The Moral Foundations of Preparedness:
Public Opinion about Federal Disaster Preparedness Spending in the US[*]

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What explains the absence of electoral incentives for preparedness spending? Previous research demonstrates that voters reward politicians for relief spending after disaster, but not for preparedness spending despite it being significantly more cost-effective than relief. This absence of political incentives for preparedness spending could exacerbate vulnerability to disasters. In this paper, we seek to understand how moral foundations and attribution shape individuals' attitudes towards disaster preparedness. Through an online survey experiment, we find that morality is associated with attitudes towards federal preparedness spending, with care and fairness positively related to support for preparedness spending, and ingroup positively associated with support for greater amounts of federal preparedness spending. Against expectations, we find that the attribution treatments had no meaningful effects on support for preparedness, suggesting that attribution of blame is not related to public attitudes about preparedness spending. The results have broad implications for the understanding of public opinion about disaster preparedness, demonstrating how moral values shape attitudes about preparedness initiatives but attribution of blame has little effect on public sentiment about these initiatives.

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1 Introduction

What explains the absence of electoral incentives for disaster preparedness spending? Previous research demonstrates that people reward politicians for disaster declarations (Reeves, 2011) and for relief spending after disaster (Bechtel and Hainmueller, 2011), but not for preparedness spending (Gailmard and Patty, 2019; Healy and Malhotra, 2009; Stokes, 2016), despite preparedness spending being significantly more cost-effective (Gailmard and Patty, 2019; Healy and Malhotra, 2009). Unsurprisingly, federal spending on disaster spending has remained relatively constant over time, while relief spending has considerably increased over time (Healy and Malhotra, 2009).[1]

The absence of public demand for preparedness could arguably be attributed to voters behaving myopically (Achen and Bartels, 2016; Healy and Malhotra, 2009), but it could also reflect information asymmetries where rational voters are uncertain about the effectiveness or corruption of preparedness projects (Andrews, Delton and Kline, N.d.; Gailmard and Patty, 2019), and disaster preparedness funds might be allocated inefficiently (Sainz-Santamaria and Anderson, 2013).

Recent research suggests that people might update their preferences regarding disaster preparedness when presented with information about policy effectiveness (Bechtel and Mannino, 2023; Weller and Jamieson, N.d.). Further, individuals in at-risk communities also might become more supportive of preparedness and mitigation when threats are presented as something that could affect them (Jamieson and Van Belle, 2018; Jamieson and Cortés Rivera, 2022).[2]

Despite these advances, an unexplored possibility that remains concerns whether voters' support for preparedness initiatives is contingent on the moral values guiding people's perception of events and the attribution of blame for previous disaster damage. In this paper, we test this possibility in an original online survey experiment of 1,005 US residents.

We find that morality is associated with attitudes towards federal preparedness spending, with harm/care and fairness/reciprocity positively related to support for preparedness spending, and ingroup/loyalty positively associated with support for greater amounts of federal preparedness

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[1] This might reflect the influence of interest groups lobbying for the use of disaster-related funds on projects not associated with reducing risk (Jamieson and Louis-Charles, 2023).

[2] This information is frequently reported in news reports of overseas disasters (Jamieson and Van Belle, 2023), but localizing risk is much more likely after disasters in developed countries, regardless of the development of the observing community (Jamieson and Van Belle, 2019). If other necessary conditions such as the political will are in place, this information might help create opportunities to adopt preparedness and mitigation policies that might not otherwise be possible (Jamieson and Van Belle, 2022).

spending. Against expectations, we find that the attribution treatments had no meaningful effects on support for preparedness, suggesting that attribution of blame is not related to public attitudes about preparedness spending. The results have broad implications for the understanding of public opinion about disaster preparedness, demonstrating how moral values shape attitudes about preparedness initiatives but attribution of blame has little effect on public sentiment about these initiatives.

This paper is structured in five further sections. First, we review prior literature on public opinion and electoral responses to disasters, demonstrating the areas of debate around the electoral implications of preparedness and relief spending while highlighting the gap in our knowledge about how fundamental moral values might influence individuals' perception of disaster spending. Second, based on prior scholarship on moral foundations, we outline our theory and our theoretical expectations for our study.

Third, we describe the experimental design we use to test our theory using a convenience sample of 1,0005 participants recruited from Amazon's Mechanical Turk (MTurk). Next, we describe our results which demonstrate the association between individual moral foundations and support for federal preparedness spending. Finally, we conclude with a brief discussion of the implications of our results for the understanding of public support for preparedness spending, and we provide some directions for future research to further build on this paper to enhance our understanding of public opinion and preparedness spending.

2   Literature Review

Previous scholarship demonstrates that people do not always pursue optimal policies, particularly when it comes to federal spending on disaster preparedness and relief. The public might reward incumbent politicians after disasters (Fair et al., 2017; Velez and Martin, 2013) or punish them (Arceneaux and Stein, 2006; Carlin, Love and Zechmeister, 2014; Cole, Healy and Werker, 2012; Eriksson, 2016; Gasper and Reeves, 2011; Healy, Malhotra and Mo, 2010; Heersink, Peterson and Jenkins, 2017), but the jury arguably remains out about the electoral effects of disasters (Bishop, 2014; Bodet, Thomas and Tessier, 2016; Remmer, 2014).

Voters might reward politicians for disaster declarations (Gasper and Reeves, 2011; Reeves,

2011) and for relief spending after disaster (Bechtel and Hainmueller, 2011). For example, President Obama experienced an electoral bump from the effects of Hurricane Sandy in 2012 (Velez and Martin, 2013). However this is context dependent (Abney and Hill, 1966; Boin et al., 2016), and poor government responses could lead to sustained electoral losses (Eriksson, 2016; Montjoy and Chervenak, 2018; Olson and Gawronski, 2010). There are also important implications for perceptions of democratic legitimacy and civic engagement (Carlin, Love and Zechmeister, 2014; Fair et al., 2017).

Furthermore, public opinion shifts in responses to contextual factors that explain attitudes about other policies such as local vulnerability to hazards (Jamieson, 2021). Further, party cues (Malhotra and Kuo, 2008), partisan bias (Bisgaard, 2015; Joslyn and Haider-Markel, 2013) strong emotional responses (Malhotra and Kuo, 2009) political sophistication and prior knowledge (Gomez and Wilson, 2008; Haider-Markel and Joslyn, 2001), race (Lay, 2009), and an individuals' beliefs about the responsibilities of different levels of government (Maestas et al., 2008; Wehde and Nowlin, 2021) explain the extent to which elected officials are blamed for the effects of disasters.

Every dollar spent on preparedness saves between \$4 and \$14 for every dollar spent on relief in the event of a disaster (Gailmard and Patty, 2019; Healy and Malhotra, 2009). However, a consistent thread across this body of literature is that the public does not reward elected officials who pursue preparedness policies that mitigate damage in the first place (Achen and Bartels, 2016; Rubin, N.d.), and they might even be punished for pursuing such policies (Andrews, Delton and Kline, N.d.; Gailmard and Patty, 2019; Stokes, 2016), especially if information about the effectiveness of these policies is not made clear (Weller and Jamieson, N.d.). As such, there are arguably few electoral incentives for investing in preparedness.

Collectively, prior scholarship suggests politicians interested in reelection would be wise to pursue relief policies and ensure they respond competently to disasters, yet they would be ill-advised to invest in preparedness in the absence of favorable conditions for disaster risk reduction (Jamieson and Van Belle, 2022), even though these policies are much more efficient. However, less remains known about how public support for federal preparedness initiatives might be contingent on their moral values and the attribution of blame for previous disaster damage.

To understand public opinion about federal preparedness spending, it is worth considering the moral values that fundamentally shape how people think about politics. Recent studies use

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moral foundations to better understand individual attitudes and behavior about politics and policy (Graham, Haidt and Nosek, 2009; Lakoff, 2010).

Moral foundations help explain differences between liberals and conservatives, as they have fundamentally different sets of core moral values that they rely upon to form judgments about politics and policy (Gilligan, 1982; Graham, Haidt and Nosek, 2009; Haidt and Graham, 2007; Weber and Federico, 2013). Previous research suggests these moral foundations are associated with a wide range of attitudes and behaviors (Clifford and Jerit, 2013; Feinberg and Willer, 2013; Johnson et al., 2014; Koleva et al., 2012; Winterich, Zhang and Mittal, 2012).

It is possible that moral values shape how people interpret events, and ultimately their level of support for federal preparedness initiatives. While one might expect that preparedness initiatives aimed at reducing the loss of life and economic damage from disasters are normatively worthwhile objectives, it could be the case that people have different moral foundations that shape their interpretation of these policies. In this paper, we address how moral foundations and information assigning blame for disaster damage affects people's attitudes about federal disaster preparedness spending.

3 Theory and Hypotheses

Morals are not a novel subject of inquiry within disaster studies. For instance, over thirty years ago Beatley (1989) called for a moral-based national disaster mitigation policy based on shared moral and ethical principles. Similarly, previous research explores both the moral imperatives for effective governance (Bishop, 1991; Bowen and Power, 1993; Fahey, 2007), and how moral hazards may lead to suboptimal policies and behavior in the context of natural hazards (Baylis and Boomhower, 2019; Besley, 1989; Cutter and Emrich, 2006) to name just a few such studies. However, less attention has been paid to how moral values influence attitudes about disaster preparedness spending at the individual level.

3.1 Moral Foundations and Attitudes about Disaster Preparedness Spending

Moral Foundations Theory (MFT) argues that five core psychological values provide the basis for moral judgment (Haidt and Joseph, 2004; Haidt and Graham, 2007; Haidt, Graham and Joseph,

2009). *Individualizing foundations* comprise Care and Fairness – values that are generally associated with the protection of others in society (Graham, Haidt and Nosek, 2009). On the other hand, *binding foundations* are associated with three moral systems: Ingroup, Authority, and Purity – values that are generally associated with social order, justice and loyalty (Graham, Haidt and Nosek, 2009). Not only do these values help understand voting behavior, but political elites vary by gender and party in which moral systems they emphasize in their messaging (Brisbane, Hua and Jamieson, 2023).

Recent work demonstrates how individualizing moral foundations are related to protecting others in society, and high scores in care and fairness are positively associated with support for protective actions such as mitigating climate change (Adger, Butler and Walker-Springett, 2017; Dickinson et al., 2016; Jansson and Dorrepaal, 2015; Vainio and Mäkiniemi, 2016; Wolsko, Ariceaga and Seiden, 2016), and perceptions of fairness might drive support for disaster relief spending (Bechtel and Mannino, 2022).

Given this relationship in other domains, it is likely that individualizing moral foundations shape attitudes about federal preparedness spending. Investment in preparedness can reduce the loss of life and the damage from disasters, so this kind of action helps ensure the welfare of people living in at-risk communities.

People who attach moral virtue to caring for others and ensuring fairness are more likely to support these policies, to assert that the government should play a leading role in protecting people from disasters, and more likely to pledge greater amounts of money to fund such initiatives. As a result, the first set of hypotheses is:

Hypothesis 1 *Individualizing Support Hypothesis*

As individualizing moral foundations increase, individuals become more supportive of federal preparedness spending.

Hypothesis 2 *Individualizing Responsibility Hypotheses*

As individualizing moral foundations increase, individuals place greater responsibility on the Federal Government to invest in preparedness.

Hypothesis 3 *Individualizing Amount Hypotheses*

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As individualizing moral foundations increase, individuals support greater amounts of preparedness spending.

However, not all moral foundations necessarily lead to increased support for preparedness spending. Instead, high scores in Ingroup reflect a commitment to protect one's own group, high scores in Authority reflect a commitment to hierarchy to leaders, and high scores in Purity reflects a willingness to forgo selfish desires and to condemn acts perceived as immoral or sinful.

Collectively, these binding moral foundations likely have their own important relationship with support for preparedness spending. In particular, people with high scores in these moral foundations might feel loyalty to their group, but they feel that poor behavior has consequences. As a result, if damage is caused by a disaster, it might be less the function of government spending and more a reflection of the failure to prepare on the part of affected communities.

Accordingly, we expect that people who attach moral virtue to their ingroup, to authority, and to purity are less supportive of federal disaster preparedness spending, more likely to place responsibility to prepare on communities living in floodplains, and that they support providing less preparedness spending than other individuals. As a result, the second set of hypotheses are:

Hypothesis 4 *Binding Support Hypothesis*

As binding moral foundations increase, individuals become less supportive of federal preparedness spending.

Hypothesis 5 *Binding Responsibility Hypotheses*

As binding moral foundations increase, individuals place greater responsibility on people living in floodplains to invest in preparedness.

Hypothesis 6 *Binding Amount Hypotheses*

As binding moral foundations increase, individuals support fewer amounts of preparedness spending.

3.2 Attribution and Attitudes about Disaster Preparedness Spending

Finally, while moral values likely play a role, the situational context also likely shapes how people support preparedness spending and who they ultimately hold responsible for preparing for disasters. For example Wehde and Nowlin (2021) suggest that there is considerable and systematic

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heterogeneity in attitudes about responsibility for disaster preparedness. How people assign blame for disasters likely leads to different opinions about the extent to which federal funds should be allocated to prepare for future events.

Previous scholarship suggests that people reward incumbent politicians when they perceive they responded well (Fair et al., 2017; Velez and Martin, 2013), and punish perceived poor responses (Arceneaux and Stein, 2006; Carlin, Love and Zechmeister, 2014; Cole, Healy and Werker, 2012; Eriksson, 2016; Gasper and Reeves, 2011; Healy, Malhotra and Mo, 2010; Heersink, Peterson and Jenkins, 2017), but it is also their attribution of blame extends to preparedness for future events.

Recent studies suggest individuals may respond to information to update their attitudes about preparedness. Information about the effectiveness of preparedness initiatives especially appear to increase support for preparedness policy Bechtel and Mannino (2023); Weller and Jamieson (N.d.).

We expect to find that when the government is assigned blame for the disaster, people will become more supportive of federal preparedness spending to protect communities from natural hazards in the future. When people are exposed to information assigning blame to the victims for failing to prepare, we expect that individuals will be less supportive of federal preparedness spending than otherwise, as people blame victims for their own predicament. As a result, the final set of hypotheses is:

Hypothesis 7 *Government Attribution Hypothesis*

Individuals exposed to the government attribution treatment are more supportive of federal preparedness spending than other individuals.

Hypothesis 8 *Victim Attribution Hypothesis*

Individuals exposed to the victim attribution treatment are less supportive of federal preparedness spending than other individuals.

4 Data and Methods

To determine the extent to which moral foundations and attribution shape attitudes about federal disaster preparedness spending, we recruited 1,005 participants living in the US from Amazon Mechanical Turk (MTurk) to complete an online survey experiment through the vendor TurkPrime.

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The experiment was a simple three-group posttest-only design, where participants are randomly assigned to receive a message that either attributes blame to the victims of the flood, attributed blame to the federal government, or a control condition. The experiment featured information about the 2019 Midwest floods, which had occurred approximately six months prior to the study in December 2019.

4.1 Sample

Our sample of 1,005 participants was limited to U.S. residents, MTurk workers who had a prior HIT approval rating of 98% or above, and workers who had completed at least 50 HITs previously.

While MTurk workers are generally more liberal, more educated, and less religious than the broader United States population, prior research suggests MTurk workers perform better than other common convenience samples (Berinsky, Huber and Lenz, 2012; Hauser and Schwarz, 2016; Huff and Tingley, 2015), average treatment effects compare well to other samples (Casler, Bickel and Hackett, 2013; Mullinix et al., 2015); and the samples are not different from probability samples on unmeasurable dimensions (Levay, Freese and Druckman, 2016). As a result, while the results do not allow for generalizing from this study to the broader US population, they are a useful sample to estimate the relationship between moral foundations and attribution of blame on support for disaster preparedness spending (Jamieson, 2019).

All participants were compensated $1.60 for participating in the study. As the study was expected to take approximately eight minutes to complete, participants were expected to earn an effective hourly rate of $12/hour. Ultimately, the median length of time to complete the study was 8.1 minutes, largely matching our expectations.

4.2 Procedure

Figure 1 outlines the design of the experiment.[3] First, participants were presented with a battery of demographic questions including questions about age, household income, race/ethnicity, education, children, and pets, before being presented with measures of moral foundations.

Moral foundations were measured through the validated 30-item battery of questions that have been validated and replicated in previous research, and are commonly used to measure moral

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[3]Appendix A reports the full design including the text of the treatments, questions, and coding of variables.

Figure 1: Experimental Design.
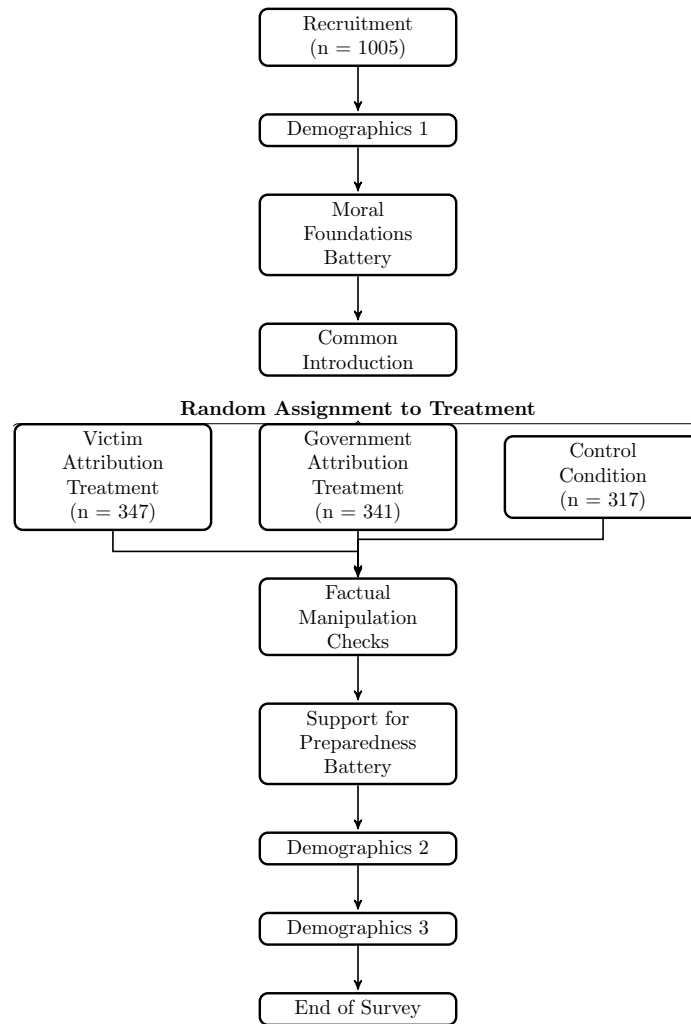
foundations (Haidt and Joseph, 2004; Haidt and Graham, 2007; Haidt, Graham and Joseph, 2009). From there, these responses are coded into the five moral foundations: care/harm, fairness/cheating, loyalty/betrayal, authority/subversion, and purity/degradation. The exact question wording and coding scheme is provided in Appendix 1.2 and 1.3.

Participants then proceeded to the experimental intervention. After a common introduction, participants were randomly assigned to receive a treatment or the control condition. All three experimental groups received information about the 2019 Midwest flood damage, and the widespread impact on affected communities. To improve external validity and make the conditions as realistic as possible, these treatments were based on news reports about the disaster (Klein, 2019; Pascus, 2019; Smith, 2019).

All three experimental conditions were broadly similar except the government treatment group also received information assigning blame for the damage to the federal government's failure to invest in preparedness, while the victims treatment group received information assigning blame for flood victims' failure to invest in preparedness. Participants in the control group only received information about the damage without any explicit attribution of blame to any group, organization, or individual.

To capture whether participants paid attention to the treatment conditions and accurately understood the information presented to them, we asked a series of comprehension questions immediately after exposure to the treatment but before measuring our dependent variables. The factual manipulation checks (FMCs) help determine if treatment effects are augmented by individual-level attention to the information presented to participants (Kane and Barabas, 2019).

Participants then completed a series of questions related to our outcomes of interest. We measure the dependent variables by asking about support for disaster preparedness spending, asking about their perceptions of personal and government responsibility to prepare for disasters, and how much should be spent on disaster preparedness after the 2019 Midwest floods. We ask participants about disaster preparedness in a variety of different ways to acquire a comprehensive sense of their attitudes about federal disaster preparedness spending. We use standard likert scales for asking about support for preparedness spending and about the extent to which different actors should be responsible to invest in preparedness for future flood events.

In the final question, we go one step further to ask participants about how much they think the

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federal government should spend in Nebraska to protect at-risk communities from future floods. By asking participants to put a figure on the level of their support for such initiatives, it goes one step beyond simple questions about support to think about the allocation of scarce resources of the government. Further details about the exact question wording and coding for our dependent variables are provided in Appendix 1.6.

Participants then completed the final two batteries of demographic questions relating to potentially relevant covariates such as party ID, political ideology, levels of interest in politics, and religiosity.

During the survey, participants also completed two comprehension questions to ensure that they read the survey carefully and accurately.

Finally, after completing all questions in the survey, participants were provided with a code for reimbursement through MTurk via TurkPrime. All data was collected from December 2-3, 2019.

4.3   Methods

Once the data is collected, we conducted analysis to examine the relationship between moral foundations and attribution of blame on support for federal preparedness spending. Broadly, statistical tests of this relationship involve simple comparisons of means and ordinary least squares (OLS) regression.

The results of these tests are presented using visual plots in the following section, but full models, alternative specifications, and robustness are available to view in the Appendix.
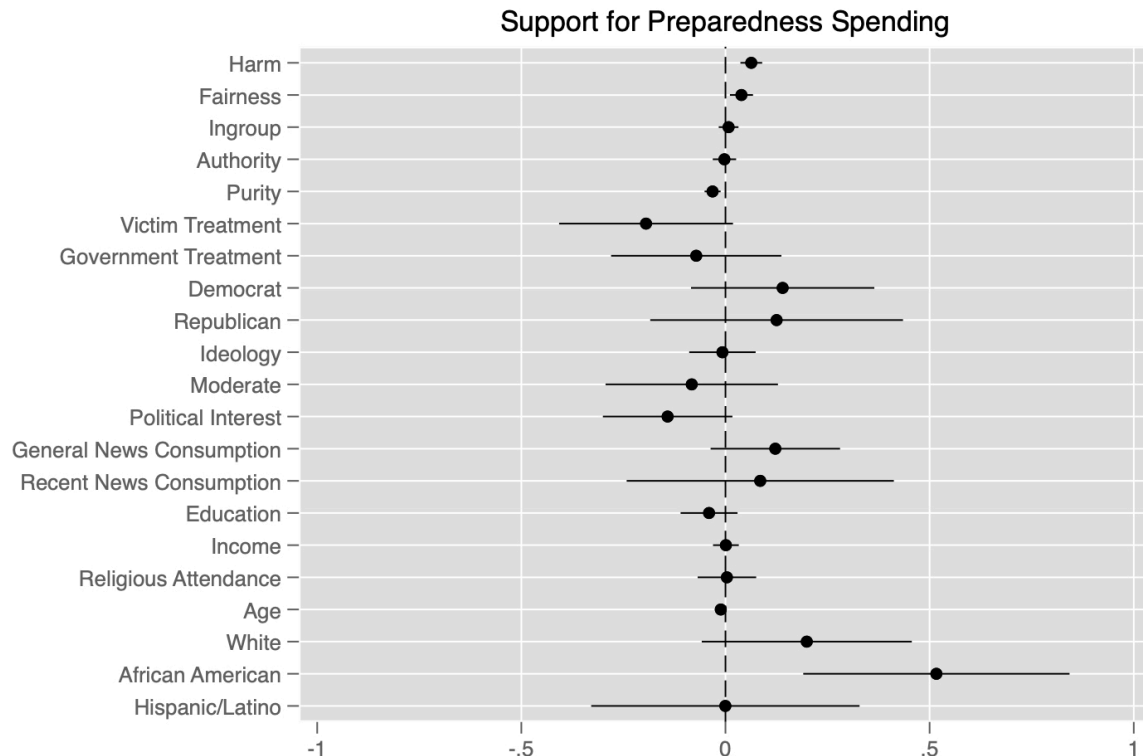
5   Results

The results from the experiment demonstrated support for most of our hypotheses. Generally, individualizing moral foundations are associated with greater support for federal disaster preparedness spending and binding moral foundations are associated with less support for this spending. However, analysis of individual moral foundations reveals the nuances behind this support at the individual level. Further, we find no evidence that different attribution of responsibility affects these attitudes. In the rest of this section, we discuss each of these results in turn.

5.1 Support for Preparedness Spending

Figure 2: Support for Preparedness Spending.
Dependent Variable: Do you support or oppose the Federal Government providing $10 billion to the State of Nebraska to protect at-risk communities from future flood events?

First, we examine the association between moral foundations and support for preparedness spending by the federal government. Figure 2 presents results from the model with all covariates included. First, individualizing moral foundations such as Harm and Fairness are associated with increased levels of support for federal preparedness spending. A one-unit increase in Harm corresponds to a 0.063 increase and a one-unit increase in Fairness is associated with a 0.039 increase in support for federal preparedness spending.

In contrast, the results suggest that a one-unit increase in Purity is associated with a 0.032 decrease in support for federal preparedness spending, but other binding moral foundations have no meaningful association with support for preparedness spending. Finally, against our theoretical expectations, the results indicate there is no statistically significant relationship between either of our experimental treatments and support for federal preparedness spending.

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Collectively, these results indicate that moral foundations drive attitudes about federal disaster spending, with individualizing moral foundations associated with increased support for this kind of spending, while Purity is associated with reduced support for spending on preparedness.

5.2 Responsibility for Preparedness Spending

Next, we turn to analysis of attitudes about who holds responsibility for preparing for disasters. It is possible that fundamental moral values shape attitudes about personal or government responsibility for preparing for disasters. This is of particular concern given that disaster risk reduction policies at the community or local level are public goods that cannot easily be provided by individuals acting without government support.

First, Figure 3 reports results for agreement with the statement that the federal government has a responsibility to invest in preparedness. As expected, individualizing moral foundations are associated with increased agreement that the federal government is responsible for investing in preparedness. A one-unit increase in Harm is associated with a 0.068 increase and a one-unit increase in Fairness is associated with a 0.053 increase in agreement with this statement.

Meanwhile, there is no meaningful association between binding moral foundations or either experimental treatment and attitudes about federal government responsibility for these policies.

On the other hand, when it comes to attitudes about personal responsibility, we find that binding moral foundations are more indicative of support with the notion that individuals living in at-risk communities have a responsibility to invest in preparedness. Figure 4 presents these results.

A one-unit increase in Authority is associated with a 0.041 increase in agreement with the argument that people living in floodplains have a responsibility to invest in preparedness for future flood events. However, this relationship did not hold for the two other binding moral foundations: Ingroup and Purity.

Whereas individualizing moral foundations were associated with agreement that the government is responsible for investing preparedness, there is no relationship between either Harm or Fairness in the case of personal responsibility for preparedness spending. Similarly, neither of the treatments affected attitudes about personal responsibility for disaster preparedness.

Taken together, these results suggest that while controlling for alternative explanations, different moral foundations drive different attitudes about who is responsible for disaster preparedness.

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Figure 3: Government Responsibility for Preparedness Spending.
Dependent Variable: The Federal Government has a responsibility to invest in preparedness for future flood events to protect at-risk communities.

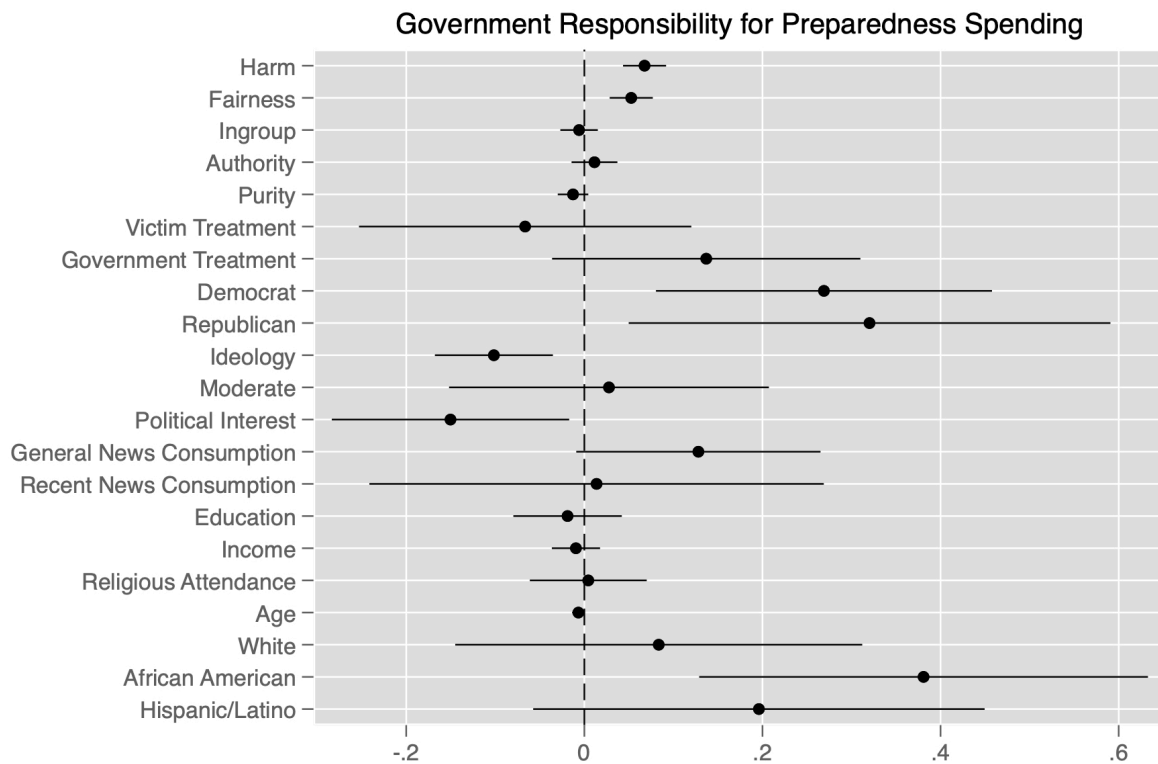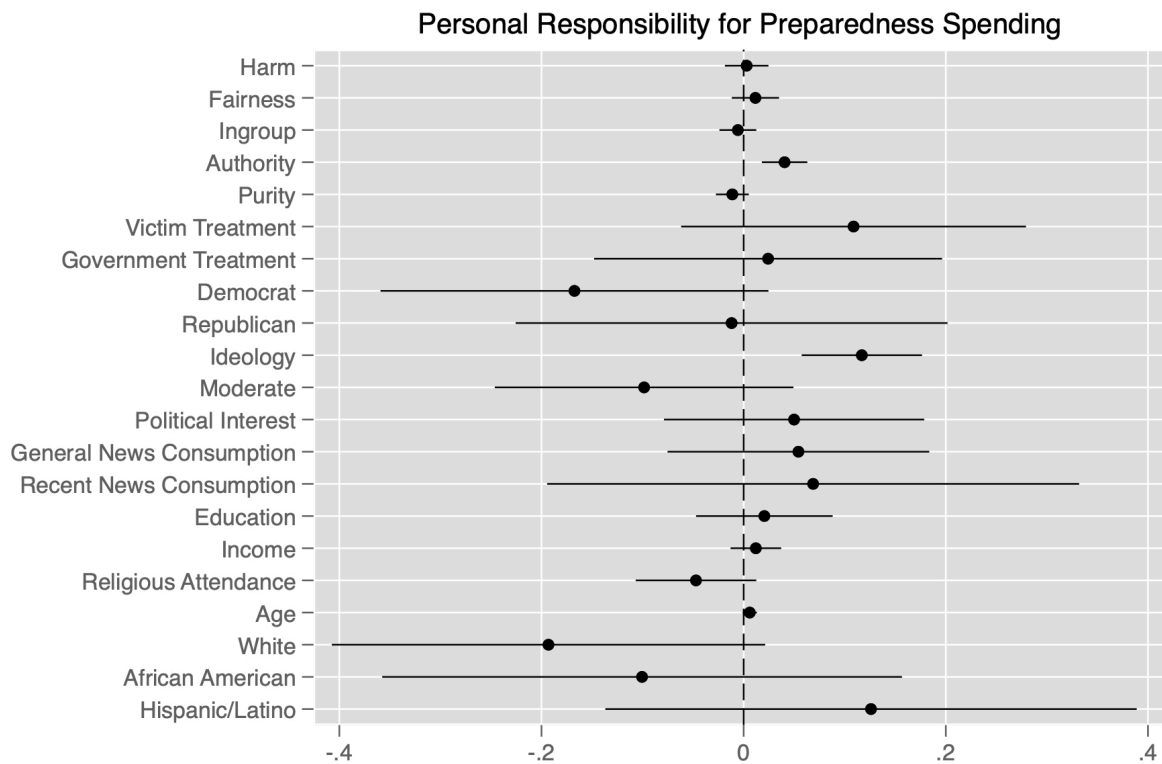Government Responsibility for Preparedness Spending

Figure 4: Personal Responsibility for Preparedness Spending.
Dependent Variable: People living in floodplains have a responsibility to invest in preparedness for future flood events to protect themselves.

Personal Responsibility for Preparedness Spending

Beyond party ID, the results suggest that fundamental moral orientations like Harm and Fairness are associated with increased belief that government should invest in disaster preparedness, while Authority is associated with an increased belief that individuals should be responsible for investing in preparedness. Further, these results do not vary irrespective of the nature of information participants receive about the attribution of blame for damage from the 2019 Midwest floods.

5.3 Amount of Preparedness Spending

Finally, we turn to how much should be spent by the federal government to protect at-risk communities from future flood events. Figure 5 presents the results of the model with all covariates included.

Figure 5: Amount of Preparedness Spending.
Dependent Variable: In $US billion, how much do you think the Federal Government should spend in Nebraska to protect at-risk communities from future flood events?
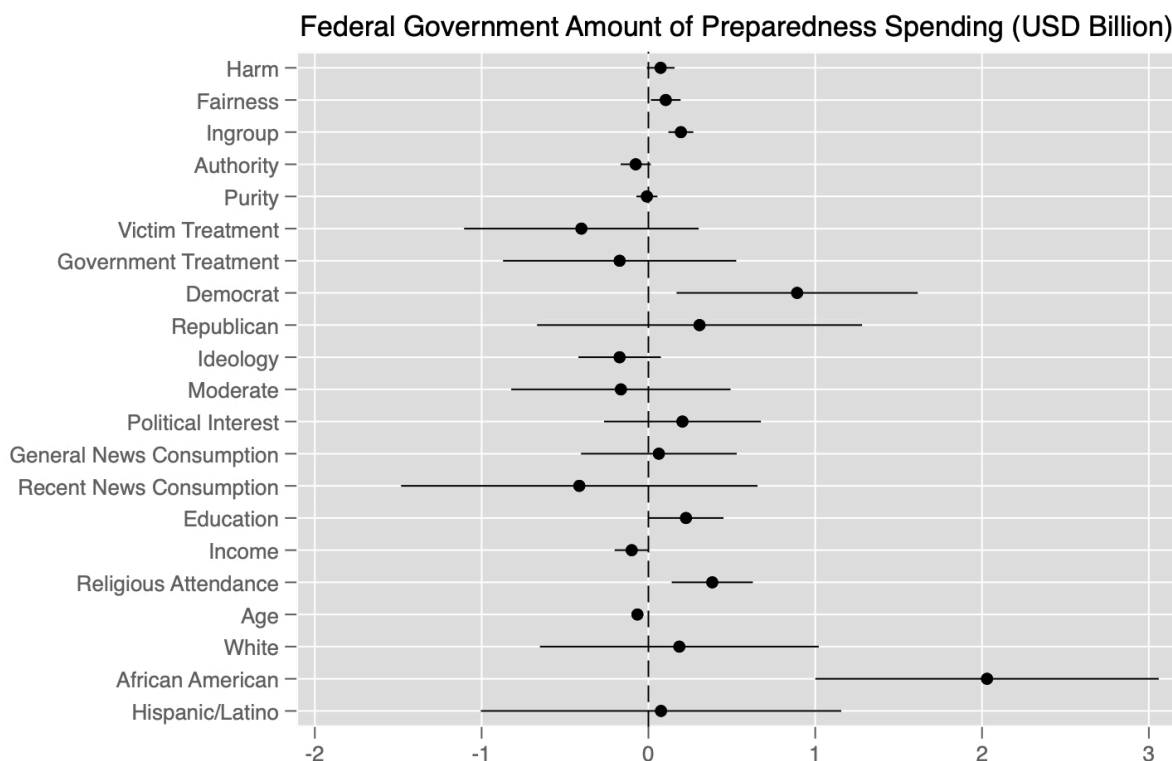
Here the results are also interesting. Harm (p <0.1) and Fairness are associated with support for greater amounts of federal preparedness spending as expected. However, a one-unit increase in

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Ingroup is also associated with an increase of 0.195 in federal preparedness spending, suggesting that people with greater attachment to the in-group support greater amounts of funding.

In contrast, Authority is associated with lesser amounts of federal preparedness spending ($p < 0.1$). Again, neither treatment was associated with changes in attitudes about the amount of federal government spending on preparedness favored by individuals, suggesting that the attribution of blame for disaster damage has no relationship with support for preparedness spending.

In sum, people who attach moral value to things like caring for others and ensuring fairness are more inclined to support greater amounts of funding for preparedness, but people who value protecting one's own group also support greater preparedness spending. In contrast, people with high scores in Authority are inclined to support less spending on disaster preparedness.

6   Discussion

Despite the significant benefits of disaster preparedness spending and its cost effectiveness relative to relief spending, prior scholarship demonstrates that elected officials spend more on relief than preparedness. Further, political scientists have demonstrated that the public does not reward preparedness spending, and may even punish elected representatives who pursue these policies.

In this paper, we explore the possibility of moral foundations as an explanation for the counter-intuitive absence of electoral incentives for these beneficial and cost effective policies. While there are important nuances in the results we find, the consistent finding is that individualizing moral foundations that reflect moral values associated with Harm and Fairness are associated with greater support for federal preparedness spending, agreement that it is the government's responsibility to invest in these policies, and support for greater amounts of preparedness spending.

In contrast, binding moral foundations that are associated with order, justice and loyalty are more associated with reduced support for preparedness spending. Against expectations, we also found that our experimental treatments varying attribution of blame for the absence of preparedness had no effect on attitudes about federal spending.

Collectively, we find evidence that moral foundations explain variation in individuals' attitudes about federal disaster preparedness spending, while controlling for alternative explanations. These results have broad implications for the understanding of public opinion about disaster preparedness,

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demonstrating that situational explanations like attribution of blame are less likely to influence attitudes than people's inherent moral values.

It remains an open question as to whether people's attitudes about federal disaster preparedness spending can be altered with exposure to moral information. In this study, information attributing blame for the damage caused by the Midwest floods had no effect on individuals' attitudes about preparedness spending, and instead time invariant moral foundations explained variation in these opinions.

Moving forward, future scholarship should examine to what extent people's moral values can be primed in campaigns oriented around federal disaster preparedness spending, the conditions under which individuals might be responsive to new information to increase their support for these policies, and whether demand for information can also be shaped by incentives for accuracy (Jamieson and Weller, 2020). This presents an important avenue for future inquiry to understand how moral appeals might lead to increased public support and ultimately greater electoral incentives for investing in policies that will reduce the loss of life and damage from disasters.

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