology to knowledge outcomes through moral foundations) by manipulating individualizing and binding foundations (i.e., mediator variables in Study 1). However, I did not manipulate the levels of political conservatism. This lack of manipulation limits the causal interpretations of the mediation model in Study 1. Future

research could investigate the complete chain of relations between political conservatism, moral foundations, and knowledge outcomes by manipulating political conservatism, the independent variable in Study 1.

One other limitation of this work is that it did not test effects on potentially threatening subjects for liberal political identity. Therefore, the observed effects of individualizing foundations on knowledge engagement are only limited to subjects that are not threatening for political liberal thought systems. Even though this work did not directly test the relationships for potentially threatening subjects for liberals, the theoretical framework and empirical data would still hypothesize a positive relationship between individualizing foundations and knowledge-seeking, regardless of the subject being potentially threatening to liberal identity. This argument is consistent with the theoretical proposition that associates individualizing foundations with the non-defensive objective pursuit of "truth" as an epistemic and moral orientation. Individualizing foundations promote the ideal that one should openly seek information, even if that information has potential to threaten cherished beliefs. Further, individualizing foundations do not afford the fear of ideological contamination against one's free-will. Individualizing foundations are also closely related to the ideas that suggest every individual is independent and autonomous, and rationality is a key component of human experience. However, these propositions need empirical testing.

Finally, results of both studies revealed stronger and more consistent evidence for the impact of individualizing foundations than binding foundations. It is unclear whether this is an accurate reflection of the strength of these predictors or reflects something particular to the current study (e.g., the weakness of the manipulation, sample characteristics, or prominent cultural practices in the U.S.). Further investigation of these effects could provide some insight

regarding the varying strength of individualizing and binding foundations on knowledge outcomes.

Future Directions

Euro-American worlds afford the prominence of individualizing foundations in relation to modernity. In these contexts, which afford independent construction of self, education practices are organized in particular ways to depict knowledge and learning as critical components of development (Greenfield, 1997). This construction of education reflects itself in measures of intelligence as well. Curiosity and motivation to learn are two core features of prevailing conceptions of intelligence in Euro-American worlds. These emphases of curiosity, knowledge, and intelligence lead to the idealization of knowledge-seeking as a moral and desirable trait (Greenfield, 1997). This particular ecology around knowledge in Euro-American worlds relates individualizing foundations to modern rational ways of being, and therefore, knowledge outcomes. This cultural psychological interpretation I presented above and preceding sections could also inform cross-cultural work with culture-bound hypotheses. For example, future research could investigate the social representations of individualizing and binding foundations in different contexts and associate them with unique tendencies of knowledge engagement.

As I mentioned above, this research was limited to investigating relationships with information that was only threatening to conservative ideology (i.e., COVID-19). Future research could consider investigating the observed patterns with potentially threatening information for liberal ideology from varying authorities (e.g., scientific authority, traditional authority). This threatening information includes but is not limited to scientific information that undermines claims of liberal political identity in the U.S. Similarly, future research could also focus on the

types of information that conservative ideology prioritizes (e.g., the Bible, traditional texts) to further investigate the implications of binding foundations for knowledge-seeking behavior.

Contributions to the Existing Literature and Implications

The morality of curiosity has been of debate in different fields including philosophy, literature, and mythology. Traditional narratives such as famous stories of Lilith, Adam, Eve, and Pandora's box have historically depicted curiosity as a temptation to be resisted. The idiom of "curiosity kills the cat" in many languages would also be a good example for this discourse of temptation and resisting the urge to question. From this perspective, engagement with any "potentially dangerous" information that might threaten the validity of the moral guidance of the traditional authority and ingroup standards would be sinful. Binding foundations reflect these concerns with the emphasis on physical and symbolic purity, preserved by the avoidance of potentially "contaminating" information or physical factors (e.g., germs). Accordingly, openness to experience and independent reasoning have been dangerous for those that emphasize binding foundations, to the extent that they threaten hierarchical networks and social ties.

In contrast to the association between curiosity and harm, the rise of Euro-American modernity was associated with a value emphasis on curiosity and learning. For instance, during that period, curiosity started to be associated with scientists and journalists as a desirable trait (Benedict, 2001). Consequently, the characteristics of "ideal citizenship" shifted from loyal and conservative to modern and rational. This ideal citizenship included features such as autonomy, independence, and being informed (Benedict, 2001; Inkeles, 1975).

In support of this theoretical interpretation, previous work demonstrated that the endorsement of individualizing foundations is related to modern, analytic rationality and abstract thinking positively, and intuitive/emotional reasoning negatively (e.g., Garvey & Ford, 2014;

Napier & Liguri, 2013; Yilmaz & Saribay, 2017). In contrast, endorsement of binding

foundations is positively related to closed-mindedness and acceptance of traditional authority for

moral guidance (Haidt et al., 2009). Endorsement of binding foundations was positively related

to low (modern and "analytic") rationality, high intuitive and emotional thinking, and lack of

tolerance for uncertainty (Federico et al., 2016; Garvey & Ford, 2014).

With the guidance of this evidence, I aimed to address a gap in the literature, one that

links the historical background to the modernity research and conceptions of morality from the

perspective of knowledge. For this purpose, I conducted this work in which, to the best of my

knowledge, I manipulated the emphases on different moral foundations for the first time. I also

applied cultural psychological interpretation of moral foundations on engagement with

knowledge while benefitting from multiple perspectives. By doing so, this research also raised

intellectually interesting considerations for the ongoing debate regarding political conservatism

and engagement with knowledge.

Some scholars suggest that the negative relationship between conservatism and accurate

knowledge is through identity-protective cognition, which operates for any identity group

(Sherman & Cohen 2002, 2006). Without denying this account, other scholars suggest that less

faithful engagement with authoritative knowledge is particular to political conservatism

(Federico, Deason, & Fisher, 2012; Jost, 2017; Jost & Krochik, 2014; Jost et al., 2003; Webster

& Kruglanski, 1994). This work does not deny either account. Rather, it expands these

perspectives by approaching political ideology as a form of cultural engagement. In support of

this account, results across two studies suggested that binding foundations could be the reason

for this particularity for conservatism. Similarly, results suggested that the underlying

mechanism for the positive relationship between liberal ideology and engagement with knowledge could be moral concerns (i.e., individualizing foundations) as well.

Multiple perspectives I used in this research not only enriched the theoretical background of this research but also allowed me to engage with different methods to assess and manipulate knowledge engagement. Accordingly, one strength of this work is that it provided both correlational and experimental support for the hypotheses. I hope these methods and tasks that I developed for this work inform future research that concerns psychological mechanisms involved in engagement with knowledge.

Finally, I hope that the results and perspectives in this research are useful for the public sphere (e.g., intervention work oriented towards public well-being). Previous research provided support for the association between accurate knowledge about COVID-19 and public health compliance (e.g., Birdir & Adams). Previous research also demonstrated that attitudinal and behavioral associates of accurate knowledge is not limited to COVID-19 but have applications for denial of racism (Nelson et al., 2013), ethnocentrism (Kurtiş et al., 2017), environmentally responsible action (Frick et al., 2004), anti-establishment voting (Van Prooijen & Krouwel, 2019), and many other domains that are closely associated with social justice and public well-being. Future work could integrate the perspective of moral concerns on knowledge-engagement into intervention studies, which could strengthen their impact for better and equitable futures.

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Tables and Figures

Table 1

Study 1: Descriptive Statistics, Internal Consistency Coefficients, and Zero-Order Correlations Between Variables

	M	SD	1	2	3	4	5	6	7	8
1. Conservatism	3.03	1.45	---							
2. d' T/F	1.35	.73	-.15*	---						
3. Info Avoidance	2.97	1.79	.25**	-.21**	---					
4. Knowledge-Seeking	4.71	1.61	-.29**	.07	-.65**	---				
5. Info Contamination	3.21	1.63	.37**	-.12	.30**	-.22**	(.84)			
6. Individualizing	4.92	.69	-.24**	.29**	-.26**	.26**	-.21**	(.78)		
7. Binding	3.56	1.05	.54**	-.21**	.13	-.08	.37**	-.02	(.90)	
8. RPVD	.83	1.06	-.16*	.18**	-.14*	.10	-.21**	.20**	-.18*	---

Notes. Conservatism = Political conservatism from 1 to 6, higher scores indicate more conservativeness. d' T/F = Performance on the true/false COVID-19 knowledge test from -2.30 (not getting any of the questions correct) and 2.30 (getting all of the questions correct). Info Avoidance = Information avoidance from 1 to 7, higher scores indicate more information avoidance. Knowledge-Seeking = Knowledge seeking from 1 to 7, higher scores indicate more knowledge seeking. Info Contamination = Perceived information contamination of the information ecology related to COVID-19 from 1 to 7, higher scores indicate higher perceptions of information contamination. Individualizing = Individualizing foundations, mean score of harm (avoidance) and fairness, ranging from 1 to 6. Binding = Binding foundations, mean score of ingroup, authority, and purity, ranging from 1 to 6. RPVD = relative perceived vulnerability to disease, COVID-19 minus general, ranging from 1 to 7. The internal consistency coefficients (Cronbach α's) are presented in parentheses in the diagonal.

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 2

Study 1: Multiple Regression Models

Outcome	Predictors	*B*	*SE*	*t*	*p*	LLCI – ULCI
Information Avoidance	Constant	5.46	.94	5.83	<.01	3.61 – 7.31
	Indv	-.67	.17	-3.93	<.01	-1.01 - -.34
	Bind	.23	.11	2.04	.04	-.01 - .46
Knowledge-Seeking	Constant	2.23	.85	2.62	<.01	.55 – 3.91
	Indv	.60	.16	3.84	<.01	.29 - .91
	Bind	-.13	.10	-1.28	.20	-.34 - .07
COVID-19 Knowledge	Constant	.41	.37	1.10	.27	-.32 – 1.14
	Indv	.30	.07	4.43	<.01	.17 - .44
	Bind	-.15	.05	-3.35	<.01	-.24 - -.06
Information Contamination	Constant	3.71	.81	4.57	<.01	2.11 – 5.31
	Indv	-.52	.15	-3.50	<.01	-.81 - -.23
	Bind	.58	.10	5.87	<.01	.39 - .77

Note. CIs (95%) are presented for *B,* unstandardized coefficients. Indv = Individualizing foundations, mean score of harm (avoidance) and fairness. Bind = Binding foundations, mean score of ingroup, authority, and purity.

Table 3

Study 1: The Summary of Indirect and Direct Effects in Mediation Model

Outcome		Effect	LLCI - ULCI
Information Avoidance	Direct Effect	.22*	.03 - .40
	Indirect Effect 1	.07**	.02 - .12
	Indirect Effect 2	.03	-.06 - .13
Knowledge-Seeking	Direct Effect	-.30**	-.48 - -.12
	Indirect Effect 1	-.05*	-.10 - -.01
	Indirect Effect 2	-.03	-.05 - .12
COVID-19 Knowledge	Direct Effect	.03	-.04 - .10
	Indirect Effect 1	-.04**	-.07 - -.01
	Indirect Effect 2	-.07**	-.11 - -.03
Information Contamination	Direct Effect	.20*	.03 - .37
	Indirect Effect 1	-.04**	-.01 - -.09
	Indirect Effect 2	.17**	.08 - .24

Notes. Direct Effect = direct effect of political conservatism. Indirect Effect 1 = indirect effect of individualizing foundations. Indirect Effect 2 = indirect effect of binding foundations. CIs (95%) are presented for the effects. All tests were run by using PROCESS Model. The pattern of findings for the indirect effects was unearthed when we standardized the variables. * indicates $p < .05$ and ** indicates $p < .01$

Table 4

Study 2: Results of One-Way ANOVA

Variable	Indv (N = 57) M	SD	Bind (N = 72) M	SD	Control (N = 76) M	SD	ANOVA F	df	η²
Self-Report IA (C)	2.49	1.39	2.15	1.27	2.30	1.27	1.12	2,202	.011
Self-Report KS (C)	5.21	1.31	5.54	1.18	5.44	1.32	1.11	2,202	.011
Self-Report KS (G)	4.14	1.51	4.36	1.10	4.26	1.11	.49	2,202	.005
Behavioral COVID-19	16.83	16.06	12.69	7.22	17.09	18.28	2.01	2,202	.019
Behavioral Alternative	15.08	13.77	14.48	10.15	15.95	13.34	.26	2,202	.003
Behavioral KS (G)	3.26	.95	3.00	.92	2.83	.94	3.49*	2,202	.033
Binding	3.75	.88	3.72	.84	3.67	.79	.13	2,202	.001
Individualizing	4.72	.72	4.73	.64	4.64	.68	.41	2,202	.004

Notes. Indv = individualizing group. Bind = binding group. Control = control group. Self-Report IA (C) = Self-reported COVID-19 information avoidance ranging from 1 to 7, higher scores indicate higher avoidance. Self-Report KS (C) = Self-reported COVID-19 knowledge seeking ranging from 1 to 7, higher scores indicate higher COVID-19 knowledge-seeking. Self-Report KS (G)= Self-reported general interest in learning more about the subjects the participants encountered via short texts they read ranging from 1 to 7, higher scores indicate higher knowledge-seeking in general. Behavioral COVID-19= time spent on COVID-19 related texts, lower scores indicate more avoidance. Behavioral Alternative = time spent on alternative-subject texts, lower scores indicate more avoidance. Behavioral KS (G)= behavioral knowledge seeking ranging from 1 to 4, measured by the performance on multiple-choice test items related to the presented texts, higher scores indicate more knowledge-seeking. Binding = Self-reported binding foundations, mean score of ingroup, authority, and purity, ranging from 1 to 6. Individualizing = Self-reported individualizing foundations, mean score of harm (avoidance) and fairness, ranging from 1 to 6.
* indicates that the *F* score is significant at the 0.05 level (2-tailed).

Table 5

Study 2: Descriptive Statistics, Internal Consistency Coefficients, and Zero-Order Correlations Between Variables

	M	SD	1	2	3	4	5	6	7	8	9
1. Conservatism	3.87	1.40	---								
2. Binding	3.71	.83	.50**	(.89)							
3. Individualizing	4.70	.68	-.33**	.06	(.78)						
4. Self-Report IA (C)	2.30	1.30	.31**	.03	-.28**	(.88)					
5. Self-Report KS (C)	5.41	1.27	-.38**	.02	.39**	-.86**	(.93)				
6. Self-Report KS (G)	4.26	1.23	-.23**	.06	.18*	-.47**	.53**	---			
7. Behavioral COVID-19	15.47	14.70	.30	.11	.07	-.04	.06	.07	---		
8. Behavioral Alternative	15.19	12.40	-.09	-.03	.11	-.11	.12	.17*	.57**	---	
9. Behavioral KS (G)	3.01	.94	-.06	-.05	.16*	-.17*	.18*	.07	.25**	.24**	---

Notes. Conservatism = Political conservatism from 1 to 7, higher scores indicate more conservativeness. Binding = Self-reported binding foundations, mean score of ingroup, authority, and purity, ranging from 1 to 6. Individualizing = Self-reported individualizing foundations, mean score of harm (avoidance) and fairness, ranging from 1 to 6. Self-Report IA (C) = Self-reported COVID-19 information avoidance ranging from 1 to 7, higher scores indicate higher avoidance. Self-Report KS (C) = Self-reported COVID-19 knowledge seeking ranging from 1 to 7, higher scores indicate higher COVID-19 knowledge-seeking. Self-Report KS (G) = Self-reported general interest in learning more about the subjects the participants encountered via short texts they read ranging from 1 to 7, higher scores indicate higher knowledge-seeking in general. Behavioral COVID-19 = time spent on COVID-19 related texts, lower scores indicate more avoidance. Behavioral Alternative = time spent on alternative-subject texts, lower scores indicate more avoidance. Behavioral KS (G) = behavioral knowledge seeking ranging from 1 to 4, measured by the performance on multiple-choice test items related to the presented texts, higher scores indicate more knowledge-seeking.

The internal consistency coefficients (Cronbach α's) are presented in parentheses in the diagonal.

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 6

Study 2: Multiple Regression Models

	Predictors	*B*	*SE*	*t*	*p*	LLCI – ULCI
Self-Report IA (C)	Constant	4.57	.71	6.43	<.01	3.17 – 5.97
	Indv	-.54	.13	-4.18	<.01	-.80 - -.29
	Bind	.08	.11	.73	.47	-.13 - .29
Self-Report KS (C)	Constant	1.98	.67	2.98	<.01	.67 – 3.29
	Indv	.74	.12	6.06	<.01	.50 - .98
	Bind	-.01	.10	-.09	.93	-.20 - .19
Self-Report KS (G)	Constant	2.51	.69	3.65	<.01	1.15 – 3.87
	Indv	.32	.12	2.52	.01	.07 - .56
	Bind	.07	.10	.70	.49	-.13 - .27
Behavioral COVID-19	Constant	2.11	8.29	.25	.80	-14.23 – 18.44
	Indv	1.35	1.52	.89	.37	-1.64 – 4.34
	Bind	1.89	1.23	1.53	.13	-.55 – 4.31
Behavioral Alternative	Constant	7.27	6.99	1.04	.30	-6.52 – 21.05
	Indv	2.15	1.28	1.68	.09	-.38 – 4.67
	Bind	-.58	1.04	-.56	.58	-2.63 – 1.47
Behavioral KS (G)	Constant	2.17	.53	4.08	<.01	1.12 – 3.21
	Indv	.24	.10	2.43	.02	.04 - .43
	Bind	-.07	.08	-.90	.37	-.23 - .09

Notes. Self-Report IA (C) = Self-reported COVID-19 information avoidance. Self-Report KS (C) = Self-reported COVID-19 knowledge-seeking. Self-Report KS (G)= Self-reported general

interest in learning more about the subjects the participants encountered via short texts they read. Behavioral COVID-19= time spent on COVID-19 related texts, lower scores indicate more avoidance. Behavioral Alternative = time spent on alternative-subject texts, lower scores indicate more avoidance. Behavioral KS (G)= behavioral knowledge seeking. Indv = Self-reported individualizing foundations, mean score of harm (avoidance) and fairness. Bind = Self-reported binding foundations, mean score of ingroup, authority, and purity.

CIs (95%) are presented for *B,* unstandardized coefficients.

* indicates *p* < .05, ** indicates *p* < .01.

Figure 1

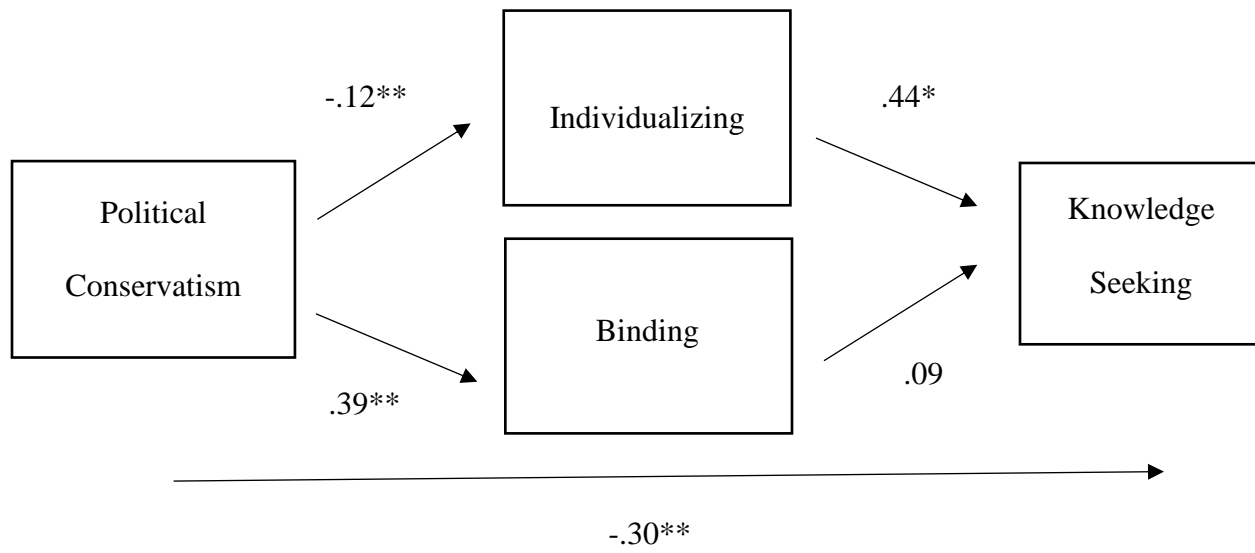*Study 1: Mediation Test for Information Avoidance*
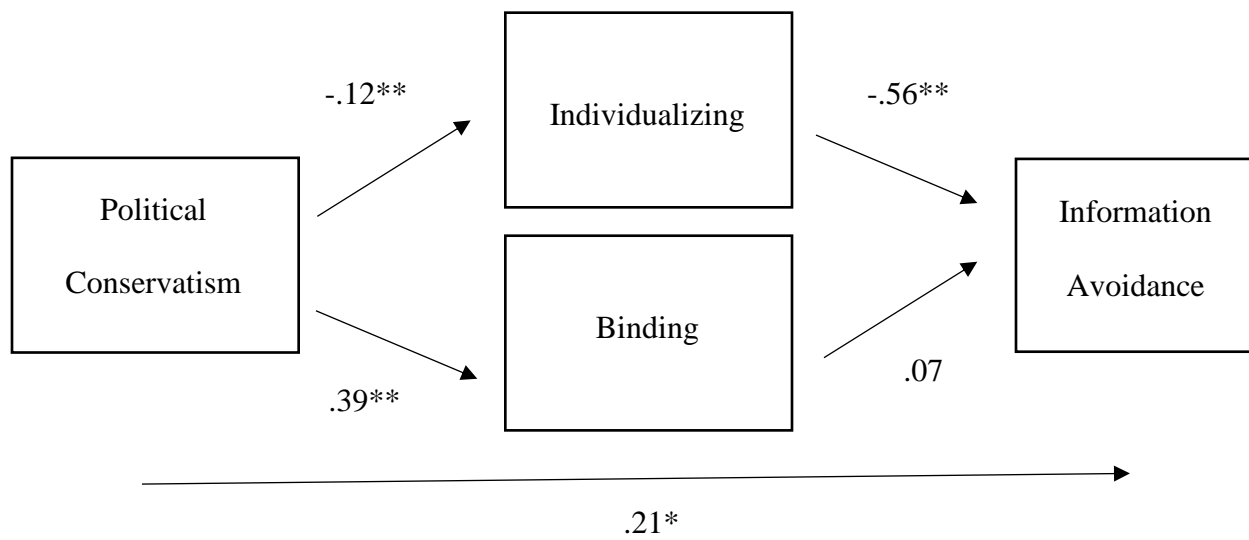
Note. * indicates *p* < .05. ** indicates *p* < .01.

Figure 2

Study 1: Mediation Test for Knowledge-Seeking

Note. * indicates *p* < .05. ** indicates *p* < .01.

Figure 3

Study 1: Mediation Test for COVID-19 Knowledge
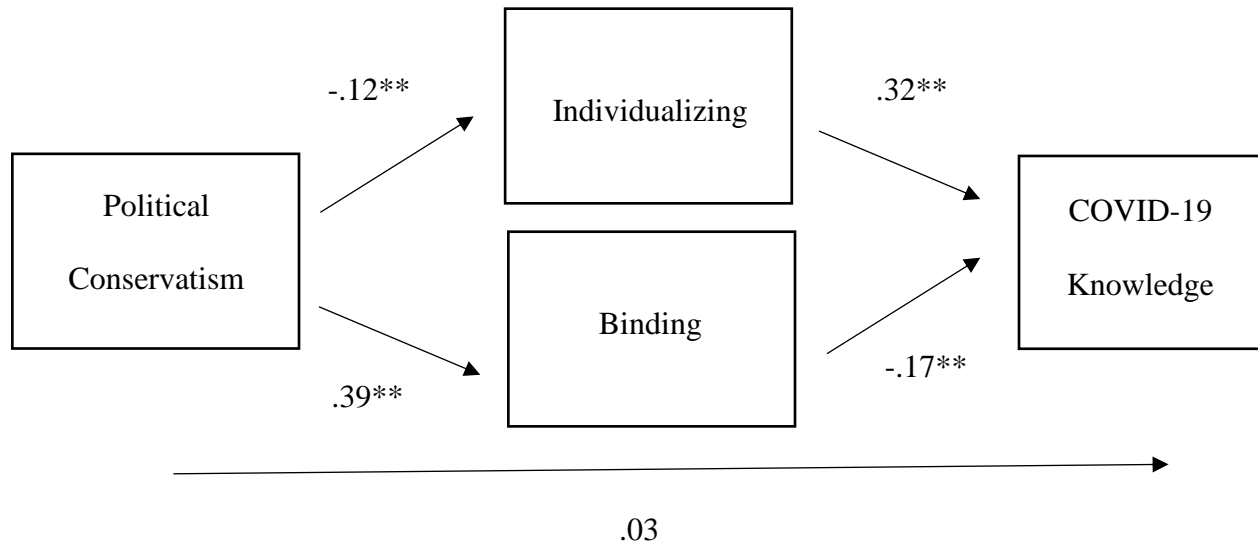
Note. ** indicates *p* < .01.

Figure 4

Study 1: Mediation Model for Information Contamination

Note. * indicates *p* < .05. ** indicates *p* < .01.

Appendices

Materials
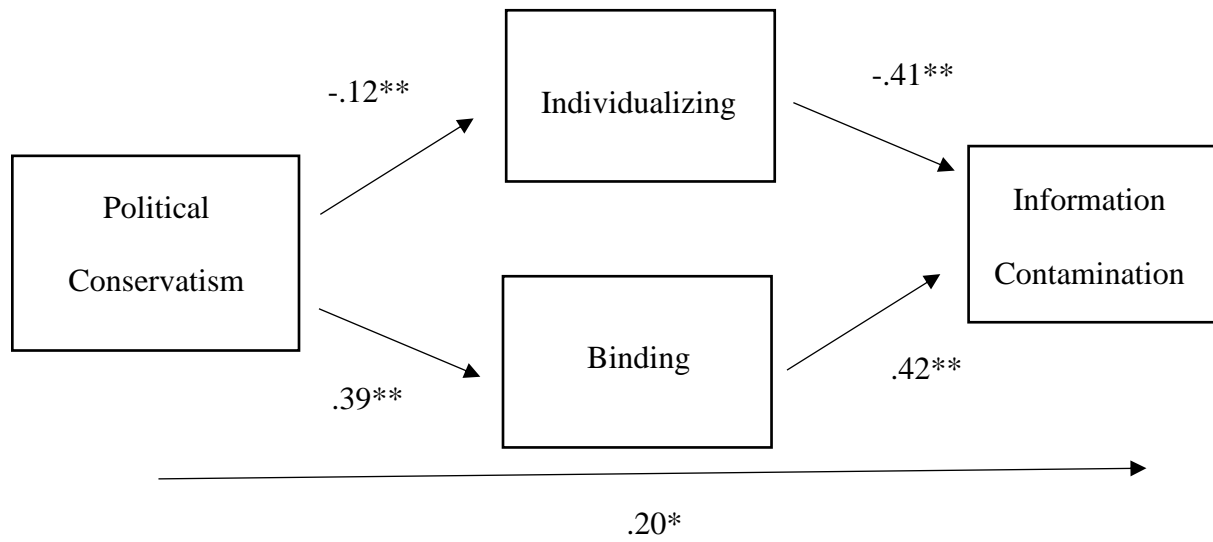
Relative Perceived Vulnerability to Disease (Study 1)

Please rate the extent to which you agree with each statement by using the scale below: (-3= strongly disagree, 3= strongly agree) by considering your thoughts/feelings BEFORE the COVID-19 pandemic.

1- In general, I am very susceptible to colds, flu, and other infectious diseases.

2- I am more likely than the people around me to catch an infectious disease.

3- My past experiences make me believe I am not likely to get sick even if my friends are sick.

4- I would typically wash my hands as soon as it is possible after shaking someone's hand.

5- I would be comfortable sharing a water bottle with a friend.

6- It would not make me anxious to be around sick people.

7- I would be afraid of catching germs after touching money.

Please rate the extent to which you agree with each statement by using the scale below: (-3= strongly disagree, 3= strongly agree) by considering your thoughts/feelings DURING the current COVID-19 pandemic.

1- In general, I am very susceptible to COVID-19.

2- I am more likely than the people around me to catch COVID-19.

3- My past experiences make me believe I am not likely to catch COVID-19 even if my friends catch it.

4- I would typically wash my hands as soon as it is possible after shaking someone's hand.

5- I am comfortable sharing a water bottle with a friend.

6- It does not make me anxious to be around sick people.

7- I am afraid of catching germs after touching money.

COVID-19 Knowledge Test (Study 1)

Below are statements about the current pandemic and the 2019 Coronavirus (COVID-19). For each statement, please indicate if the statement is true or false according to **your** knowledge.

1- The main purpose of wearing a mask is to protect oneself from getting COVID-19.

2- If person infected with COVID-19 does not have a cough, then that person cannot transmit the virus to other people.

3- High blood-pressure is a risk factor for COVID-19 (a.k.a., it causes to experience the disease in a more severe way).

4- Currently, the U.S. Food and Drug Administration has approved a vaccine that people can take to prevent infection from COVID-19.

5- COVID-19 can access the host cell's ribosome without entering the nucleus of the host cell.

6- The common cause of respiratory failure as a result of COVID-19 occurs because of the fluid filling the alveoli in the lungs.

7- The most common symptoms of COVID-19 are sneezing, sinus infection, and severe diarrhea.

8- According to the current knowledge, washing with baking soda is ineffective in killing coronavirus on vegetables.

Moral Foundations Questionnaire (MFQ20; Study 1)

When do you decide **whether something is right or wrong**, to what extent are the following considerations **relevant** to your thinking? Please rate each statement using the scale below from

0 (not at all relevant; this consideration has nothing to do with my judgments of right and wrong)

to 5 (extremely relevant; this is one of the most important factors when I judge right and wrong).

1- Whether or not someone suffered emotionally.

2- Whether or not some people were treated differently than others.

3- Whether or not someone's action showed love for his or her country.

4- Whether or not someone showed a lack of respect for authority.

5- Whether or not someone violated standards of purity and decency.

6- Whether or not someone cared for someone weak or vulnerable.

7- Whether or not someone acted unfairly.

8- Whether or not someone did something to betray his or her group.

9- Whether or not someone conformed to the traditions of society.

10- Whether or not someone did something disgusting.

Please read the following sentences and indicate your agreement or disagreement from 0

(strongly disagree) to 5 (strongly agree).

1- Compassion for those who are suffering is the most crucial virtue.

2- When the government makes laws, the number one principle should be ensuring that everyone is treated fairly.

3- I am proud of my country's history.

4- Respect for authority is something all children need to learn.

5- One of the worst things a person could do is hurt a defenseless animal.

6- Justice is the most important requirement for a society.

7- People should be loyal to their family members, even when they have done something wrong.

8- Men and women each have different roles to play in society.

9- I would call some acts wrong on the grounds that they are unnatural.

10- People should not do things that are disgusting, even if no one is harmed.

Information Contamination (Study 1)

Below are some statements about the information sources relevant to the current pandemic.

Please rate the extent to which you agree with each statement by using the scale below: (-3= strongly disagree, 3= strongly agree).

1- I distrust the information I receive about the Coronavirus (COVID-19) from public health officials.

2- I think public health officials have an agenda that's causing them not to give the whole story to the populace.

COVID-19 Information Avoidance and Knowledge-Seeking (Study 1)

Please rate the extent to which you agree with the following statements by using the scale from -3 (strongly disagree) to 3 (strongly agree).

1- I watch/read a lot of news about the Coronavirus (COVID-19).

2- I purposefully try NOT to watch/read news on Coronavirus (COVID-19).

Political Ideology (Study 1)

Please indicate your political standing by using the two scales given below.

1- I am socially...

3(very liberal)---2(liberal)---1(slightly liberal)---1(slightly conservative)---

2(conservative)---3(very conservative)

2- I am economically…

3(very liberal)---2(liberal)---1(slightly liberal)---1(slightly conservative)---

2(conservative)---3(very conservative)

Demographics (Study 1 & 2)

1- Please indicate your gender: woman, man, other _____

2- Please enter your age to the given space below: _____

3- Please write your race/ethnicity to the given space below: _____

4- Please enter your monthly income to the space provided below: _____

Manipulation Texts (Study 2)

Binding Group

Moral Values: Authority, Loyalty, and Purity Study

Please read the text below about the moral virtues: authority, loyalty, and purity carefully. Then, please answer the questions. You will not be able to go back to the text, so please read as carefully as you can.

Roots of Morality: Authority, Loyalty, and Purity

Across many centuries, scholars, philosophers, and experts from different religions have argued that **respect for traditional authority, loyalty to one's country or community, and preservation of purity** are the foundation of moral virtue. They have suggested that practice of those virtues provides the foundation for the **purity of spirit** and sound moral character.

In your opinion, how do these values contribute to positive outcomes? Please explain your thoughts briefly by typing the box below, in one or two sentences.

(next page)

Moral Values: Authority, Loyalty, and Purity Study

On the previous page, you read about how experts emphasize the importance of authority, loyalty, and purity. Please keep reading the passage and respond to the question below.

Now scientific research confirms that these moral values are adaptive, too. People in societies that emphasize **purity, loyalty, and respect for traditional authority** tend to enjoy greater wealth, well-being, and happiness than do people in societies that do not emphasize these values. Scientists believe that **purity, loyalty, and respect for traditional authority** promote these positive outcomes because they bind a community together and organize their activities in a way that conserves effort and other resources as people work in **harmony toward a common purpose**.

Please briefly write down an incident in which you observed or experienced an example of the situation given above: following the leader of the country, being a loyal citizen, and preserving purity leading to good outcomes. Please use the box below to type your response in one or two sentences.

Individualizing Group

Moral Values: Fairness and Beneficence Study

Please read the text below about the moral virtues: authority, loyalty, and purity carefully. Then, please answer the questions. You will not be able to go back to the text, so please read as carefully as you can.

Roots of Morality: Fairness and Beneficence

Across many centuries, scholars, philosophers, and experts from different religions have argued that **fairness and beneficence—that is, avoidance of harm to innocent people**—are the foundation of moral virtues. They have suggested that practice of those virtues provides the foundation for **autonomous ethical reasoning and sound moral character**.

In your opinion, how do these values contribute to positive outcomes? Please explain your thoughts briefly by typing the box below, in one or two sentences.

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(next page)

Moral Values: Fairness and Beneficence Study

On the previous page, you read about how experts emphasize the importance of fairness and beneficence. Please keep reading the passage and respond to the question below.

Now scientific research confirms that these moral values are adaptive, too. People in societies that emphasize **fairness and beneficence** tend to enjoy greater wealth, well-being, and happiness than do people in societies that do not emphasize these values. Scientists believe that an emphasis **on fair treatment and beneficence** promotes these positive outcomes because they **provide individual actors with a set of sound ethical principles that they can apply across situations as an efficient rationale for independent and autonomous moral action**.

Please briefly write down an incident in which you observed or experienced an example of the situation given above: emphasis on fairness, individuality, and avoiding harm leading to good outcomes. Please use the box below to type your response in one or two sentences.

```
┌─────────────────────────────────────────────────────────────────┐
│                                                                   │
│                                                                   │
└─────────────────────────────────────────────────────────────────┘
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Control Group

Please read the text below about the steaming rice carefully. Then, please answer the questions. You will not be able to go back to the text, so please read as carefully as you can.

<div align="center">

Steaming Rice

</div>

Steaming rice is one of the common ways of cooking it. **Washing rice before cooking helps get rid of the starch, causing a mushy and sticky taste**. Cooks recommend one and a half cups of water for a cup of rice. When the rice is cooked, it is going to be the size of 3 cups. After washing the rice and preserving the given ratio, adding some **olive oil improves the taste**.

In your opinion, why do you think people suggest this method? Please explain your thoughts briefly by typing the box below, in one or two sentences.

```
┌─────────────────────────────────────────────────────────────────┐
│                                                                   │
│                                                                   │
└─────────────────────────────────────────────────────────────────┘
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On the previous page, you read about how to start steaming rice. Please keep reading the passage and respond to the question below.

Combining those at **high heat and waiting for the water to boil** is the next step for steamed rice. After the rice starts to boil, cooks recommend covering the pot/pan with a tight-fitting lid, reducing the heat to low, and waiting for fifteen minutes. As it soaks the remaining water in the pot, rice will be ready to be steamed. The steaming process is relatively simple since it only requires **turning the heat off and letting it sit for ten more minutes**. Opening the lid and fluffing the rice with a fork after that would finalize the rice cooking process.

Please briefly write down an incident in which you observed or experienced an example of steamed rice that turned out well. Please use the box below to type your response in one or two sentences.

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COVID-19 Information Avoidance (Study 2)

Please rate the extent to which you agree with each statement by using the scale below: (-3= strongly disagree, 3= strongly agree).

1- I would rather not know about COVID-19 and public health guidelines.

2- I would avoid learning COVID-19 and public health guidelines.

3- When it comes to COVID-19 and the current pandemic, ignorance is bliss.

4- I can think of situations in which I would rather not know about COVID-19.

5- I would rather NOT watch/read the news on Coronavirus (COVID-19).

COVID-19 Knowledge-Seeking (Study 2)

Please rate the extent to which you agree with each statement by using the scale below: (-3= strongly disagree, 3= strongly agree).

1- Even if it might upset me, I would want to seek information about COVID-19.

2- I want to be informed about COVID-19.

3- It is important to try to learn about the nature of COVID-19 and public health guidelines.

4- I want to know COVID-19 and public health guidelines immediately.

5- I choose to seek a lot of news about the Coronavirus (COVID-19).

Four Short Texts to Measure Behavioral Information Avoidance and Knowledge-Seeking (Study 2)

In this Part, you will encounter four paragraphs about different subjects. Please hit next after spending as much time as you want on each paragraph to move to the next one.

1- Globally, there have been over a hundred million confirmed cases of COVID-19, including over two million deaths, reported to WHO. The U.S. reported over twenty-five million confirmed cases of COVID-19 with over four hundred thousand deaths.
(next page)

2- There are two different weather forecasts. Short range forecast products depicting pressure patterns, circulation centers and fronts, and types and extent of precipitation. Medium range forecast products depicting pressure patterns and circulation centers and fronts.
(next page)

3- There is a broad variety of types of paper on the market that are adapted to specific applications or the target industry. Each type has specific properties in terms of composition, production and handling.
(next page)

4- As of December twenty-eight, 2020, large-scale (Phase 3) clinical trials are in progress or being planned for three COVID-19 vaccines in the United States: AstraZeneca's COVID-19 vaccine, Janssen's COVID-19 vaccine, Novavax's COVID-19 vaccine.

Multiple-Choice Test to Measure General Behavioral Knowledge-Seeking

1- As of December twenty-eight, how many COVID-19 vaccines are planned to be or currently in progress in the U.S.?

A) 1

B) 2

C) 3

D) 4

2- How many types of weather forecasts you have just read about?

A) 2

B) 3

C) 5

D) 6

3- How many confirmed cases the U.S. has reported so far?

A) Around four-hundred thousand

B) Around two million

C) Around twenty-five million

D) Around thirty thousand

4- What are the three specific properties separating types of paper between each other?

A) Composition, production, and handling

B) Color, texture, and composition

C) Color, opaqueness, thickness

D) Thickness, handling, color

Self-Reported General Interest

Please rate the extent to which you would be interested in learning more on the following

subjects from -3 (not interested at all) to 3 (very interested).

1- COVID-19 cases and death rates

2- Weather forecast

3- Types of paper

4- COVID-19 vaccines

Moral Foundations Questionnaire (MFQ30)

Part 1: When you decide whether something is right or wrong, to what extent are the following

considerations relevant to your thinking? Please rate each statement using this scale:

[0] = not at all relevant (This consideration has nothing to do with my judgments of right and

wrong) [1] = not very relevant [2] = slightly relevant [3] = somewhat relevant [4] = very relevant

[5] = extremely relevant (This is one of the most important factors when I judge right and wrong)

1. _____Whether or not someone suffered emotionally

2. _____Whether or not some people were treated differently than others

3. _____Whether or not someone's action showed love for his or her country

4. _____Whether or not someone showed a lack of respect for authority

5. _____Whether or not someone violated standards of purity and decency

6. _____Whether or not someone was good at math

7. _____Whether or not someone cared for someone weak or vulnerable

8. _____Whether or not someone acted unfairly

9. _____Whether or not someone did something to betray his or her group

10. _____Whether or not someone conformed to the traditions of society

11. _____Whether or not someone did something disgusting

12. _____Whether or not someone was cruel

13. _____Whether or not someone was denied his or her rights

14. _____Whether or not someone showed a lack of loyalty

15. _____Whether or not an action caused chaos or disorder

16. _____Whether or not someone acted in a way that God would approve of

Part 2: Please read the following sentences and indicate your agreement or disagreement

[0]	[1]	[2]	[3]	[4]	[5]
Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree

1. _____Compassion for those who are suffering is the most crucial virtue.

2. _____When the government makes laws, the number one principle should be ensuring that everyone is treated fairly.

3. _____I am proud of my country's history.

4. _____Respect for authority is something all children need to learn.

5. _____People should not do things that are disgusting, even if no one is harmed.

6. _____It is better to do good than to do bad.

7. _____One of the worst things a person could do is hurt a defenseless animal.

8. _____Justice is the most important requirement for a society.

9. _____People should be loyal to their family members, even when they have done something wrong.

10. _____Men and women each have different roles to play in society.

11. _____I would call some acts wrong on the grounds that they are unnatural.

12. _____It can never be right to kill a human being.

13. _____ I think it's morally wrong that rich children inherit a lot of money while poor

   children inherit nothing.

14. _____ It is more important to be a team player than to express oneself.

15. _____ If I were a soldier and disagreed with my commanding officer's orders, I would

   obey anyway because that is my duty.

16. _____ Chastity is an important and valuable virtue.

Political Ideology

Please indicate your political standing by using the two scales given below.

Scale 1: Social

3 (Conservative)----------2-----------1----------0 (Center)- ----------1-----------2----------3 (Liberal)

Scale 2: Economic

3 (Conservative)----------2-----------1----------0 (Center)- ----------1-----------2----------3 (Liberal)

Please indicate your political party identification by using the scale below.

3 (Republican)----2---1---0 (Independent)---1---2---3 (Democrat)

Which candidate did you vote for the 2020 presidential elections?

   A) Joseph R. Biden (Democrat)

   B) Donald J. Trump (Republican)

   C) Other (please specify _____)

COVID-19 Experiences

Please indicate if you have experienced following statements by marking Yes or No.

1- I have been diagnosed with coronavirus (COVID-19) or had coronavirus-like symptoms at some point in the last two months.

2- I know/have been in close proximity with someone who has been diagnosed with Coronavirus (COVID-19) or had coronavirus-like symptoms in the last two months.

3- Please indicate your agreement with the following statement by using the scale from -3 (strongly disagree) to 3 (strongly agree) below: I feel anxious about the effects of the pandemic on myself and the society.

Demographics (Study 2)

In addition to the demographics questionnaire in Study 1, participants responded to the following questions in Study 2.

1- Education Level (The program you have most recently completed):

   a. Lower than high school

   b. High school

   c. Bachelor's

   d. Master's

   e. Ph.D.

   f. Higher than Ph.D.

2- Please rate the frequency that you watch/listen to the following channels to keep informed about COVID-19 and other events (0: never – 6: very frequently).

   1. Fox News

   2. CBS

   3. CNN

   4. MSNBC

5. National Public Radio

6. Newsmax

3- Do you identify with any religious group?

    a. Yes

        i. If yes, please indicate the religious group you identify with

            I. Christians

            II. Jews

            III. Muslims

            IV. Other _____

        ii. If yes, please indicate the extent to which your religious belief is central to your life on a scale from 0 (not at all) to 10 (quite a lot) below.

    b. No

Exploratory Analyses with Political Ideology, Moral Foundations, and Knowledge

Outcomes (Study 2)

Study 2: Multiple Regression Models with Political Conservatism

	Predictors	*B*	*SE*	*t*	*p*	LLCI – ULCI
Self-Report IA (C)	Constant	3.38	.76	4.44**	<.01	1.88 – 4.88
	Indv	-.33	.14	-2.36*	.02	-.60 - -.05
	Bind	-.17	.12	-1.41	.16	-.42 - .07
	Conservatism	.28	.08	3.71**	<.01	.13 - .44
Self-Report KS (C)	Constant	3.49	.69	5.06**	<.01	2.13 – 4.85
	Indv	.46	.13	3.68**	<.01	.22 - .71
	Bind	.31	.11	2.77**	<.01	.09 - .53
	Conservatism	-.36	.07	-5.18**	<.01	-.50 - -.23
Self-Report KS (G)	Constant	3.69	.73	5.02**	<.01	2.24 – 5.14
	Indv	.10	.13	.441	.44	-.16 - .37
	Bind	.32	.12	2.69**	<.01	.09 - .55
	Conservatism	-.28	.08	-3.80**	<.01	-.43 - -.14
Behavioral COVID-19	Constant	2.31	9.16	.25	.80	-15.76 – 20.38
	Indv	1.32	1.67	.79	.43	-1.98 – 4.62
	Bind	1.93	1.48	1.30	.19	-.99 – 4.85
	Conservatism	-.05	.93	-.05	.96	-1.88 – 1.79
Behavioral Alternative	Constant	9.04	7.73	1.17	.24	-6.20 – 24.27
	Indv	1.82	1.41	1.29	.20	-.96 – 4.61
	Bind	-.21	1.25	-.17	.87	-2.67 – 2.25

	Conservatism	-.43	.79	-.54	.59	-1.98 – 1.12
	Constant	2.06	.59	3.51**	<.01	.90 -3.22
Behavioral KS (G)	Indv	.26	.10	2.37*	.02	.04 - .47
	Bind	-.09	.10	-.98	.33	-.28 - .09
	Conservatism	.03	.06	.42	.67	-.09 - .14

Notes. Self-Report IA (C) = Self-reported COVID-19 information avoidance. Self-Report KS (C) = Self-reported COVID-19 knowledge-seeking. Self-Report KS (G)= Self-reported general interest in learning more about the subjects the participants encountered via short texts they read. Behavioral COVID-19= time spent on COVID-19 related texts, lower scores indicate more avoidance. Behavioral Alternative = time spent on alternative-subject texts, lower scores indicate more avoidance. Behavioral KS (G)= behavioral knowledge seeking. Indv = Self-reported individualizing foundations, mean score of harm (avoidance) and fairness. Bind = Self-reported binding foundations, mean score of ingroup, authority, and purity. Conservatism = Political conservatism, mean score of economic and social conservatism.

CIs (95%) are presented for *B,* unstandardized coefficients.

* indicates $p < .05$, ** indicates $p < .01$.