

THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF SOCIOLOGY AND CRIMINOLOGY

Compliance with Masking Mandates During the COVID-19 Pandemic: The Influence of
Moral Foundations

ELLA CORBY
SPRING 2023

A thesis
submitted in partial fulfillment
of the requirements
for a baccalaureate degree in Criminology
with honors in Criminology

Reviewed and approved* by the following:

Dr. Eric Silver
Professor of Sociology and Criminology
Thesis Supervisor

Dr. Stacy Silver
Professor of Sociology, Human Development and Family Studies
Honors Adviser

* Electronic approvals are on file.

ABSTRACT

This thesis uses a survey of 565 Penn State students to explore the relationship between moral foundations and compliance with masking mandates. Grouping the constructs of fairness and harm as individualizing moral intuitions, we hypothesize that those who place value upon these foundations will in turn correlate with greater compliance pertaining to COVID-19 masking and social distancing protocol. Classifying the constructs of loyalty, authority and purity as binding moral intuitions, we hypothesize that those who stress these foundations will be associated with lessened compliance with COVID-19 masking and social distancing protocol. We hypothesize an additional correlation between study participants that approved of Trump's handling of the pandemic and lessened social distancing compliance. Lastly, we hypothesize that binding moral intuitions will have a greater effect on COVID-19 noncompliance among those identifying as Trump supporters. The results of this study substantiate the first, second, and third hypotheses, whilst being unable to achieve statistical significance for the final hypothesis, likely due to an insufficiently sized sample of students. We conclude that individualizing moral intuitions are associated with higher COVID-19 compliance levels than binding intuitions, as well as those who approve of Trump represent the lowest levels of compliance with COVID-19 safety mandates.

Keywords

masking compliance, social distancing, Moral Foundations Theory, individualizing intuitions, binding intuitions, public health mandates

TABLE OF CONTENTS

ABSTRACT	i
LIST OF TABLES	iii
ACKNOWLEDGEMENTS	iv
INTRODUCTION	1
PRIOR RESEARCH	3
SUMMARY & HYPOTHESES	5
METHODS	8
ANALYSIS & RESULTS	11
DISCUSSION	18
LIMITATIONS	21
CONCLUSION	23
APPENDIX	24
BIBLIOGRAPHY	26
ACADEMIC VITA	28

LIST OF TABLES

Table 1. Descriptive Statistics (N=565)	16
Table 2. Masking and Social Distancing Compliance by Moral Foundations	18
Table 3. Logistic Regression Predicting Masking and Social Distancing Compliance	19
Table 4. Compliance by Approval of Trump's Handling of the Pandemic	20
Table 5. Compliance by Moral Foundations by Trump Approval	21

ACKNOWLEDGMENTS

I am wholly grateful to Dr. Eric Silver, my thesis supervisor, who guided me throughout the thesis process and provided me with valuable insight, knowledge and support. I also extend sincere gratitude to Dr. Stacy Silver, my honors adviser, for being a wonderful resource and helping me stay organized these past two years. I am immensely grateful to my parents for investing in my education at Penn State by always supporting and believing in me. I would lastly like to thank my friends and roommates, who inspire me.

INTRODUCTION

This thesis explores the relationship between moral foundations and compliance with masking mandates throughout the COVID-19 pandemic that enveloped the world in early 2020. Studying this topic is valuable because it promises to lend insight into why certain individuals comply with public safety measures (such as mask mandates) while others do not. Adhering to public safety mandates and guidelines during a global health crisis is essential not only because it decreases a person's chances for infection, but because it aids in protecting the rest of society — especially those who may be unable to fully protect themselves through social distancing — such as medical professionals, the elderly, the health-compromised, and the homeless.

Various factors have been found to influence compliance with COVID-19 health and safety mandates. These factors include low self-control, faith in then-President Trump (Graham et al., 2020), variation among schools in “political themes” found in students' graduation speeches (Mueller et al., 2021), and a general fear of the COVID-19 virus (Harper et al., 2020). These factors (along with others) will be described in greater detail below. A major contribution of the thesis is its focus on an understudied factor in the literature: people's moral intuitions, which are potentially important for better understanding why people do and do not comply with public health and safety mandates. In addition, understanding individuals' moral responses to public health and safety mandates could aid in devising messaging strategies to increase compliance with public health mandates, thereby reducing viral spread.

This study will use Moral Foundations Theory to examine the influence of people's moral intuitions on masking and social distancing. I will be looking at the different components of morality specified by MFT, including individualizing moral intuitions that place individual

wellbeing at the center of moral concern (including harm and fairness) and binding moral intuitions that place the needs of groups at the center of moral concern (including loyalty, authority, and sanctity). Despite MFT being the most influential theory of morality in current use, little research has examined the influence of people's moral intuitions on their compliance with masking mandates. The small amount of research that has been done suggests that "caring and fairness concerns predict complying with all behaviors, while sanctity concerns only predict compliance with wearing face masks and social distancing" (Chan, 2020). Similarly, a study by Graham et al. entitled *Faith in Trump, Moral Foundations, and Social Distancing Defiance During the Coronavirus Pandemic* found that the moral foundations of "ingroup/loyalty, authority/respect, and purity/sanctity are far more important to conservatives than to liberals" when it comes to compliance, particularly those also supported President Trump (Graham et al., 2020).

Adding to the existing literature, this study will examine survey data from a sample of 565 Penn State students compiled in the Fall of 2020 during the first year of the pandemic. This study will pay special attention to the influence of students' moral foundations on their compliance with university masking and social distancing mandates that were in place at the time, and in so doing complement previous research on the factors affecting COVID-19 safety compliance, which mostly rely on adult samples and focus on factors other than morality.

PRIOR RESEARCH LINKING MORAL FOUNDATIONS TO COVID-19 COMPLIANCE BEHAVIOR

MFT delineates five central foundations of morality: loyalty, authority, purity, fairness, and harm. These foundations have been found to influence (and arguably dictate) individuals' values, behaviors, priorities, and actions. The relationship between moral foundations and compliance with COVID-19 health mandates has been examined in a handful of studies, producing compelling results. However, research on the topic remains limited, particularly regarding the influence of morality.

Various studies note a correlation between specific moral foundations and political affiliation. Henderson and Schnall's *Disease and Disapproval: COVID-19 Concern is Related to Greater Moral Condemnation* observes how the more worried one was about becoming infected with COVID-19, the more likely they were to comply with health mandates and morally chastise those who were less worried. The study also found that "political orientation was a significant predictor of such moral condemnation" (Henderson and Schnall, 2021). The researchers note that the moral foundations of fairness and harm are closely associated with individuals identifying as politically left-leaning, whereas the foundations of loyalty, authority and purity are closely associated with individuals identifying as politically conservative. This notion is also pointed out in Chan's *Moral Foundations Underlying Behavioral Compliance During the COVID-19 Pandemic*, which maintains that "political liberals are more focused on the foundations of caring and fairness, while conservatives are focused on loyalty, authority, and sanctity" (Chan, 2020).

A study by Presti et al. entitled *Psychological Precursors of Individual Differences in COVID-19 Lockdown Adherence: Moderated-Moderation by Personality and Moral Cognition*

Measures examines COVID-19 health mandate compliance in Italy, and the factors most significant in predicting it. The study found that “novelty-seeking and harm-avoidance, and the authority moral foundation...play interacting roles in the adherence to containment measures” (Presti et al., 2021). It is important to note, however, that Italy’s and the United States’ political systems and governments are distinct from one another, and that the United States’ handling of the COVID-19 pandemic quickly became politicized due to Trump’s public disregard for following health protocol in a way that deviated from Italy.

A study conducted by Cullen et al. (2021) entitled *The Denier in Chief: Faith in Trump and Techniques of Neutralization in a Pandemic* concurs with Henderson and Schnall’s findings regarding political affiliation and lack of compliance with COVID-19 mandates. Cullen et al.’s findings are consistent with other research findings that individualizing moral intuitions emphasizing fairness and care are closely aligned with a left-leaning political orientation and are associated with greater compliance, while binding moral intuitions stressing purity, loyalty and authority align with conservatism and lower levels of compliance. Cullen et al. also find that levels of compliance were especially low among those with strong binding moral intuitions, especially those who supported Trump. They interpret this finding by arguing that strong binding moral intuitions render one highly susceptible to the influence of leaders. Therefore, since Trump was non-compliant himself, so were his supporters, especially when their binding moral intuitions were strong.

SUMMARY & HYPOTHESES

To summarize, prior research finds varying levels of compliance with COVID-19 restrictions associated with the moral foundations. Those with strong binding moral foundations were less likely to comply with COVID-19 restrictions while those with strong individualizing moral intuitions were more likely to comply. There is also evidence that those who supported Trump were less likely to comply with COVID-19 restrictions, especially if they also possessed strong binding moral intuitions (Cullen et al., 2021). The current study seeks to add to these findings.

I argue that differences in the priorities of those with strong binding moral intuitions (loyalty, authority, purity) and those with strong individualizing moral intuitions (fairness, harm) influence compliance with COVID-19 restrictions. My reasoning is as follows. Those with strong individualizing moral intuitions are more likely to comply with COVID-19 health protocols because they are more likely to put care and concern for individual wellbeing, especially the vulnerable, at the center of moral concern. Moreover, in spite of social distancing and mask mandate compliance being associated with lessened social bonds and weakened group ties in the short run, those who possess strong individualizing moral intuitions would perceive such costs as necessary, and even imperative with regard to protecting vulnerable individuals by restraining viral spread.

In contrast, those with strong binding moral intuitions are more likely to prioritize “group cohesion” including the vigorous maintenance of social ties and social bonds. They are therefore more likely to view COVID-19 health protocols of masking and social distancing negatively because they may weaken group bonds. As a result, those who more strongly endorse binding

intuitions would be particularly distressed and outraged by being unable to fraternize and attend social gatherings compared to those who more strongly endorse individualizing moral intuitions. Those with strong binding moral intuitions may also perceive a greater threat to the health of the economy and other social institutions, such as churches, due to extreme restrictions on social activity.

This thesis also seeks to replicate Cullen et. al's 2021 findings in *The Denier in Chief: Faith in Trump and Techniques of Neutralization in a Pandemic*. Specifically, I examine whether binding moral intuitions exert a greater influence on COVID-19 noncompliance among Trump supporters. Cullen et al. argue that Trump's denial of the seriousness of the pandemic led to his supporters' rejection of masking mandates, social distancing, and curfews. The study states how "these results suggest that in the early stages of the pandemic, President Trump's denials served as a likely source of cognitions justifying noncompliance with social distancing health norms" (Cullen et al., 2021, 1).¹ This thesis seeks to replicate Cullen et al.'s result by examining whether students who supported Trump were especially unlikely to comply with masking and social distancing mandates if their binding moral intuitions were strong. This thesis thus examines Trump's role in facilitating noncompliance within COVID-19 health protocols and predicts that "binding foundations might encourage [non-compliance] if the group's authority figure — in this case, Donald Trump — was seen as favoring noncompliance" (Cullen et al., 2021, 7).

¹ Techniques of neutralization are characterized as rationales individuals construct subsequent to disobeying societal norms and/or laws. The five techniques of neutralization are 1) denial of responsibility, 2) denial of injury, 3) denial of the victim, 4) condemnation of the condemners, and 5) appeal to higher loyalties (Cullen et al., 2021, 8).

HYPOTHESES

In light of prior research and using a large sample of college students, the current study will examine the following three hypotheses:

1. Individualizing moral intuitions (including fairness and harm) will correlate with increased compliance with COVID-19 masking and social distancing mandates.
2. Binding moral intuitions (including loyalty, authority and purity) will correlate with decreased compliance with COVID-19 masking and social distancing mandates.
3. Masking and social distancing compliance will be lower among students who approved of Trump's handling of the pandemic.
4. Binding moral intuitions will have a greater effect on COVID-19 noncompliance among Trump supporters.

METHODS

Data

Data for this study were gathered in 2020 from students in 10 large-enrollment, general education courses in sociology and criminology at Penn State University. Students were contacted via e-mail and provided a personalized link to the survey instrument, which was hosted on an online survey platform. Each student was offered one percentage point of extra credit for participating. All personally identifying information was removed before analysis. The survey was conducted in accordance with IRB standards. In total, 1,601 of the 2,291 students contacted took the survey, resulting in a 70% response rate. Eight students were removed from the sample due to missing data. Of these, 565 students agreed to answer a follow-up survey in October of 2021, while classes were back in session and COVID-19 restrictions were in place both nationally and at Penn State. The additional survey focused on their COVID-19 compliance.

Measures

Dependent Variables

Mask-Wearing Compliance (on weekends). Mask-wearing compliance on the weekends was measured through a self-reported scale ranging from 0-10. The rationale for measuring compliance on the weekends as opposed to week days is due to students having greater freedom and discretion on weekends compared to days of the week when they were under the supervision of school authorities. *Social Distancing Compliance (on weekends).* Social-distancing compliance on the weekends was measured through a self-reported scale ranging from 0-10. Both dependent variables were coded as dichotomies, where students who self-reported an 8 or

greater were coded as 1 (compliant) and students who self-reported a 0-7 were coded as 0 (non-compliant).

Independent Variables

Individualizing Moral Intuitions. Individualizing moral intuitions include harm and fairness, and are measured using the Moral Foundations Questionnaire (MFQ 30). The Moral Foundations Questionnaire (MFQ 30) is comprised of two parts, with the first asking participants to characterize the relevance of “15 principles to their assessments of right and wrong” (Silver, 2022, 8) through a Likert rating, and the second part having them rate the extent of which they agree with another 15 statements of moral relevance. The individualizing moral intuitions scale was constructed by taking the average of the 12 items from the MFQ 30 that concern the foundations of care/harm and fairness/cheating. Six items were taken from Part 1, and another 6 from Part 2 (alpha = .74).

Binding Moral Intuitions. Binding moral intuitions consist of loyalty, authority and purity, and are measured using the Moral Foundations Questionnaire (MFQ 30). The binding moral intuitions scale was constructed by taking the average of the 18 items from the MFQ 30 that concern the foundations of loyalty/betrayal, authority/subversion, and sanctity/degradation. Nine items were taken from Part 1 and 9 were taken from Part 2 (alpha = .83).

The correlation between the two moral intuitions scales is $r = .251$. This result indicates that the individualizing and binding moral intuitions scales are positively and modestly associated with one another so that when one score is higher the other tends to be higher too. This corresponds with prior literature on the subject. The MFQ 30 can be found in *Appendix A*.

Moderating Variable

Trump Approval is measured by a question asking how the student would rate Trump's handling of the pandemic. Response options ranged from 1-5, with 1 being *excellent* and 5 being *poor*. Responses were coded 1 for students who approved of Trump's handling of the pandemic (response options 1, 2, or 3), and 0 for students who did not approve (response options 4 or 5).

Control Variables

Sex is measured using a dummy variable coded 1 for students identifying as female, and 0 for students identifying as male. *Age* is measured through a scale ranging from 1-5; 1 = 17 or 18 years old, 2 = 19 years old, 3 = 20 years old, 4 = 21 years old, and 5 = 22+ years old. *U.S.*

Citizenship is measured with a dummy variable coded 1 for *U.S. citizens* and 0 for *non-U.S.*

citizens. *Race* is measured using four dummy variables for *non-Latino black*, *Asian*, *Latino*, and

Other. The latter variable is coded 1 and includes students who identified as Middle Eastern,

Indian, etc. *Conservatism* is measured using Q29.7 from the 2020 PSU Codebook with a scale

ranging from 1-7, with 1 being *very liberal* and 7 being *very conservative*. *Religious*

Participation is measured through self-reported participation in religious services (1-7 range, 1

being *never*, 7 being *more than once a week*). U.S. citizenship was measured by asking

respondents "are you a U.S. citizen (coded 1 for yes and 0 for no). *Sociology/Criminology Major*

is measured using a dummy variable coded 1 for students majoring in Sociology/Criminology,

and 0 for other majors. *Fraternity/Sorority Membership* is measured using a dummy variable

coded 1 for students identifying as a fraternity/sorority member, and 0 for students not affiliated.

The descriptive statistics for all variables are shown in Table 1.

ANALYSIS & RESULTS

Starting with the descriptive statistics, Table 1 shows that 72.0% of participants complied with masking mandates, but only 42.2% complied with social distancing mandates. Students were thus substantially more likely to comply with mask mandates than to socially distance. Table 1 also shows that students tended to score higher on the individualizing moral intuitions (mean of 4.1 on a 5-point scale) than on the binding moral intuitions (mean of 3.3), which is indicative of the cultural norms present in many western societies (which can foster individualism). 21.5% of students approved of Trump’s handling of the pandemic. With regard to other the sample, 69.7% identified as female, 73.7% were White, 6.2% were Black, 7.4% were Asian, and 3.9% were Latino. 93.5% of the sample were U.S. citizens, 19.9% were sociology or criminology majors, and 19.2% were active members in a fraternity or sorority. The average student scored in the middle of the political conservatism scale (3.6 on a scale from 1 to 7) and in the middle of the religious participation scale (3.3 on a scale from 1 to 7). The sample’s mean age of 2.3 indicates students were on average between 18 and 19 years old.

TABLE 1. Descriptive Statistics (N = 565)

<i>Variable</i>	<i>Percent/ Mean (SD)</i>	<i>Range</i>	<i>Scale Alpha</i>
<i>Dependent Variables</i>			
<i>Masking compliance</i>	72.0%	0 – 1	
<i>Social distancing compliance</i>	42.2%	0 – 1	
<i>Moral Intuitions</i>			

<i>Individualizing</i>	4.1 (0.5)	1 – 5	.74
<i>Binding</i>	3.3 (0.6)	1 – 5	.83
<i>Moderator Variable</i>			
<i>Trump approval</i>	21.5%	0 – 1	
<i>Control Variable</i>			
<i>Female</i>	69.7%	0 – 1	
<i>Age</i>	2.3 (1.1)	1 – 5	
<i>White</i>	73.7%	0 – 1	
<i>Black</i>	6.2%	0 – 1	
<i>Asian</i>	7.4%	0 – 1	
<i>Latino</i>	3.9%	0 – 1	
<i>Other race</i>	8.8%	0 – 1	
<i>Political conservatism</i>	3.6 (1.7)	1 – 7	
<i>Religious participation</i>	3.3 (1.7)	1 – 7	
<i>U.S. citizen</i>	93.5%	0 – 1	
<i>Soc or crim major</i>	19.9%	0 – 1	
<i>Fraternity/sorority member</i>	19.2%	0 – 1	

SD = Standard deviation

Table 2 presents bivariate relationships between masking and social distancing compliance and moral foundations. The findings indicate that of those with low individualizing moral foundations, 66.3% were compliant with masking, and 36.4% were compliant with social distancing, compared to 77.9% and 47.9% for those with high individualizing moral foundations.

These differences are statistically significant, meaning they are unlikely to have occurred by chance. These results support hypothesis 1: higher individualizing moral intuitions (including fairness and harm) are associated with increased compliance with COVID-19 masking and social distancing mandates.

TABLE 2. Masking and Social Distancing Compliance by Moral Foundations (N=565)¹

	% Compliant	
<i>Moral Foundations</i>	<i>Masking</i>	<i>Social Distancing</i>
<i>Low individualizing</i>	66.3 **	36.4 **
<i>High individualizing</i>	77.9	47.9
<i>Low binding</i>	77.6 **	46.1 ~~
<i>High binding</i>	67.3	38.9

Chi-square test: ** $p < .01$, ~~ $p < .10$

¹ Compliance = score of 8 or above on a scale from 1 to 10 where 1 = “not complying at all” and 10 = “fully complying”

Table 2 also shows that, of those with low binding moral foundations, 77.6% were compliant with masking and 46.1% were compliant with social distancing, compared to 67.3% and 43.9% for those with high binding moral foundations. The difference for masking is statistically significant. The difference for social distancing is marginally significant. These results support hypothesis 2, which is that binding moral intuitions (including loyalty, authority, and sanctity) are associated with decreased compliance with COVID-19 masking and social distancing mandates.

Table 3 replicates the results of Table 2 but within a multivariate framework including control variables. We use logistic regression because the dependent variables (masking and social

distancing compliance) are coded as dichotomies. The results show that each unit increase in the individualizing moral foundations scale is associated with .78 increase in the likelihood of complying with masking and a .53 increase in the likelihood of complying with social distancing. Both results are statistically significant. The results also show that each unit increase in the binding moral foundations scale is associated with a .55 decrease in the likelihood of complying with social distancing and a .22 decrease in the likelihood of social distancing. The result for masking compliance was significant the result for social distancing compliance was not. These findings provide further support for hypotheses 1 and 2.

TABLE 3. Logistic Regression Predicting Masking and Social Distancing Compliance (N=565)

	<i>Masking Compliance b (SE)</i>	<i>Social Distancing Compliance b (SE)</i>
<i>Moral Foundations</i>		
<i>Individualizing</i>	.78 (.25) **	.53 (.24) *
<i>Binding</i>	-.55 (.23) *	-.22 (.20)
<i>Control Variables</i>		
<i>Female</i>	.20 (.24)	.31 (.23)
<i>Age</i>	.18 (.10)	.23 (.09) **
<i>Black</i>	.79 (.57)	1.15 (.41) **
<i>Asian</i>	.89 (.49)	.82 (.36) *
<i>Latino</i>	.19 (.54)	.40 (.45)
<i>Other race</i>	.75 (.44)	.64 (.33)
<i>Political conservatism</i>	-.07 (.08)	-.09 (.07)

<i>Religiosity</i>	.03 (.06)	-.03 (.06)
<i>U.S. citizen</i>	-.21 (.52)	-.58 (.41)
<i>Soc or crim major</i>	-.20 (.25)	.04 (.23)
<i>Fraternity/sorority member</i>	-.65 (.24) **	-.45 (.24)
<i>R²</i>	.13	.13

* $p < .05$, ** $p < .01$, *** $p < .001$ / *SE* = standard error

¹ Reference category = White

We now turn to examining the influence of students' approval of Trump's handling of the pandemic. Table 4 shows compliance with masking and social distancing mandates broken out by approval of Trump's handling of the pandemic. Of those who approved of Trump's handling of the pandemic, 60.7% were compliant with masking compared to 75.3% of those who did not approve of Trump's handling of the pandemic. Table 4 also shows that of those who approved of Trump's handling of the pandemic, 33.3% were compliant with social distancing compared to 44.6% of those who did not approve of Trump's handling of the pandemic. Both differences are statistically significant. Table 4 thus shows that those who approved Trump's handling of the pandemic were significantly less likely to comply with masking and social distancing mandates. These results support hypothesis 3.

TABLE 4. Compliance by Approval of Trump's Handling of the Pandemic (N=565)¹

	% Compliant	
<i>Approval of Trump's Handling of the Pandemic</i>	<i>Masking</i>	<i>Social Distancing</i>
<i>Yes (N=122)</i>	60.7 **	33.3 *

No (N=444)	75.3	44.6
------------	------	------

Chi-square test: * $p < .05$, ** $p < .01$

¹ Compliance = score of 8 or above on a scale from 1 to 10 where 1 = “not complying at all” and 10 = “fully complying”

We now examine our last hypothesis (hypothesis 4), which is that binding moral intuitions will have a greater effect on COVID-19 noncompliance among Trump supporters. Table 5 shows compliance by the moral foundations through the lens of Trump approval. Of those who approved of Trump’s handling of the pandemic (top portion of the table) and had high binding moral foundations, only 56.2% complied with masking, and only 29.5% complied with social distancing. On the other hand, of those who approved of Trump’s handling of the pandemic but had low binding moral foundations, 72.7% complied with masking and 43.8% complied with social distancing. This means those high in binding moral intuitions *and* approving of Trump were the least likely to comply with both measures of Covid safety protocol. This finding replicates Cullen’s (2021) study of the U.S. general population using a student sample. It’s important to note that the sample of Trump approvers shown in Table 5 was small, (N = 122). But the differences in compliance for high and low binding moral foundations were large so that if we had additional participants and this pattern was maintained, the results would likely have achieved statistical significance.

TABLE 5. Compliance by Moral Foundations by Trump Approval¹

Approval of Trump’s Handling of Pandemic = YES (N = 122)

	% Compliant	
<i>Moral Foundations</i>	<i>Masking</i>	<i>Social Distancing</i>
<i>Low binding</i>	72.7 ~	43.8
<i>High binding</i>	56.2	29.5

Approval of Trump's Handling of Pandemic = NO (N = 444)

	% Compliant	
<i>Moral Foundations</i>	<i>Masking</i>	<i>Social Distancing</i>
<i>Low binding</i>	78.2	46.2
<i>High binding</i>	72.1	42.9

Chi-square test: $\sim p < .10$, $ p < .05$, $** p < .01$, $*** p < .001$*

¹ Compliance = score of 8 or above on a scale from 1 to 10 where 1 = "not complying at all" and 10 = "fully complying"

The bottom portion of Table 5 shows that, of those who reported not approving of Trump's handling of the pandemic and who possessed low binding moral foundations, 78.2% complied with masking and 46.2% complied with social distancing. Of those who reported not approving of Trump yet had high binding moral foundations, 72.1% were found to be compliant with masking and 42.9% compliant with social distancing. There was thus little difference in compliance due to binding moral foundations between Trump supporters and non-supporters. Overall, the results of Table 4 support hypothesis 4: the combination of Trump approval and high binding moral foundations was especially detrimental to Penn State students' compliance with masking and social distancing guidance during the pandemic.

DISCUSSION

This study examined the influence of students' binding or individualizing moral intuitions on their compliance with mask mandates and social distancing during the COVID-19 pandemic. This study examined four hypotheses. The first is that individualizing moral intuitions (fairness and care) are associated with increased compliance with COVID-19 masking and social distancing protocols. The second is that binding moral intuitions (loyalty, authority, purity) are associated with decreased compliance with COVID-19 masking and social distancing mandates. The third hypothesis is that masking and social distancing compliance would be lower among students who approved of Trump's handling of the pandemic. The fourth and final hypothesis is that binding moral intuitions are especially detrimental to COVID-19 noncompliance among Trump supporters.

The results of this study supported the first hypothesis: Individualizing moral intuitions are associated with heightened compliance with both COVID-19 social distancing and masking protocols. The second hypothesis was also supported: Binding moral intuitions were associated with decreased compliance. This study's third hypothesis was supported as well: Those who approved of Trump's handling of the pandemic were less compliant with COVID-19 restrictions than those who did not approve. The fourth hypothesis — that binding moral intuitions will more strongly correlate with decreased compliance among those who approved of Trump — was supported though the association did not attain statistical significance. This is probably due to the relatively small sample size of students who approved of Trump's pandemic management.

This study makes several contributions to the literature. First, it complements prior research that has been done on the general population by focusing on college students'

propensity to conform to COVID-19 health and safety mandates. Extending prior research to include college students is important since they represent a demographic that may greatly contribute to virus spread and about whose compliance behaviors relatively little is known. Examining which moral foundations most closely resonate with university students' compliance, therefore, may help in constructing policies and/or communication campaigns geared toward facilitating heightened compliance during the next public health crisis.

There are several practical implications of this study worth noting. Most communication campaigns throughout the pandemic primarily targeted individualizing intuitions of harm and fairness rather than binding intuitions. People were encouraged to comply with masking and social distancing as a way to care for others, especially the vulnerable. However, those who resonate with binding moral intuitions may be less moved by such appeals. Indeed, the results show that they were significantly less likely to comply with social distancing and mask mandates. Policy makers and/or university administrations should consider implementing information campaigns intended for individuals with binding intuitions. Such campaigns might redirect the central message to revolve around viewing COVID-19 as akin to an enemy of the state or a terrorist, and encourage adhering to masking and social distancing protocols as a way of showing loyalty to one's country. With special regard to the binding moral intuition of purity, communication campaigns could speak of the collective society as a single "social body," and COVID-19 as a pathogen among the group. This might motivate those who prioritize purity to follow mandates more closely and, hopefully, reach similar compliance levels as those with strong individualizing moral intuitions.

This study also has implications for criminological research on deviance and conformity. Noncompliance with COVID-19 restrictions is a form of deviance and this study demonstrates

that morality is an important correlate of compliance. Therefore, the results of this study indicate that Moral Foundations Theory is useful not just for analyzing COVID-19 compliance, but for analyzing deviance and conformity more generally.

A final factor of interest attached to this research is the variable of Trump approval, as this study replicates and complements existing literature examining the influence of binding moral intuitions on COVID-19 compliance among Trump supporters. Accordingly, this study should be useful to those interested in public policy, criminology, and the health and safety university populations.

LIMITATIONS

This study is not without limitations. First, it is merely one study examining college students' binding or individualizing moral intuitions in relation to their pandemic compliance. Caution must therefore be used in generalizing the results to populations outside of Pennsylvania State University. Likewise, Penn State students could, for example, be unusual in their moral foundations or their COVID-19 compliance compared to other students or adults. I recommend that future researchers attempt to replicate these findings using samples from other universities and the adult public.

In addition, although this study's data were collected from large-enrollment general education courses, these classes were exclusively sociology and criminology courses, which could skew the results of the surveys and present bias. In addition to this, the survey was disseminated through email, and students who completed it received one percentage point of extra credit in their given course. Therefore, two potential limitations of this study are selection bias and inherent issues with self-reported data. There is ingrained selection bias in only drawing from students in general education criminology and sociology lectures, because there is the possibility that those interested in criminology or sociology may exhibit different ethics or moral foundations compared to students who do not share their academic interests.

Further, since students were given a percentage point of extra credit, one could have gone through the survey quickly or haphazardly — therefore not answering accurately — being solely motivated by the extra credit aspect. This would, in turn, jeopardize the study's results. This could raise questions about the overall internal validity of this data. Social desirability is another potential source of bias in self-reported data. Due to the study's subject matter – not only

encompassing morality but asking about individual pandemic compliance – participants may have answered survey questions in a way they inferred researchers would approve of.

Correspondingly, the subsample of Trump supporters depicted in Table 5 is quite small (N = 122), and is arguably too small for generalizing the results to all college students who approved of Trump's handling of the pandemic.

CONCLUSION

This thesis examined the relationship between moral foundations and compliance with COVID-19 health and safety protocols, specifically evaluating adherence to both masking mandates and social distancing. Utilizing Haidt's Moral Foundations Theory, this study characterized measured binding moral intuitions (loyalty, authority, purity) and individualizing moral intuitions (fairness and care). The study analyzed survey data from a Penn State students sample (N = 565), and discovered a notable correlation between moral intuitions and pandemic compliance.

Indeed, those with individualizing moral intuitions were more likely to comply and those with strong binding moral intuitions were less likely to comply. This study also examined the relationship between students' who approved of Trump's handling of the pandemic and their compliance with COVID-19 protocol. It was found that students' who endorsed Trump's pandemic management and possessed strong binding moral intuitions were the least likely to comply with COVID-19 mandates. Mirroring this, those who simultaneously did not approve of Trump and exhibited strong individualizing moral intuitions were the most likely to comply. Additional research and inquiry on this topic is needed and should be prioritized for future funding in view of the timely implications of this study, which include improved communication campaigns for the plausibly inevitable next global health crisis.

APPENDIX A: THE MORAL FOUNDATIONS QUESTIONNAIRE (MFQ 30)

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)

- _____ Whether or not someone suffered emotionally
- _____ Whether or not some people were treated differently than others
- _____ Whether or not someone's action showed love for his or her country
- _____ Whether or not someone showed a lack of respect for authority
- _____ Whether or not someone violated standards of purity and decency
- _____ Whether or not someone was good at math
- _____ Whether or not someone cared for someone weak or vulnerable
- _____ Whether or not someone acted unfairly
- _____ Whether or not someone did something to betray his or her group
- _____ Whether or not someone conformed to the traditions of society
- _____ Whether or not someone did something disgusting
- _____ Whether or not someone was cruel
- _____ Whether or not someone was denied his or her rights
- _____ Whether or not someone showed a lack of loyalty
- _____ Whether or not an action caused chaos or disorder
- _____ 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

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

- _____ When the government makes laws, the number one principle should be ensuring that everyone is treated fairly.
- _____ I am proud of my country's history.
- _____ Respect for authority is something all children need to learn.
- _____ People should not do things that are disgusting, even if no one is harmed.
- _____ It is better to do good than to do bad.
- _____ One of the worst things a person could do is hurt a defenseless animal.
- _____ Justice is the most important requirement for a society.
- _____ People should be loyal to their family members, even when they have done something wrong.
- _____ Men and women each have different roles to play in society.
- _____ I would call some acts wrong on the grounds that they are unnatural.
- _____ It can never be right to kill a human being.
- _____ I think it's morally wrong that rich children inherit a lot of money while poor children inherit nothing.
- _____ It is more important to be a team player than to express oneself.
- _____ If I were a soldier and disagreed with my commanding officer's orders, I would obey anyway because that is my duty.
- _____ Chastity is an important and valuable virtue.

BIBLIOGRAPHY

- Chan, Eugene Y. 2020. "Moral Foundations Underlying Behavioral Compliance During the COVID-19 Pandemic." *Personality and Individual Differences* 171(1):1-10.
- Cullen, Francis T., Justin T. Pickett, Cheryl L. Jonson, Murat Haner, Melissa M. Sloan, and Amanda Graham. 2020. "Faith in Trump, Moral Foundations, and Social Distancing Defiance During the Coronavirus Pandemic." *Socius: Sociological Research for a Dynamic World* 6(1):1-23.
- Cullen, Francis T., Amanda Graham, Cheryl L. Jonson, Justin T. Pickett, Melissa M. Sloan, and Murat Haner. 2021. "The Denier in Chief: Faith in Trump and Techniques of Neutralization in a Pandemic." *Deviant Behavior* 42(4):1-17.
- Harper, Craig A., Liam P. Satchell, Robert D. Latzman, and Dean Fido. 2021. "Functional Fear Predicts Public Health Compliance in the COVID-19 Pandemic." *International Journal of Mental Health and Addiction* 19(10):1875-1888.
- Henderson, Robert K., and Simone Schnall. 2021. "Disease and Disapproval: COVID-19 Concern is Related to Greater Moral Condemnation." *Evolutionary Psychology* 19(2):163.
- Igielnik, Ruth. "Men and Women in the U.S. Continue to Differ in Voter Turnout Rate, Party Identification." *Pew Research Center*, Pew Research Center, 2 Sept. 2020, *Pew Research Center*.
- Mueller, Anna S., Katherine A. Beardall, Krystina Millar, Sarah Diefendorf, Seth Abrutyn, Lauren O'Reilly, James T. Wakins, and Hillary Steinberg. 2021. "Youth Mask-Wearing and Social-Distancing Behavior at In-Person High School Graduations During the COVID-19 Pandemic." *Journal of Adolescent Health* 68(3):1-8.
- Pagliaro, Stefano et al. 2021. "Trust Predicts COVID-19 Prescribed and Discretionary Behavioral Intentions in 23 Countries." *PLOS One* 16(3):1-20.
- Presti, Sarah L., Giulia Mattavelli, Nicola Canessa, and Claudia Gianelli. 2021. "Psychological Precursors of Individual Differences in COVID-19 Lockdown

Adherence: Moderated-Moderation by Personality and Moral Cognition Measures.”

Personality and Individual Differences 182(14):1-18.

Reimer, Nils K. et al. 2021. “Moral Values Predict Country-Level COVID-19 Vaccination Rates in the United States.” *University of Southern California* 1(1):1-40.

Rosenfeld, D. L., & Tomiyama, A. J. (2022). Moral Judgments of COVID-19 Social Distancing Violations: The Roles of Perceived Harm and Impurity. *Personality and Social Psychology Bulletin*, 48(5), 766–781.

Silver, Eric. Bystander Reporting on a College Campus: Moral Intuitions as a Precursor to Informal Social Control. *Deviant Behavior*, 1-23.

ACADEMIC VITA

Ella Corby

ebc5311@psu.edu | [LinkedIn Profile URL](#)

EDUCATION

The Pennsylvania State University, Schreyer Honors College
 Bachelor of Science in Criminology
 Minors in Legal Studies & Sociology
University Park, Pennsylvania
 Graduation: May 2023

Council on International Educational Exchange (CIEE)
 Non-profit Intercultural Exchange Program
 Course Focus: Psychology, Communications & Mass Media Relations
London, England
Madrid, Spain
 January 2023 – May 2023

ACADEMIC & RESEARCH EXPERIENCE

Honors Thesis
Masking Mandate Compliance During the Pandemic: The Influence of Moral Foundations
University Park, Pennsylvania
 August 2021 – Present

- Developed journal-style research project chaired by a faculty supervisor on Haidt's *Moral Foundations Theory* (MFT) in relation to compliance with Coronavirus safety protocol
- Operationalized and analyzed data constructs from IRB-approved research such as conformity, conservatism, ethnicity and religiosity
- Produced thorough literature review detailing prior studies linking MFT to Coronavirus compliance behaviors
- Seeking peer-reviewed publication

Undergraduate Teaching Assistant
SOC 119N: Race, Ethnicity & Culture, The Pennsylvania State University
University Park, Pennsylvania
 January 2023 – Present

- Formulated quiz questions based on lecture material on a biweekly basis
- Coordinated student volunteers for each class through contacting participants, updating volunteer spreadsheets, and transcribing course material for faculty to upload online
- Assisted in administrative tasks including managing attendance, participant surveys and consent forms

Paterno Fellow
The Pennsylvania State University
University Park, Pennsylvania
 May 2021 – Present

- Assumed an additional 14 honors credits in final four semesters
- Volunteered 50 hours of community service throughout senior year
- Petitioned an honors option with course supervisor; conducted structured interviews and implemented research into communitarian-oriented and individualist-oriented behavior
- Completed an enhanced minor in Sociology and an additional 9 credits of International Culture (IL) courses

WORK & INTERNSHIP EXPERIENCE

sepiaEYE Art Gallery
Paid Intern and Administrative Assistant
New York, New York
 June 2017 – December 2021

- Organized client files, logged business expenses, scheduled appointments, composed and sent out weekly mass emails
- Cataloged print inventory, compiled spreadsheets, drafted and disseminated press releases on gallery's various social media platforms (Instagram, Facebook, Twitter)
- Utilized databases such as: Dropbox, Microsoft Word, Excel, etc.

Lisa Chambers
Paid Intern to Independent Editor
New York, New York
 June 2021 – August 2021

- Organized research materials for an upcoming autobiographical literary work
- Transcribed and photocopied newspaper archives relevant to Chambers' research
- Annotated archival works and documents; composed summaries and provided analysis for further book research

Davis Polk & Wardwell LLC
Legal Mentorship
New York, New York
 September 2017 – June 2018

- Participated in unpaid internship program providing knowledge on legal procedure and client relational skills
- Gained insight on crisis management, clerical work and administrative assistance

ACTIVITIES

Zeta Tau Alpha
General Member, ATO ZTA Benefitting THON Committee
University Park, Pennsylvania
 January 2020 – Present

Greeks CARE: Combatting Sexual Violence on Campus
General Member
University Park, Pennsylvania
 August 2021 – December 2021

SKILLS

Technology: Dropbox, Microsoft Word, Microsoft Excel, Microsoft Outlook, Minitab, Minitab Express, Powerpoint

Language: English (*fluent*), Spanish (*intermediate*)