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Culture, COVID-19, and Climate: Evaluating the Cultural Theory of Risk as a Framework for National Responses to Global Natural Crises

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Introduction

The Covid-19 pandemic has forced nations to quickly and drastically change the ways in which they operate. In order to tackle climate change, states will also need to change the ways in which they operate—but they have been much slower to change. This thesis examines whether democratic countries' pandemic responses and their climate strategies are motivated by the same aspect of their national characters: culture, an area that is consistently under-studied in international relations. My research question is the following: *What drives democratic countries' responses to global natural crises?* My argument, which examines Covid-19 plans and climate change policies in three case countries and is based on the cultural theory of risk, posits that institutional culture drives national responses to both short-term and long-term global natural crises. My analysis then disaggregates global natural crises by time horizon and by issue orientation, offering more granular insights into the types of crises that elicit high- and low-efficacy responses from various cultures.

There are several reasons why I have undertaken a joint analysis of Covid-19 and climate responses. Both are international problems—in a globalized environment, one country's eradication of Covid-19 may secure it from the virus in a narrow sense. But the country will remain vulnerable to fallout from the virus due to phenomena such as international trade, migration, and foreign investment flows. Further, Covid-19 and climate change are both issues rooted in the hard sciences. As a result, a government's trust in science is a critical element of an effective pandemic response and an effective climate strategy. Finally, the pandemic and climate change are both inescapable threats—all countries, whether developed or developing, need to reckon with these problems. Granted, some nations are better equipped to handle the pandemic than others, and some nations are more immediately threatened by climate change than others.

Nevertheless, for all countries, the pandemic is a global problem that has pushed societies to drastically change their ways of life; although global warming is unfolding on a longer timescale, such drastic changes are also necessitated by climate change.

The purpose of this paper is not to argue that the cultural theory of risk provides the only, or even that it provides the strongest, explanation for national responses to global natural crises. Rather, my goal is to evaluate the cultural theory of risk as a framework for understanding these crises. In doing so, I will not rule out other contributors to national responses to climate change or pandemics. Instead, I will offer a useful contribution to the set of tools policymakers and scholars have for predicting and analyzing those responses, through my elucidation of the specific ways in which culture underpins action on key crises. If, in the next decade, another pandemic begins or a looming ecological disaster is uncovered, analysts may broadly understand the extent to which the United States' market individualist culture and Sweden's egalitarian culture will shape their respective reactions.

My hypothesis builds upon the existing cultural theory of risk literature by positing that culture drives responses to global natural crises. In my analysis, for each case country, the independent variable in question is national cultural type, and the two dependent variables are Covid-19 response and climate change response. By examining national responses to Covid-19 and climate change, I will be able to assess the degree to which culture is shaping responses to both short-term and long-term natural risks. For each case country, I will first identify its cultural type—egalitarian, market individualist, or hierarchical bureaucracy—and provide an explanation of why it fits that cultural type. I will then discuss its climate change responses over the past two decades, as well as its response to the Covid-19 pandemic in 2020. After going through the data on both issues for each country, I will then discuss whether and how the institutional culture of

each country aligns with responses to both Covid-19 and climate change. For example, in the case of the market individualist United States, the longstanding national focus on economic growth has both inhibited substantial climate policy, which would necessarily cause the fossil fuel industry to decline, and made states hesitant to go into lockdown during the pandemic. In egalitarian Sweden, that the national focus on equality has enabled an effective climate strategy, while also underpinning a herd immunity approach to the pandemic that paid little attention to the risks faced by immunocompromised and elderly citizens. In New Zealand, a culture defined by hierarchical bureaucracy has resulted in a strictly enforced, highly effective pandemic response, and an ambitious but ultimately insufficient climate plan.

I will begin by clarifying the term “global natural crisis” and discussing existing literature on the cultural theory of risk. The argumentative section of this thesis will follow the format below for each case country:

- i. Identification of cultural type and brief justification of cultural type assignment
- ii. Predictions of climate change response and Covid-19 response based on cultural type assignment
- iii. Disaggregation of short-term and long-term global natural crisis responses
- iv. Disaggregation of human-oriented and environment-oriented global natural crisis responses

The empirical analysis section will then address the following areas:

- v. National climate policy discussion
 - a. Analysis of how cultural type squares with national climate policy
- vi. National Covid-19 response discussion
 - a. Analysis of how cultural type squares with national Covid-19 response

Following the empirical analysis, I will explain my methodology, discuss my results, and consider the implications of my findings for future policy and academic work.

What is a global natural crisis?

For the purpose of this paper, I will use the term “global natural crisis” to refer to global problems rooted in either ecology, public health, or elsewhere in the hard sciences, rather than problems borne out of security or other proximately manmade forms of conflict. Some examples of global natural crises beyond the two central issues of this paper include: air pollution, the HIV/AIDS epidemic, mass species extinction, and the hole in the ozone layer. The “global” in the term global natural crisis is also critical in this conceptualization—“global” denotes a state of worldwide diffusion and an inability for policymakers to narrow the crisis to a certain geographic location. There are countries—such as New Zealand—in which the Covid-19 pandemic has been effectively stamped out. But the Covid-19 pandemic is still New Zealand’s problem, as it is every other country’s problem. The elimination or confrontation of a global natural crisis in one country does not shield that country, or any other country, from the crisis. A complete reckoning with a global natural crisis necessitates sustained worldwide attention and action. Finally, global natural crises are, in fact, crises—they pose extreme threats to human life, and thus require immediate attention.

Global natural crises are distinct from other crises that nations typically encounter. Accordingly, the responses that they elicit are likely to differ from state responses to other forms of crisis. With many forms of military conflict, for example, a state has a clearly identifiable adversary. Wars occur in very human terms; the politicians, military officers and diplomats who lead national governments are trained to handle human-caused and human-centric problems. By contrast, a global natural crisis like a pandemic or climate change does not clearly implicate a single adversary or culprit. Scientists are the people best equipped to handle these crises, not politicians or military strategists. And no single country—no matter its GDP, geopolitical stature,

or size—can end a global natural crisis independently the way that a single country can effectively end a war. Because global natural crises possess both the aforementioned qualities and stark differences from traditional crises, they constitute an area ripe for further study.

Global natural crises like Covid-19 and climate change are increasing in both frequency and impact; accordingly, the findings of this paper have important implications for international relations and future policymaking. Public health experts have noted that widespread urbanization, globalization, and rising human consumption of animal proteins will likely make epidemics more frequent in the coming decades.¹ In addition, as long as global greenhouse gas emissions remain high, extreme weather events such as droughts, hurricanes, and wildfires will occur more often.² My paper tests culture as an explanation for state behavior in the midst of these natural crises. If cultural types do, in fact, consistently map on to states' behaviors when facing natural risks, then policies aimed at addressing those risks—through, for example, environmental regulations or public health restrictions—should be crafted with cultural types in mind. Security scholars have noted the dearth of contemporary scholarship on culture in international relations;³ this project constitutes a critical intervention into the literature by applying an often-overlooked dimension of international order to rising global threats.

In addition to “global natural crisis,” another important piece of terminology in this thesis warrants clarification: I use the term “high efficacy” and “low efficacy” to refer to national Covid-19 responses. For the purposes of this paper, the following indicators constitute a low efficacy Covid-19 response: high death rate, high infection rate, large absolute number of deaths

¹ Jon Hilsenrath, “Global Viral Outbreaks Like Coronavirus, Once Rare, Will Become More Common,” *The Wall Street Journal*, March 6, 2020.

² “Extreme Weather and Climate Change,” Climate Basics, Center for Climate and Energy Solutions, accessed February 18, 2021, <https://www.c2es.org/content/extreme-weather-and-climate-change/>.

³ Christian Reus-Smit, “International Relations Theory Doesn’t Understand Culture,” *Foreign Policy*, March 21, 2019, <https://foreignpolicy.com/2019/03/21/international-relations-theory-doesnt-understand-culture/>.

due to Covid-19, high absolute number of Covid-19 cases. Correspondingly, the following indicators constitute a high efficacy Covid-19 response: low death rate, low infection rate, low absolute number of deaths due to Covid-19, low absolute number of Covid-19 cases.

The results of my empirical analysis shed light on the ways in which states respond differently to natural crises with varying qualities. My findings suggest that hierarchical bureaucracies, such as New Zealand, are highly efficacious in their responses to short-term, human centric natural crises, but they are unsuccessful in addressing longer-term environmental crises; that egalitarian societies, such as Sweden, are highly efficacious in responding to longer-term, environmental crises, but less successful in handling short-term, human-oriented natural crises; and that market individualist societies, such as the United States, are unsuccessful in their handling of both short-term, human-oriented natural crises and longer-term crises rooted in the natural environment. Although these findings were drawn from a small number of cases, they nevertheless offer critical insights into the ways in which culture should be taken into account when policymakers attempt to address future global natural crises.

Literature Review

Existing Literature on Climate Change and Natural Crises

This paper offers a more comprehensive alternative to the existing explanations for variation in national governmental action in response to natural crises. Most scholarship on climate change and pandemic policy analyzes state behavior in the context of specific national circumstances, treating countries like unique entities rather than archetypes. In the case of the United States, for example, a common argument is that the government's focus on economic growth has inhibited meaningful federal action on climate change. The 2010 *Citizens United vs. Federal Election Commission* Supreme Court ruling, which expanded the ability of corporations to make political

donations, is one contributing factor to this phenomenon; the decision enabled fossil fuel companies to discourage emissions-cutting policies by ramping up their political spending.⁴ The journalist and activist Naomi Klein’s 2014 book *This Changes Everything* helped to popularize the notion that avoidance of widespread climate disaster would not be achievable without the dismantling of American capitalism: “the triumph of market logic, with its ethos of domination and fierce competition, is paralyzing almost all serious efforts to respond to climate change,” she writes.⁵ I am categorizing the United States as a market individualist culture, so these explanations are not discounted by my paper. In fact, my findings may lend further evidence to the argument that the American strain of capitalism is driving climate change. Rather than disputing existing explanations for national responses to natural crises, I am making an argument that situates those responses in a broader framework—in other words, analyzing a few states’ behavior against a set of pre-existing archetypes instead of proposing a single novel causal explanation for each national context.

The Cultural Theory of Risk

Table 1: Cultural Types and Defining Features

| Cultural Type | Egalitarianism | Hierarchical Bureaucracy | Market Individualism |
|-------------------|--|--|---|
| Defining Features | Cooperation over competition, consensus building, participatory institutions, equality | Rules and routine procedures, long-established formal institutions | Entrepreneurship, perception of individualism as key to success, trust in successful individuals, focus on expansion and innovation |

My argument is largely based on the cultural theory of risk, a concept developed by British anthropologist Mary Douglas in the 1960’s and 70’s. The cultural theory of risk argues that

⁴ Common Cause, *Silencing Science: How Citizens United and Fossil Fuel Campaign Cash Has Silenced Public Debate on Climate Change*, September 2014, <https://www.commoncause.org/wp-content/uploads/2018/03/silencing-science.pdf>.

⁵ Klein, Naomi. *This Changes Everything: Capitalism vs. the Climate* (New York: Simon & Schuster, 2014), 38.

different groups' framings of risks and their decision making processes around certain risks are driven by their respective worldviews, referred to as "institutional culture."⁶ These worldviews are labeled as market individualist, hierarchist, egalitarian, and fatalist.⁷ In more recent cultural theory-based work, the cultural theory of risk has been applied to states rather than groups of individuals, with states falling into three distinct categories: market individualist, hierarchical bureaucracy, and egalitarian. Egalitarian cultures emphasize "equality, cooperation and consensus."⁸ Hierarchical bureaucracies prioritize established procedures and control, and people in hierarchical bureaucracies "ascribe and accept externally imposed rules, regulations or prescriptions on social relations."⁹ Market individualist cultures focus on maximizing benefits for individuals through competition and entrepreneurship.¹⁰

Several authors have applied the cultural theory of risk framework to the issue of climate change. In McNeeley and Lazrus' application of the cultural theory of risk to climate change, the authors explain the ways in which each cultural type views environmental and climate-related risks. They write that market individualist cultures view nature as benign and the climate as "naturally variable," that hierarchical bureaucracies view nature as "tolerant" and the climate as "manageable within limits," and egalitarians view nature as "fragile" and remain fixated on climate change tipping points.¹¹ My work will build on the cultural theory of risk and McNeeley and Lazrus' analysis by extending the cultural theory framework to the shorter-term problem of

⁶ McNeeley, Shannon M., and Heather Lazrus. "The Cultural Theory of Risk for Climate Change Adaptation." *Weather, Climate, and Society* 6, no. 4 (October 2014): 506-519.

⁷ McNeeley and Lazrus 2014, 508.

⁸ Johnson, Anne K. "The Influence of Institutional Culture on the Formation of Pre-Regime Climate Change Policies in Sweden, Japan and the United States." *Environmental Values* 7, no. 2 (May 1998): 223-244.

⁹ McNeeley and Lazrus 2014, 508.

¹⁰ Johnson 1998, 224.

¹¹ McNeeley and Lazrus 2014, 508.

Covid-19. In doing so, my paper will test the cultural theory of risk's strength and generalizability as an explanation for responses to natural risks beyond climate change.

One common criticism of the cultural theory of risk is that culture should not be understood as uniform across an entire country or society; states are not monoliths. Johnson addresses this criticism in her application of cultural theory to climate change:

While it is the interaction of the four styles that shapes the nature of public institutions and decision-making, national political cultures may well be overdetermined by one characteristic cultural type. This is not to suggest simply that national culture is dominated by one style to the exclusion of the others, but rather that as a whole, one style may exhibit predominant characteristics.¹²

My argument is not based on the idea that, for example, every constituency and community within the United States fits the description of a market individualist culture, or that every organization within Sweden is stereotypically egalitarian. These notions are clearly false, as any country comprising millions of citizens necessarily encompasses myriad philosophies, values and worldviews. There are many individual hierarchical bureaucrats in Sweden, just as there are many egalitarian individuals in New Zealand. Instead, as Johnson writes, I am evaluating these states' cultural types on the whole, examining their "predominant characteristics."

Argument

The United States: Market individualist

Hypothesis: The United States' market individualist culture results in an low-efficacy Covid-19 response and weak federal climate policy.

The United States fits the description of a market individualist culture. The market individualist cultural type is characterized by competition, a focus on innovation and expansion,

¹² Johnson 1998, 224.

and the prioritization of individual judgment in the face of risks.¹³ In the United States, entrepreneurship and innovation are highly valued, both in professional and in social contexts. The country's defining narrative—the “American dream”—is a story centered around individual prosperity, with prosperity defined primarily by financial success. The 20th century businessman and historian James Truslow Adams, who coined the term “the American dream,” defined it as the following:

That dream of a land in which life should be better and richer and fuller for everyone, with opportunity for each according to ability or achievement. It is a difficult dream for the European upper classes to interpret adequately, and too many of us ourselves have grown weary and mistrustful of it. It is not a dream of motor cars and high wages merely, but a dream of social order in which each man and each woman shall be able to attain to the fullest stature of which they are innately capable, and be recognized by others for what they are, regardless of the fortuitous circumstances of birth or position.¹⁴

Adams identifies a personal trajectory that has been solidified in American culture: one in which individuals employ all of the skills they possess in order to achieve the “fullest stature” possible, and subsequently receive praise from others for their accomplishments. Success in the United States is not defined by any degree of collective or societal well-being; rather, it is defined by a journey to individual well-being, and the admiration that accompanies personal triumph.

As a market individualist culture, the United States, per the cultural theory of risk, would be expected to respond to natural crises in a way that prioritizes economic growth and individual freedoms over collective well-being. Climate change is a natural crisis that necessarily impacts collective well-being—i.e., it threatens the ability of all future generations to survive on a livable planet. But climate change solutions typically require sacrifices by individuals, firms, or specific

¹³ McNeeley and Lazrus 2014, 508.

¹⁴ Columbia University Libraries Archival Collections; “James Truslow Adams papers, 1918-1949”

industries: in order to lower emissions, certain industries would have to face heavy regulation and lose profits. On an individual level, to mitigate climate change, Americans may have to pay higher prices for gasoline, or reduce their own consumption to lessen their environmental impact. Nearly all of the steps typically included in packages of climate change solutions require some level of sacrifice by individuals or companies in order to benefit the collective good. They also often necessitate a prioritization of future well-being and long-term environmental health over short-term economic gains. With these factors in mind, I expect that a market individualist nation like the United States will enact weak federal legislation in response to climate change, stopping short of making the issue a top political priority.

The Covid-19 pandemic is a natural crisis that shares several qualities with climate change, although it is playing out on a much shorter timescale. The virus was first discovered in China in December 2019; it began spreading rapidly in the United States in March 2020; as of April 2021, vaccination efforts are effectively ending the pandemic for large populations within the United States and in other parts of the world. As is the case with climate change, in order to mitigate the impacts of Covid-19, individuals and firms were required to make sacrifices for the collective good. People were instructed to avoid large gatherings and to limit their social interactions to the inhabitants of their own households. Public health guidelines asked Americans to avoid non-essential travel. Many firms moved their operations to remote work and laid off workers, and many small businesses closed permanently after suffering dramatic reductions in revenue. With the United States' market individualist cultural type in mind, my expectation is that the American Covid-19 response will be hindered by a prioritization of economic growth over societal well-being. My expectation is also that the individualist ideology of the United

States will make public health recommendations around social distancing, mask-wearing, and other sacrifices of personal preferences difficult to implement.

Sweden: Egalitarian

Hypothesis: Sweden's egalitarian culture results in a robust, comprehensive climate policy and a high-efficacy Covid-19 response.

Sweden fits the egalitarian cultural type. In egalitarian societies, social solidarity and equality are paramount,¹⁵ and there is a common belief that both wealth and environmental risks should be distributed equally.¹⁶ Sweden exemplifies these qualities through its embrace of what is known as the Nordic model, a framework for free-market capitalism championed by Sweden, Denmark, Finland and Norway. The landmark components of the Nordic model are a robust welfare state with free, high-quality public education and healthcare, strong social security, and open markets with low tariffs and low barriers to trade.¹⁷ Because this system has been so successful in creating wealth and maintaining relatively low levels of inequality, other industrialized countries have idolized Nordic countries for decades.¹⁸ Senator Bernie Sanders, who was a frontrunner in the U.S. Democratic party primary in 2020, often mentions the Nordic model as a guiding framework for the policies he would like to see implemented in the United States.

My expectation is that Sweden will implement robust measures to mitigate climate change. The egalitarian cultural theory type focuses on equality and cooperation in decision-making; the Nordic model provides a basis of comparison for its action on climate change. I

¹⁵ McNeeley and Lazrus 2014, 508.

¹⁶ Johnson 1998, 224.

¹⁷ Brende, Borge. "The New Nordic Model: How to Reconcile Free Trade, Patriotism, and Inclusivity." *Foreign Affairs*, January 2, 2020. <https://www.foreignaffairs.com/articles/europe/2020-01-02/new-nordic-model>.

¹⁸ Brende 2020.

expect that the robust social policy and welfare state that Sweden has established will be mirrored in the country's climate change response.

My expectation with regards to Covid-19 is that Sweden will undergo a deliberative, cooperative process to decide on the correct course of action, and that it will leverage its strong social welfare and healthcare systems to make diagnostic testing and other medical services available to citizens.

New Zealand: Hierarchical bureaucracy

Hypothesis: New Zealand's culture of hierarchical bureaucracy results in a high-efficacy Covid-19 response and a comprehensive, strictly enforced national climate change policy.

New Zealand fits the cultural theory archetype of a hierarchical bureaucracy. Countries fitting the hierarchical bureaucracy cultural label emphasize remain highly focused on procedure and control.¹⁹ Johnson effectively summarizes the hierarchical bureaucracy archetype:

Power in hierarchical societies tends to be centralized, and risk is routinized whenever possible. There is also a high level of trust in government and other institutions; disagreement is fragmented and accommodated. They are biased toward large-scale, high-technology approaches that require specialized knowledge and centralized direction.²⁰

McNeeley and Lazrus add that particularly in response to environmental problems, hierarchical bureaucracies place trust in "long-established formal institutions."²¹

My expectation is that New Zealand will have robust climate change policies and a record of consistent emissions reductions in accordance with its stated goals. In a hierarchical bureaucracy, I would expect that environmental regulations would be strictly enforced.

¹⁹ Johnson 1998, 224.

²⁰ Johnson 1998, 224.

²¹ McNeeley and Lazrus 2014, 508.

With regards to Covid-19, my expectation is that New Zealand will be successful in slowing, or even effectively stopping, the spread of the virus through strictly enforced public health measures. Because there is a high degree of trust in institutions in hierarchical bureaucracies, I predict that citizens in New Zealand will willingly adhere to government recommendations related to Covid-19 mitigation. Beyond the trust in institutions, I expect the elements of routine, procedure and control common in hierarchical bureaucracies to aid New Zealand's pandemic response—i.e., once the guidelines around Covid-19 are mandated and publicized, citizens will follow those guidelines closely.

Short-term and Long-term Global Natural Crises

One notable way in which the natural crises Covid-19 and climate change differ is in the length of their time horizons. Climate change became a global concern, and the basis of international policymaking, at the end of the 20th century; it remains an unresolved—and quickly worsening—problem in 2021. By contrast, Covid-19 began to garner international attention in early 2020, and just over one year later, effective vaccines are being distributed globally. The following question warrants further examination: are some cultural types better equipped to handle long-term natural crises than short-term ones? Are other types better at stamping out crises that arise in the short term, but they struggle with ones that unfold over decades? The results of my analysis shed some light onto these questions.

The United States, a market individualist country, struggled to grapple with Covid-19 over the course of 2020. It has also failed to pass substantive policies aimed at mitigating climate change throughout the first two decades of the 21st century. The principles of market individualism are perhaps not well-suited to grappling with natural crises in general. When a

problem is not obvious to the naked eye, it requires deference to scientific experts, and it requires some sacrifice of individual habits and preferences, in a market individualist society, there is likely to be strong resistance to necessary solutions. A market individualist country prioritizes personal liberties and steady economic growth over the systemic overhauls, compromises, and collective paradigm shifts often necessitated by natural crises like Covid-19 and climate change.

Sweden, an egalitarian country, was unsuccessful in its handling of the short-term natural crisis that was Covid-19, but it has sustained ambitious and impactful climate policy action since the 1990's. The principles of egalitarian decision-making and ideology—namely, consensus-building through extended dialogue, participatory institutions, equality, and cooperation²²—may be better suited to dealing with long-term crises than short-term ones like pandemics. In the face of a long-term, widespread, existential planetary threat, Sweden's egalitarian system developed bold policies, such as a carbon tax, that have yielded consistent emissions reductions. But when Covid-19 became a global concern, Sweden's government did not have the luxury of spending months or years deliberating the best course of action. My analysis suggests that egalitarian governments may produce more effective policies when facing long-term natural risks because of their tendency to undergo a deliberative, cooperative, equality-minded process of decision-making in response to a novel natural crisis.

New Zealand, a hierarchical bureaucracy, has been successful in handling the short-term crisis of Covid-19, while it has struggled to meet its own commitments regarding the longer-term crisis of climate change. The common principles of hierarchical bureaucracies—trust in established institutions, adherence to routine, high levels of control—seem to produce better results when applied to short-term natural crises than when they are applied to longer-term

²² McNeeley and Lazrus 2014, 508.

phenomena. In the midst of a natural crisis that is unfolding quickly, with a high degree of uncertainty surrounding it, people living in hierarchical bureaucracies appear to turn to long-standing institutions for guidance—and they adhere to that guidance. When a natural crisis unfolds much more slowly, over decades, the immediate influence of long-standing institutions on the lives of citizens may weaken. It is much more difficult to adhere to strict procedures and nationally imposed guidelines for a period of decades than it is to follow them for several months, with the knowledge that they will produce positive short-term outcomes. The examples of Covid-19 and climate change suggest that a hierarchical bureaucracy’s ability to reckon with natural crises through procedure and control is stronger when the crisis in question is a short-term problem.

The table below offers a simplified summary of my findings with regards to short-term versus long-term natural crisis responses among the three cultural types examined in this paper.

Table 2: Global Natural Crisis Responses Segmented by Time Horizon

| Cultural theory type | Efficacy of Response to Short-term Natural Crisis (Covid-19) | Efficacy of Response to Long-term Natural Crisis (climate change) |
|-----------------------------|---|--|
| Hierarchical bureaucracy | High | Low |
| Egalitarian | Low | High |
| Market individualist | Low | Low |

Human-oriented versus Environmental Global Natural Crises

The perception of Covid-19 and climate change as either human-oriented or environmental crises may also partially explain the differences between each cultural theory type’s response to them. Covid-19 is an entirely human issue; we care about it not because of its impact on the natural environment, but rather because of its ability to make people very sick. It is relatively easy for people to understand how contracting the virus will impact their own health,

as well as the well-being of their loved ones. Climate change also has grave implications for human life, but they are more indirect and more diffuse, making them more difficult for people to understand. The logic involved in understanding the human impacts of Covid-19 and climate change are simplified below:

Covid-19 infection → Humans get sick or die.

Climate change → Planet warms, ecological systems collapse, sea levels rise, etc.
→ Earth eventually becomes uninhabitable for humans.

These logical paths from natural crises to human suffering—the direct path from Covid-19, and the indirect path from climate change—may offer some insight into variation within each cultural archetype's responses.

In an egalitarian society like Sweden, perhaps environment-oriented problems are easier to grapple with because they appear more abstract, and therefore are better dealt with through deliberative, cooperative decision-making processes. Human-centric problems may not be well managed by the idealistic egalitarian principles of equality and consensus.

In a hierarchical bureaucracy like New Zealand, perhaps the widespread recognition of institutional authority works well in handling human-centric problems because people may be more likely to defer to authority when the consequences for humans are clear. The principles of routine, procedure, and control are likely strengthened when the human impact of disobedience is clearly outlined and understood. With an issue like climate change, however, the human consequences of disobedience or incomplete enforcement of regulations are less evident.

In the market individualist United States, the distinction between responses to human-centric and environment-centric natural crises is less pronounced. In the face of climate change, shorter-term interests of individual Americans take precedent over long-term environmental

damage that will result in human suffering. This ranking of priorities makes sense given the market individualist archetype’s tendency to defer to individual judgment in the face of risks.²³ But the United States’ response to Covid-19 does not square as neatly with this conceptualization of market individualist priorities, considering the clear human impact of the virus. Perhaps the framing of pandemic mitigation recommendations as protections of *collective* well-being reinforced a perceived dichotomy between those public health measures and individual interests. The discourse around “doing one’s part” to slow the spread of the virus, as well as the notion that facemasks do not protect the wearer, but instead protect those around him, may have obscured the immediate benefits that Covid-19-focused policy measures deliver to individuals. In the United States, a narrative was developed around sacrificing individual preferences for the collective good; this narrative was not particularly effective in the context of a market individualist society, especially when those sacrifices of individual preferences were recommended amid a historic economic decline. The United States’ market individualist response to climate change, an issue based in the natural environment, is largely unsurprising. The logical path from a warming planet to human suffering is lengthier than the path from Covid-19 to human illness. When a country’s two paramount concerns are individual (human) interests and economic performance, a problem that is rooted in the natural environment—and that requires some mental legwork to fully understand in human terms—is not likely to garner a large amount of sustained attention or policy action.

Table 3: Global Natural Crisis Responses Segmented by Issue Orientation

| Cultural theory type | Efficacy of Response to Human-oriented Natural Crisis (Covid-19) | Efficacy of Response to Environmental Natural Crisis (climate change) |
|-----------------------------|---|--|
| Hierarchical bureaucracy | High | Low |
| Egalitarian | Low | High |
| Market individualist | Low | Low |

²³ McNeeley and Lazrus 2014, 508.

Empirical Analysis

American Climate Policy

The United States' climate change policies have been characterized by a deep partisan divide, consistent corporate influence over policy, and a lack of robust federal emissions standards. Prior to 2021, even when Democrats—who favor more stringent environmental regulations, and who tend to view climate change as more of a threat than their Republican counterparts do—held the presidency or the legislative branch, there was a serious dearth of federal policy on climate change.

The influence of corporate lobbying, particularly by the fossil fuel industry, over American federal climate policy squares neatly with the market individualist mindset. After the Supreme Court ruled in the 2010 case *Citizens United vs. Federal Election Commission* that prohibition of expressly political spending by corporations constituted a violation of the First Amendment, the fossil fuel industry ramped up their political donations substantially.²⁴

More recently, both Democratic and Republican presidential administrations have implemented insufficient, and sometimes quite counterproductive, climate change policies. In 2016, for example, President Obama touted the United States' joining of the Paris Climate Agreement as a major success in the fight against global climate change.²⁵ But the Paris Agreement was not a particularly aggressive plan; shortly after it took effect, the International Energy Agency deemed the treaty too weak to achieve its target, which was to remain below a

²⁴ Krumholz, Sheila. "Campaign Cash and Corruption: Money in Politics, Post-Citizens United." *Social Research*, vol. 80, no. 4, 2013. *Corruption, Accountability, and Transparency*.

²⁵ The White House. 2016. "President Obama: The United States Formally Enters the Paris Agreement." Last modified September 3, 2016. <https://obamawhitehouse.archives.gov/blog/2016/09/03/president-Obama-United-states-formally-enters-Paris-agreement>.

temperature increase of 2 degrees Celsius compared to pre-industrial levels.²⁶ When President Trump took office, he was more blatant about his intentions with regards to environmental policy and his skepticism about the threat of climate change. President Trump promptly withdrew from the Paris Agreement after his inauguration; he lifted existing bans on oil and gas exploration within the Arctic National Wildlife Refuge and coastal areas around the United States;²⁷ in 2019, he chose Andrew Wheeler, a former fossil fuel lobbyist, to lead the Environmental Protection Agency. In short: the Obama administration took tepid steps toward emissions reductions, recognizing the threat of climate change; the Trump administration then rolled back many Obama-era regulations, aligning itself more closely with heavy industry and fossil fuel giants. On the whole, the American response to climate change aligns with my market individualist cultural theory-based prediction.

American Covid-19 Response

The United States has seen the most Covid-19 related cases and deaths of any country in the world. According to the Johns Hopkins University Coronavirus Resource Center, as of April 2021, over 31 million of the world's 133.6 million Covid-19 cases to date have been recorded in the United States; over 580,000 of the world's 2.8 million Covid-19 deaths have been recorded in the US.²⁸ The United States constitutes approximately four percent of the global population,

²⁶ Schwartz, John. "Paris Climate Deal Is Too Weak to Meet Goals, Report Finds." *The New York Times*, November 16, 2016.

²⁷ The Brookings Institution. 2020. "Policy 2020 Voter Vitals: What is the Trump Administration's Track Record on the Environment?" <https://www.brookings.edu/policy2020/votervital/what-is-the-trump-administrations-track-record-on-the-environment/>.

²⁸ Johns Hopkins University and Medicine Coronavirus Resource Center. 2021. "COVID-19 Dashboard by the Center for Systems Science and Engineering." <https://coronavirus.jhu.edu/map.html>.

while it accounts for around 23 percent of global Covid-19 cases, and around 20 percent of global Covid-19 deaths.

The American Covid-19 response has been inhibited in part by widespread prioritization of individual interests over collective well-being. After the CDC endorsed mask-wearing to reduce the spread of the virus and mask mandates went into effect in many states, protests broke out, with a sizable contingent of Americans opposing the measures on the grounds that they violated individual liberties.²⁹ In August 2020, when a Vox journalist began asking protestors at anti-mask mandate demonstrations why they had showed up, many of their answers invoked principles of market individualism. One protestor said:

If you want to wear a mask, great. I will never look down on you, have anything bad to say to you, do what you want. But the *mandates* are what I disagree with and I don't think are right, especially now.³⁰

This woman does not seem to take issue with the practice of mask-wearing itself; rather, she resists the notion that the state government has a right to impose requirements on citizens.

Another respondent expressed that sentiment more directly: “No states are allowed to make laws that take our freedoms and liberties away,” she commented.³¹ The discourse among anti-mask mandate protestors mirrors the emphasis on individual liberties and personal decision-making that is central to the market individualist cultural type.

Protests also broke out in the United States in opposition to various statewide Covid-19-related lockdown measures; these demonstrations, like their anti-masking counterparts, highlighted key elements of market individualism. A Michigan resident protesting Governor Gretchen Whitmer's lockdown measures in April 2020 commented:

²⁹ <https://apnews.com/article/coronavirus-mask-requirements-tension-us-7898d8d87a12fe88145986ec38db45e9>

³⁰ Stewart, Emily. “Anti-maskers explain themselves.” *Vox*, August 7, 2020. <https://www.vox.com/the-goods/2020/8/7/21357400/anti-mask-protest-rallies-donald-trump-covid-19>.

³¹ Stewart 2020.

There are lots of places in the world that will give you all the safety you would want, so long as you agree to their rules. America is not supposed to be the safest place on earth but it is supposed to be the freest... They're telling people: we're going to take your civil liberties away and put you out of work but, by the way, we're not really sure about any of these numbers.³²

This protestor's statement reveals an interesting feature of the market individualist ideology as it relates to Covid-19: the notion that the cost of American citizens' health and safety does not outweigh the economic and social benefits offered by keeping non-essential businesses open.

The Trump administration's messaging around Covid-19 contributed to skepticism about the severity of Covid-19, as well as the perception of conflict between critical public health measures and individual liberties. At the beginning of the pandemic, in March 2020, President Trump likened Covid-19 to the seasonal flu.³³ Months later, after multiple waves of the pandemic, hundreds of thousands of American Covid-19-related deaths, and his own hospitalization due to a Covid infection, Trump tweeted: "Don't be afraid of Covid... don't let it dominate your life."³⁴ In April 2020, when Michigan and Minnesota began adopting lockdown measures, he tweeted "LIBERATE MINNESOTA!" and "LIBERATE MICHIGAN!"³⁵ The President's communications to the public during the Covid-19 pandemic both contradicted the public health advice of his own pandemic response team and reinforced the idea that lockdowns and restrictions on American businesses necessarily infringed upon individual liberties. The discourse around the United States' incomplete, low-efficacy pandemic response echoes many of

³² Crow, David and Patti Waldmeir. "US anti-lockdown protests: 'If you are paranoid about getting sick, just don't go out'." *The Financial Times*, April 22, 2020. <https://www.ft.com/content/15ca3a5f-bc5c-44a3-99a8-c446f6f6881c>.

³³ Brooks, Brad. "Like the flu? Trump's coronavirus messaging confuses public, pandemic researchers say." *Reuters*, March 13, 2020. <https://www.reuters.com/article/us-health-coronavirus-mixed-messages/like-the-flu-trumps-coronavirus-messaging-confuses-public-pandemic-researchers-say-idUSKBN2102GY>.

³⁴ Kolata, Gina and Roni Caryn Rabin. "'Don't Be Afraid of Covid,' Trump Says, Undermining Public Health Messages." *The New York Times*, October 8, 2020. <https://www.nytimes.com/2020/10/05/health/trump-covid-public-health.html>.

³⁵ Zurcher, Anthony. "Coronavirus: Anti-lockdown protests grow across US." *BBC*, April 17, 2020. <https://web.archive.org/web/20200417172715/https://www.bbc.com/news/world-us-canada-52330531>.

the self-interested, economically-oriented principles of market individualism. The United States' Covid-19 response aligns with my cultural theory-based, market individualist prediction.

Swedish Climate Policy

Sweden has a strong track record on the issue of climate change. There is national cross-party consensus in Sweden on the severity of threats posed by a warming planet, as well as on the necessity of policy instruments to combat that warming. In 2017, Sweden passed a Climate Act, legislation that commits to reaching a target of net-zero emissions by the year 2045, and negative net emissions in the years after 2045.³⁶ The Climate Act necessitates an 85 percent reduction in Sweden's greenhouse gas emissions from 1990 levels. The country is on track to meet that target; its greenhouse gas emissions have fallen 29 percent between 1990 and 2020.³⁷

Instrumental in Sweden's successful climate strategy has been its longstanding, robust carbon tax. Sweden's carbon tax rate is the highest in the world, at 110 euros per metric ton of carbon as of 2020.³⁸ Critics of carbon tax proposals often predict that such plans will inhibit economic growth. Sweden's carbon tax has dispelled this notion; its real GDP per capita grew 50 percent between 1990 and 2019.³⁹ As a result, Sweden has differentiated itself on the global stage as a country capable of acting responsibly with regards to environmental protections while maintaining a strong economy. On the whole, Sweden's climate change policy aligns with my egalitarian cultural-theory based prediction.

³⁶ United Nations Framework Convention on Climate Change. 2017. "Sweden Plans to Be Carbon Neutral by 2045." Last modified June 19, 2017. <https://unfccc.int/news/sweden-plans-to-be-carbon-neutral-by-2045>.

³⁷ Swedish Environmental Protection Agency. 2019. "Territorial emissions and uptake of greenhouse gases." Last modified December 15, 2020. <http://www.naturvardsverket.se/Sa-mar-miljon/Statistik-A-O/Vaxthusgaser-territoriella-utslapp-och-upptag/>.

³⁸ Pomerleau, Shuting. "What can we learn from Sweden's carbon tax?" *The Niskanen Center*, October 29, 2020. <https://www.niskanencenter.org/what-can-we-learn-from-swedens-carbon-tax/>.

³⁹ Pomerleau 2020.

Swedish Covid-19 Response

Sweden's performance in response to the Covid-19 pandemic has been markedly less effective than its response to climate change. As of April 2021, among its 10 million person population, Sweden has seen 841,807 confirmed cases of Covid-19 and 13,578 Covid-19 related deaths, per World Health Organization data.⁴⁰ These figures amount to a death rate of approximately 1.6 percent. In his public Christmas address in December 2020, Sweden's king, Carl XVI Gustaf, admitted simply: "I think we have failed."⁴¹

At the beginning of the Covid-19 pandemic, the Swedish government made a conscious decision to pursue a goal of herd immunity rather than enact substantive mitigation efforts. This strategy, which was led by state epidemiologist Anders Tegnell, entailed no official lockdown, no recommendation for citizens to wear face masks, and less stringent quarantine requirements than many of the country's European neighbors.⁴² Although the government publicly denied that their goal was to reach herd immunity from the beginning, emails among national health authorities leaked to the Swedish press indicated that those authorities had resigned themselves to widespread infections as early as March 2020.⁴³

Sweden's Covid-19 response does not align with my cultural theory-based, egalitarian prediction. The egalitarian archetype would be expected to engage in a deliberative, inclusive decision-making process in the face of a public health threat, and create policies intended to promote equality and collective well-being. Swedish health authorities privately made decisions,

⁴⁰ World Health Organization. 2021. "Sweden: WHO Coronavirus Disease (COVID-19) Dashboard with Vaccination Data." Last modified May 7, 2021. <https://covid19.who.int/region/euro/country/se>.

⁴¹ Milne, Richard. "Sweden's king says country's coronavirus strategy has failed." *The Financial Times*, December 17, 2020. <https://www.ft.com/content/d1e581a4-b7d9-4215-8a82-b1a4884c592c>.

⁴² Milne, Richard. "Anders Tegnell and the Swedish Covid experiment." *The Financial Times*, September 10, 2020. <https://www.ft.com/content/5cc92d45-fbdb-43b7-9c66-26501693a371>.

⁴³ Bjorklund, Kelly. "The Inside Story of How Sweden Botched Its Coronavirus Response." *Foreign Policy*, December 22, 2020. <https://foreignpolicy.com/2020/12/22/sweden-coronavirus-covid-response/>.

and then spent months denying that those decisions had been made. Their actions, in fact, functioned squarely in opposition to the principle of equality: immunocompromised or otherwise high-risk Swedish citizens were either forced to isolate completely, or risk putting themselves at immense risk due to the lack of mitigation measures.

New Zealand's Climate Policy

New Zealand has passed strong long-term policies aimed at addressing climate change, but the country's short-term actions have not been sufficient to meet its stated emissions reductions targets. In 2019, the Zero Carbon Act was signed into law in New Zealand, setting a target of net zero greenhouse gas emissions by 2050.⁴⁴ The primary device through which the government aims to reach net zero emissions is an emissions trading scheme. The scheme was last amended in June 2020, when policymakers agreed to place a cap on the amount of emissions that can possibly be traded; that limit will decrease yearly beginning in 2021.⁴⁵ The government has also set a goal to run on 90% renewable energy by 2025, and to run entirely on renewables by 2035.⁴⁶

There are several areas in which New Zealand's climate plan falls short. One notable shortcoming of New Zealand's climate plan lies its methane exemption. Methane is a greenhouse gas that is significantly more potent than carbon dioxide: it has "more than 80 times the warming power of carbon dioxide" over the first twenty years after it reaches the atmosphere, according to the Environmental Defense Fund.⁴⁷ But in New Zealand, methane emissions from agriculture

⁴⁴ Climate Action Tracker. 2021. "New Zealand." <https://climateactiontracker.org/countries/new-zealand/>.

⁴⁵ Climate Action Tracker. 2021. "New Zealand." <https://climateactiontracker.org/countries/new-zealand/>.

⁴⁶ Climate Action Tracker. 2021. "New Zealand." <https://climateactiontracker.org/countries/new-zealand/>.

⁴⁷ Environmental Defense Fund. 2021. "Methane: a crucial opportunity in the climate fight." <https://www.edf.org/climate/methane-crucial-opportunity-climate->

and waste—which account for over 40 percent of national emissions—are exempt from the national zero-emissions goal. Additionally, the agricultural sector will not be included in the emissions trading scheme until 2025, and even after 2025, farmers will only be required to meet the costs of 5 percent of their greenhouse gas emissions.⁴⁸ Most recently, the stimulus package that the New Zealand government passed in response to economic damage sustained during the Covid-19 pandemic did not include any restrictions on funding for carbon-intensive projects.⁴⁹ Although New Zealand has set some ambitious goals for its nationwide response to climate change, its more granular policy actions—in particular, the methane exemption—are not sufficiently formulated to meet those goals. New Zealand’s response to climate change differs from my cultural theory-based prediction, as the government sets admirable emissions reductions targets but its actual policies are not exhaustive enough to reach them. The national climate approach does not align with the hierarchical bureaucracy’s tendency to impose strict regulations and obtain high levels of compliance.

New Zealand’s Covid-19 Response

New Zealand has had a remarkably high-efficacy Covid-19 pandemic response, which brought global attention to the country in 2020. As of April 2021, according to WHO data, among its population of 4.917 million, New Zealand has seen 2,199 confirmed cases of Covid-19 and only 26 deaths.⁵⁰ These figures amount to a death rate of around 1.1 percent.

[fight#:~:text=In%20the%20first%20two%20decades,more%20potent%20than%20carbon%20dioxide.&text=While%20methane%20doesn't%20linger,how%20effectively%20it%20absorbs%20heat.](#)

⁴⁸ Climate Action Tracker. 2021. “New Zealand.” <https://climateactiontracker.org/countries/new-zealand/>.

⁴⁹ Climate Action Tracker. 2021. “New Zealand.” <https://climateactiontracker.org/countries/new-zealand/>.

⁵⁰ World Health Organization. 2021. “New Zealand: WHO Coronavirus Disease (COVID-19) Dashboard with Vaccination Data.” Last modified May 7, 2021. <https://covid19.who.int/region/wpro/country/nz>.

New Zealand achieved elimination of the Coronavirus within its territory through a set of highly restrictive policies, modulated in accordance with levels of community spread. A Brookings Institution Covid-19 policy report concisely summarizes the trajectory of New Zealand's pandemic response over the course of 2020:

Following a month during which the country shut down all nonessential businesses, restricted internal travel, and banned social gatherings, New Zealand was able to rapidly reopen its economy. Following a second outbreak in August, New Zealand was able to control the outbreak through a targeted lockdown of Auckland. Having reopened the economy in June, the country did return to a heightened alert level in August, but it has since returned to a vigilant but full opening.⁵¹

New Zealand's government did not hesitate to lock down the economy when the virus began spreading. Policymakers understood that quickly implementing lockdowns in response to outbreaks, however small, was a much-needed step in the journey to "vigilant but full [re]-opening." On the whole, New Zealand's national Covid-19 response aligned with my predicted cultural theory-based outcome. The government acted in accordance with its hierarchical bureaucracy cultural type, creating strict guidelines for public behavior and closely monitoring adherence to those guidelines.

Methodology

This paper examines Covid-19 responses and climate policies in the United States, Sweden, and New Zealand. I assess pandemic performance by per capita death rates, total deaths, and total numbers of infections per country, and I judge climate performance based on emissions reductions and the Climate Change Performance Index, an independent monitoring tool. The

⁵¹ Dyer, Paul. "Policy and Institutional Responses to COVID-19: New Zealand." *The Brookings Institution*, January 15, 2021. <https://www.brookings.edu/research/policy-and-institutional-responses-to-covid-19-new-zealand/>.

United States has had a low-efficacy pandemic response and inadequate climate policies; Sweden has had ambitious climate policies but their herd immunity approach to the pandemic failed, yielding a high death rate; New Zealand has had an excellent pandemic response and substantive, though not comprehensive, climate policies. I am including one case in which Covid-19 and pandemic performance largely correspond and two cases in which they diverge. This variation in cases allows for a more thorough investigation of the independent variable.

For each of my cases, I consider a broad swath of mostly qualitative data: each country's domestic and international climate policies, as well as public health data and reporting on each country's pandemic response. The public health data included in my analysis, such as infection rates and death rates, will be largely numerical. I do not perform any regressions or quantitative analysis on this data. I look at these figures as part of a holistic assessment of national pandemic performance, alongside qualitative Covid-19-related data such as political rhetoric and policy plans. I limit the timeline for the pandemic response data to the year 2020; doing so enables me to look at both the preparedness of each country—how they reacted and readied themselves when they first learned of the virus—as well as each country's responses once the virus began rapidly spreading internationally. This time frame also enables me to understand how my case countries dealt with multiple waves of the virus; it is clear if their pandemic plans were robust and pragmatic enough to withstand a slightly longer time horizon, or if they were only successful for a very short time period. My analysis is focused on the period before widespread vaccination efforts began in my case countries. This limitation means that the Covid-19 responses in question are mostly mitigation efforts such as lockdowns and mask mandates.

This project relies heavily on qualitative data; as such, I clearly trace the causal mechanisms at work in order to prove my hypothesis. I include descriptions of *how* cultural type drives

behavior in each case country in addition to the more straightforward, numerical data-based assessments of Covid-19 and climate performance. In my analysis, I pay particularly close attention to lawmakers' language around certain national policies, the implementation of and adherence to those policies, and public opinion regarding the natural crises in question. These factors are most insightful for assessing the strength of the cultural theory framework in my case countries. For example, I may find support for my hypothesis if the justifications for mask mandate policies and discussions around pandemic lockdowns in the United States focus primarily on the health of the economy and individual freedoms. Alternatively, if the concepts of economic stability and individual liberties are not commonly mentioned in public discourse around these policies, the hypothesis that the United States' market individualist culture drives its Covid-19 and climate responses may be shown to lack support.

Through observations of pandemic performance, climate change policies, and discourse around natural crises in my three case countries, I can determine the strength of the cultural theory of risk framework against existing explanations for action on Covid-19 and climate change. If policies around Covid-19 and climate change align with a case country's cultural theory-based predicted behaviors and discourse around the natural crises is focused on the key priorities of that cultural type, my hypothesis will find support. If the aforementioned scenario occurs for all three of my case countries, the cultural theory of risk framework will be shown to be quite powerful in explaining national responses to global natural crises. Alternative explanations may find support whenever the data from a case country do not correspond to its cultural type. For example, if the data indicate that in Sweden, lawmakers primarily justified avoiding lockdowns as a means of avoiding economic stagnation, the egalitarian cultural type would appear not to be a primary driver of the national pandemic response. Findings like this

might lend support to the methodology of examining case countries as unique actors, rather than sorting them into archetypal categories.

Results

Table 4: Global Natural Crisis Response Overview

| Country | Cultural Theory of Risk Type | Cultural Theory of Risk Prediction of Covid-19 Response | Cultural Theory of Risk Prediction of Climate Change Response | Observed Covid-19 Response | Observed Climate Change Response |
|---------------|------------------------------|--|--|---|---|
| New Zealand | Hierarchical Bureaucracy | High efficacy: Centralized set of rules; deference to public health experts; populace will follow public health mandates; focus on procedure and control | High efficacy: Adherence to self-imposed emissions limits, heavy regulation of industry | High efficacy: High level of adherence to public health guidelines; strictly enforced lockdowns and travel bans; extremely low infection rate, very few deaths; global recognition | Low efficacy: Ambitious policy goals, exemptions for methane and agricultural industry, policies unable to meet established targets |
| Sweden | Egalitarian | High efficacy: Deliberative decision-making process; focus on equality and cooperation; widespread availability of testing and medical services | High efficacy: Goal of minimizing environmental risk; ensuring long-term health for all citizens | Low efficacy: Herd immunity approach, no lockdowns; public denial of private government planning process | High efficacy: Highest carbon tax in the world; successfully reducing GHG emissions without sacrificing economic growth |
| United States | Market Individualist | Low efficacy: Economic growth prioritized; difficulty implementing guidelines intended to benefit society collectively | Low efficacy: Economic growth prioritized over environmental health; prioritization of individual preferences interferes with attempts to reduce consumption | Low efficacy: Misalignment between government messaging and public health recommendations; widespread focus on individual freedoms; resistance to mask-wearing and lockdowns; distrust in science | Low efficacy: Minimal federal action on climate change; deep partisan divide; heavy corporate influence over policymaking efforts |

Table 4 summarizes the predictions for the case countries' responses to natural crises according to the cultural theory of risk, as well as the case countries' observed responses to climate change and Covid-19.

In egalitarian Sweden, we observe a successful set of climate policies that has translated to consistent emissions reductions and a failed herd immunity approach to the Covid-19 pandemic. In the hierarchical bureaucracy that is New Zealand, we observe ambitious national climate goals paired with policies that are not sufficient to meet them, and a set of strictly enforced, effective guidelines and public health measures that stamped out the Covid-19 pandemic nationally. In the market individualist United States, we observe a deeply inadequate climate change response and a Covid-19 response that was hindered by the public's focus on individual freedoms. My cultural theory-based predictions of national behavior in response to global natural crises held true in the case of the market individualist United States. In New Zealand, my prediction for the hierarchical bureaucracy's national Covid-19 response was correct, and my prediction for its climate change behavior was incorrect. In Sweden, my prediction for the egalitarian national Covid-19 response was incorrect, and my prediction for its climate change policy was correct. In order to better understand my results and propose further research, I will examine these outcomes with respect to two dimensions along which the natural crises in question differ: their time horizons, and the respective orientations of the crises around humans or around the natural environment.

My cultural theory of risk-based predicted outcomes for national responses to natural crises held true for only one out of three case countries—the market individualist United States. However, this result does not necessarily disprove the predictive power of cultural theory of risk in relation to global natural crises. Examining the differences between the two crises in question

on a more granular level—looking at short-term versus long-term, and human-centric versus planet-centric crises—yielded noteworthy results.

In sum, the results of my analysis suggest the following:

1. Hierarchical bureaucracies are successful in responding to short-term, human-centric natural crises, but less successful in responding to longer-term environmental crises.
2. Egalitarian societies are successful in responding to long-term, environmental crises, but less successful in their handling of short-term, human-oriented natural crises.
3. Market individualist societies struggle to adequately address both short-term, human-oriented natural crises and longer-term crises rooted in the natural environment.

My analysis deals with an extremely limited set of cases. I have included only three case countries—one of each cultural type—and only two global natural crises. The scope limitations of this paper have allowed me to conduct a more thorough analysis of the discourse and decision-making processes around natural crises in my three case countries. Further research on the cultural theory of risk and global natural crises should include a wider set of case countries, in order to verify or disprove the three generalizations that I have set forth regarding the responses that different kinds of natural crises elicit in countries of various cultural types.

Conclusion

Scientists expect that global natural crises like the Covid-19 pandemic and climate change will become more frequent and more intense in the coming decades. As climate change itself gives way to a host of extreme weather events and changes to the natural environment, and agriculture and globalization give way to more epidemics and pandemics, it will be increasingly important for policymakers and political science scholars to understand how and why different

countries take divergent actions in response to these crises. This paper constitutes the beginning of a research thread examining culture's impact on policy responses. Further scholarship on this same research thread can confirm or complicate our collective understanding of that impact, and make policymakers better equipped to handle modern global crises. Unprecedented events demonstrate the need for novel forms of analysis; although the cultural theory of risk framework is an imperfect predictive instrument, it may be a useful tool for grappling with oncoming crises.

This paper has covered climate change-related and pandemic-related events through the end of 2020. The first months of 2021 have introduced critical new data points relevant to the discussion of cultural theory and global natural crises. In the United States, Joe Biden was inaugurated in January, and the government made vaccines available to all American adults by mid-April. The rapid rollout of vaccines, however, has been hindered by partisan conflict: in an April Washington Post-ABC News poll, only 10 percent of Democrats expressed an unwillingness to get vaccinated, while 40 percent of Republicans voiced that same opinion.⁵² The individualistic cultural tendencies of the United States have pervaded in response to an incredibly fast and scientifically unprecedented vaccine effort, as individual Americans' preferences against inoculation and political leanings have superseded the value of vaccination to the collective. This outcome suggests that even when states demonstrate remarkable technological competency in their handling of a global natural crisis, national culture can be a major obstacle to the implementation of effective solutions. The distribution and effectiveness of Covid-19 vaccines around the world in the coming year will constitute another test of national culture's ability to shape states' responses to global natural crises. Similarly, as the remaining

⁵² Bump, Philip. "The partisan divide in coronavirus vaccinations is widening." *The Washington Post*, April 27, 2021. <https://www.washingtonpost.com/politics/2021/04/27/partisan-divide-coronavirus-vaccinations-is-widening/>.

time before catastrophic climate events dwindle, culture may prove to be a critical driver of behaviors and policies that have potential to determine the fate of the planet.

The results of this paper also have important implications for the policy realm. As heads of state and international organizations work to address global natural crises in the coming decades, the impact of culture on state behavior should be considered. Policies should be crafted with the proclivities of the United States' market individualist culture, Sweden's egalitarian culture, and New Zealand's hierarchical bureaucracy in mind, as well as the behaviors associated with each cultural type in response to various forms of global natural crisis. If, for example, an international health organization identifies an imminent epidemic or pandemic—i.e., a short-term, human-oriented global natural crisis—the organization should be particularly vigilant in monitoring the behaviors of egalitarian and market individualist countries, who have struggled with such issues before, to the detriment of the entire international community. Policymakers may also benefit from basing allocation of resources around certain cultural types' past performance: hierarchical bureaucracies may warrant more attention and resources from international organizations if future long-term environmental crises arise, while egalitarian societies may warrant less diligent monitoring and fewer resources from those organizations.

It is worth noting that culture changes over time; the low efficacy of some cultural types' responses to certain varieties of global natural crises need not be a permanent condition. The United States may, for instance, demonstrate remarkably high-efficacy climate and pandemic plans in the next few decades, or Sweden may execute a high-efficacy pandemic response. As culture is constantly in flux, scholars should pay close attention to indicators of changing national culture, and monitor how states undergoing cultural transformations adjust their behavior in response to global natural crises. States that are today clearly market

individualists may, in a matter of years, begin to resemble egalitarians or hierarchical bureaucracies. This thesis has set forth a framework for evaluating culture's impact on various forms of global natural crisis. As states evolve, demographics shift, technology develops, and new natural crises emerge, that framework should be continuously reworked and re-evaluated.