

SECURITIZING THE THREAT OF CLIMATE CHANGE: THE MEANING OF
“CLIMATE CHANGE” TO DIFFERENT AUDIENCES WITHIN THE U.S.
NATIONAL SECURITY ENTERPRISE

by

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A Dissertation
Submitted to the
Graduate Faculty
of
George Mason University
in Partial Fulfillment of
The Requirements for the Degree
of
Doctor of Philosophy
Conflict Analysis and Resolution

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Date: _____ Spring Semester 2014
George Mason University
Fairfax, VA

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Different Audiences within the U.S. National Security Enterprise

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DEDICATION

To anyone who sees the *Matrix* for what it is, and refuses to go back to sleep.

ACKNOWLEDGEMENTS

This project marks a milestone in a quest that I began ten years ago to understand why the institution to which I had dedicated a career of service seemed to focus on some threats while discounting others. I am indebted to the members of my committee—Patricia Maulden, Dan Rothbart, and Ed Maibach. They listened to my odd mix of ideas and helped me to find a way to move forward. I am especially thankful to Patricia for her guidance and patience, particularly when I subjected her to hours of national security jargon punctuated at times by the colorful language of a soldier. Most of all, I would like to thank Esther, Liam, and Ethan. Without their love, support, and patience, none of this would have been possible.

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LIST OF ABBREVIATIONS

Armed Forces Press Service	AFPS
Brazil, Russia, India, China, and South Africa	BRICS
Carbon Dioxide	CO2
Carnegie Endowment for International Peace	CEIP
Center for Naval Analyses	CNA
Center for Strategic and International Studies	CSIS
Central Intelligence Agency	CIA
Chairman Joint Chiefs of Staff	CJCS
Climate Change Adaptation	CCA
Climate Science Center	CSC
<i>Congressional Record Daily Edition</i>	<i>CRDE</i>
Council on Foreign Relations	CFR
Critical Infrastructure and Key Resources	CIKR
Defense Science Board	DSB
Department of Commerce	DOT
Department of Defense	DOD
Department of Energy	DOE
Department of Homeland Security	DHS
Department of Interior	DOI
Department of State	DOS
Department of Transportation	DOT
Director of National Intelligence	DNI
Environmental Protection Agency	EPA
Executive Order	EO
Fiscal Year	FY
Hydrofluorocarbons	HFC
Government Accounting Office	GAO
Greenhouse Gases	GHG

Intergovernmental Panel on Climate Change	IPCC
Landscape Conservation Cooperative.....	LCC
National Aeronautics and Space Administration	NASA
National Defense University.....	NDU
National Intelligence Community.....	IC
National Intelligence Council	NIC
National Oceanic and Atmospheric Administration	NOAA
National Research Council	NRC
National Security Council.....	NSC
National Security Resources Board	NSRB
National Security Strategy	NSS
National War College	NWC
Natural Resources Defense Council	NRDC
North Atlantic Treaty Organization	NATO
Parts Per Million	PPM
Quadrennial Diplomacy and Development Review	QDDR
Reduction of Emissions from Deforestation and Forest Degradation	REDD
School for Conflict Analysis and Resolution.....	SCAR
Senate Committee on Energy and Natural Resources	CENR
Senate Committee on Environment and Public Works.....	CEPW
Senate Committee on Foreign Relations.....	SFRC
State, Local, Tribal, and Territory	SLTT
Social Identity Theory.....	SIT
United Nations	UN
United Nations Framework Convention on Climate Change	UNFCCC
United States	US
United States Africa Command	AFRICOM
United States Agency for International Development	USAID
United States Geologic Survey	USGS
United States Marine Corps	USMC
Weapons of Mass Destruction	WMD

ABSTRACT

SECURITIZING THE THREAT OF CLIMATE CHANGE: THE MEANING OF
“CLIMATE CHANGE” TO DIFFERENT AUDIENCES WITHIN THE U.S.
NATIONAL SECURITY ENTERPRISE

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George Mason University, 2014

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Abstract: National Security is the primary concern of every government and the list of potential security menaces is long and diverse, perhaps limited only by the imagination of those entrusted with the security of the state. Based on varying interpretations of the social contract, state leaders make decisions and implement policies that affect people, institutions, societies, other states, and relationships of all kinds. When that state is the United States, the implications of threat identification and the resulting security responses can be costly and far reaching. Borrowing conceptually from the Copenhagen School's securitization theory, this project describes the discursive complexity of threat meanings held by audiences within the US national security enterprise following securitizing moves by President Obama. Specifically, I question what the threat of climate change means to the executive branch, Congress, and national security experts, how those meanings are constructed, and to what end. Using frame analysis, I examine 213 official texts from the

period May 1, 2010 to September 1, 2013 to discern diagnostic, prognostic, motivational and cognitive frames and interactional framing regarding the climate change threat. I further inform my analysis with personal insights from a thirty year career in the enterprise and theoretical insights from Stephen Walt's balance of threat theory, John Kingdon's three streams model of public policy formation, social identity theory, and Mary Douglas and Aaron Wildavsky's cultural theory of risk. Ultimately, I find that each audience creates and draws from one or more climate change meanings to acknowledge or refute the threat in ways that serve its own ends. This project contributes to our understanding of the US response to climate change, helps to describe the under theorized role of audiences in securitization theory, and identifies new avenues of inquiry related to threat identification and climate change.

CHAPTER ONE: INTRODUCTION

You need to pick one. Those two shades of green don't go together.¹

A Thirty-Year Ethnography Yields a Research Question

National security is the primary concern of governments and the list of potential menaces is long and diverse, limited only by the imagination of those entrusted with the security of the state. These threats may be real or perceived, imminent or future, near or far, and the product of material as well as ideational factors. Sometimes states downplay or ignore threats. Other times they see threats wherever they look. The threatened object is equally variable, ranging from the whole of society to any of its parts. Clearly, context matters and thus states identify and prioritize threats uniquely. Guided by varying interpretations of the social contract, states implement policies that affect people, institutions, societies, and other states. Governments shift resources away from perceived lower priorities to meet the demands of the security imperative. Laws change, taking their toll on personal liberties. Agenda crowding relegates many issues to the periphery as chosen threats and security issues become the *raison d'état*. Leaders may use force to address the threat. Sometimes states resort to war. In short, security responses are as varied as the menaces they are intended to confront.

¹ My well-meaning commander provided me with this guidance soon after my arrival in Germany in 1989. He concluded that my passions for Army “green” and environmental “green” would rarely, if ever, align.

My insights and curiosity about threat identification and security responses come from a thirty-year career as an Army intelligence officer in the US national security enterprise.² In my career, the threats toward which I have directed my time and energy varied. Initially, I prepared to fight the Soviet Union, a threat that ushered in, dominated, and shaped the enterprise for fifty years. Then, in November 1989, I struggled to hold on to my perch on the Berlin Wall long enough to hammer off a memento. As a newcomer to the enterprise, I found it easy to look beyond the Soviet menace to other threats, but ensconced in the Cold War narrative, my senior colleagues found the loss of a distinct enemy “other” discomfoting. I listened with amusement as many Soviet experts and senior military leaders cautioned that the Soviet Union could resurge at any moment.

Sometimes my skepticism earned rebuke from others or, as illustrated by the quotation at the beginning of the chapter, a polite reminder that the US Army must remain focused on America’s enemies. Accordingly, I adapted to the dominant narrative, developing my expertise on the Soviet Union while privately reconsidering notions of threat and security. As the focus on the Soviet Union faded over time, I began to find a few other kindred spirits who had also (re)discovered that the world was considerably more complex than the Cold War framing that had guided our thinking and training.

Gradually, the enterprise identified new threats worthy of the sole superpower’s attention. After all, crises in the Balkans, Kuwait, Haiti, and Somalia showed that the world was still a dangerous place that required US leadership and assistance. Although

² I borrow the term *enterprise* from George and Rishikof (2011) who describe it as three concentric circles with the executive branch in the center, Congress and the Supreme Court in the middle, and informal players such as special interest groups in the outer circle. I discuss the enterprise in chapter two.

states remained the primary focus of the enterprise, the post-Cold War era also saw an influx of new ideas about threats and security. Natural and human-made disasters, drug cartels, transnational criminal threats, malicious non-state actors, pandemics, failed and failing states, underdevelopment, the proliferation of weapons of mass destruction (WMD), and resource scarcity, among many other problems, competed with more traditional state-based threats for the enterprise's attention in the 1990s. During this period, the enterprise's reluctance to embrace some problems as security issues while seeming all too enthusiastic to embrace other problems puzzled me.

The terrorist attacks on September 11, 2001, gave the national security enterprise a new, singular focus and my career followed the same path with deployments to Kuwait, Iraq, and Afghanistan. I studied the threat, trained and deployed units into combat, and helped to build an effective intelligence system to support the war. Seldom did I hear anyone discuss other problems unless in the context of terrorism. Indeed, conditions seemed reminiscent of the Cold War, only the dominant frame was now terrorism. In 2004, I attended a conference during which I heard a senior national security leader declare Islamic fundamentalism an existential threat to America and one that would take our lifetimes and the lifetimes of our children to fight.³ This statement unsettled me deeply, leading me to ponder what constitutes a national security threat and how an issue comes to acquire the threat label. A year later, as a student at the National War College (NWC), I probed for answers, often encountering opposition from fellow students and

³ I attended many conferences during which one or more speakers labeled terrorism as an existential threat. Although the existential reference is not common today, I still hear it occasionally in relation to terrorism, cyber threats, China, and weapons of mass destruction, but not in relation to climate change.

faculty who resisted any suggestions that there were bigger issues than terrorism or state sponsors of terrorism deserving of our attention. Then, a trip to West Africa to study US national security strategy motivated me to focus my inquiry on threat and security and to undertake this project.

Ghana's Akosombo Dam created the largest human-made reservoir in the world by surface area, Lake Volta.⁴ As I stood on the dam in 2005, I asked the chief engineer what he considered Ghana's most pressing national security issue. Without hesitation, he replied, "global warming." Seeing my surprise, he added that Ghana relies on the dam for most of its electrical power needs. Warmer temperatures, decreased rainfall, and greater demands for power and water force him to operate the dam's turbines at low, heavily silted water levels. The results are the frequent replacement of costly turbine parts and an inability to keep pace with Ghana's growing energy needs with hydroelectric power. He understood that Ghana's most important national interest was development, requiring increases in both energy and water. Proving to be politically savvy, the engineer surprisingly added that officially however, Ghana's utmost national security problem is the possibility that northern Ghana becomes a sanctuary for Islamic extremists. All things considered, he said, there isn't any US foreign aid for global warming.⁵

My experience in Ghana led me to question what the threat of climate change means to the US national security enterprise. After all, US threat identification and

⁴ Lake Volta is the largest reservoir by surface area, but the fourth largest by volume. http://education.nationalgeographic.com/education/encyclopedia/reservoir/?ar_a=1.

⁵ The statement is not wholly accurate although the perception is noteworthy. The US provides many types of aid that could be said to help societies contend with problems such as climate change. However, the engineer was accurate in the sense that the US rarely provides aid in the context of climate change.

related security policies can have enormous repercussions for American society and the international community. The engineer clearly recognized the implications for Ghana. However, why did a group of US national security strategists not recognize that Ghana's most pressing security issue had nothing to do with terrorism?

The US government was aware of the climate change threat in 2005. The Intergovernmental Panel on Climate Change (IPCC) published its third report in 2001, concluding that most of the recent global warming trend is due to human activity.⁶ The US National Academy of Sciences followed with its own study, publishing *Abrupt Climate Change: Inevitable Surprises*, which noted that human activities could trigger rapid climate changes (NRC 2002). In 2003, the Department of Defense (DOD) held planning sessions to consider the implications of abrupt climate change for national security. Citing these sessions, *Fortune* published an article in February 2004 that called climate change the “mother of all national security issues” (Stipp 2004).⁷ I was working in the Pentagon at the time, and I recall that the article elicited responses ranging from disbelief or indifference to polite indulgence or minimal curiosity. Focused on terrorism and Iraq, few colleagues took any interest in the climate change issue. This pattern persisted at NWC from 2004 to 2005 where I witnessed students, as well as some faculty members, ignore, downplay, or refute the climate change threat to national security.⁸

⁶ The IPCC published its fourth assessment in 2007 and will complete its fifth assessment in 2014.

⁷ The Pentagon asked the Global Business Network (GBN) to develop the scenario. GBN is known for its scenario's development methodology. See Schwartz and Randall (2003)

⁸ I was a student at NWC from 2004 to 2005.

I credited much of the enterprise's hostility toward the climate change issue to the wars in Afghanistan and Iraq as well as the lack of interest by President George Bush.⁹ International relations scholar Rita Floyd concluded in her study of the environment and security that the Bush Administration desecuritized and depoliticized environmental issues from 2001 to 2009, all but removing environmental issues from the security and political agendas (Floyd 2010, 7). While I generally agree, the Bush Administration did not completely ignore climate change as a possible threat. For example, in 2007 the Center for Naval Analyses (CNA) published *National Security and the Threat of Climate Change*, a report prepared by an advisory board of retired admirals and generals in consultation with experts on climate change. Chaired by retired Army General Gordon Sullivan, the board concluded that "Climate change can act as a threat multiplier for instability" and that climate change "presents significant national security challenges for the United States" (CNA 2007, 1).

With Barak Obama's presidency, I thought that the consensus on the climate change threat by the scientific community would finally have a voice in the enterprise and thus ascend on the national security agenda.¹⁰ Although Obama has made few statements about climate change, his statements have clearly labeled climate change as a threat to US national interests. In his first inaugural speech, he said, "With old friends and former foes, we'll work tirelessly to lessen the nuclear threat, and roll back the

⁹ Floyd (2010) contrasts the Bush Administration's efforts to depoliticize the environment with the Clinton Administration's efforts to securitize the environment.

¹⁰ Climate change has sparked much contradictory dialogue, suggesting a lack of scientific consensus on the phenomenon. I concur with Doran and Zimmerman (2009, 23) that "the debate on the authenticity of global warming and the role played by human activity is largely nonexistent among those who understand the nuances and scientific basis of long-term climate processes." Much of the so-called debate on climate change resides outside of the scientific community, including within the national security enterprise.

specter of a warming planet” (Obama 2009a). In those words, he binned two existential threats together, suggesting a level of importance and urgency to climate change akin to that of nuclear weapons. However, Obama adopted a less confrontational approach with Congress by emphasizing the need for clean energy, largely avoiding mention of climate change during his first term in office. One noteworthy exception is the 2010 National Security Strategy (NSS), which makes explicit references to the threat of climate change. The strategy states that we must “forge cooperative solutions to the threat of climate change,” we must “combat climate change,” and that “climate change...threatens the security of regions and the health and safety of the American people” (White House 2010, 3-8).¹¹ Obama has been somewhat more assertive on the climate change issue at the beginning of his second term. In his second inaugural speech, he declared,

We will respond to the threat of climate change, knowing that the failure to do so would betray our children and future generations. Some may still deny the overwhelming judgment of science, but none can avoid the devastating impact of raging fires and crippling drought and more powerful storms. (Obama 2013)

During his February 2013 State of the Union speech, he continued to address the issue of climate change:

And over the last four years, our emissions of the dangerous carbon pollution that threatens our planet have actually fallen...But for the sake of our children and our future, we must do more to combat climate change. Now, it’s true that no single event makes a trend. But the fact is the 12 hottest years on record have all come in the last 15. Heat waves, droughts, wildfires, floods— all are now more frequent and more intense. We can choose to believe that Superstorm Sandy, and the most severe drought in decades, and the worst wildfires some states have ever seen were all just a freak coincidence. Or we can choose to believe in the overwhelming judgment of science—and act before it’s too late. Now, the good

¹¹ The NSS was preceded in February 2010 by the Department of Defense’s *Quadrennial Defense Review Report*, noteworthy for recognizing that “climate change and energy are two key issues that will play a significant role in shaping the future security environment” (DOD 2010, 84).

news is we can make meaningful progress on this issue while driving strong economic growth. I urge this Congress to get together, pursue a bipartisan, market-based solution to climate change, like the one John McCain and Joe Lieberman worked on together a few years ago. But if Congress won't act soon to protect future generations, I will. I will direct my Cabinet to come up with executive actions we can take, now and in the future, to reduce pollution, prepare our communities for the consequences of climate change, and speed the transition to more sustainable sources of energy. (Obama 2013b)

Obama unveiled his Climate Action Plan in June 2013. Speaking at Georgetown University, his remarks repeated many of the themes from his earlier speeches. He highlighted the science that proves the reality of anthropogenic climate change. He stressed the need to act, the importance of adaptation and societal resilience, and the important role that the scientific community and the private sector will play in any solution. However, he also embraced a more strident tone, challenging climate change deniers and those who contend that we must choose between a prosperous economy and climate action. He enlisted citizens to get involved, not only to take part in solving the problem, but in confronting deniers, and he challenged fossil-fuel special interests by stressing the need to end tax breaks and to regulate carbon emissions (Obama 2013c).

Attendant to his remarks were words and statements typical of a national security threat briefing. Referring to the Keystone XL pipeline, he commented, "Our national interest will be served only if this project does not significantly exacerbate the problem of carbon pollution" (Obama 2013c). He also remarked on the high cost of inaction, the persistent and growing nature of the threat, and the need to take offensive measures to counter the causes of climate change as well as defensive measures to manage the consequences of a changing climate. He peppered his comments with language that would resonate with any strategist or security expert, noting that "This is the fight

America can, and will, lead in the 21st century” and asking us to make America a global leader “in the fight against climate change” and to “lead the world in a coordinated assault on a changing climate” (Obama 2013c).

Clearly, Obama has labeled climate change a significant threat and one deserving of immediate action, but where are the actions to follow the words? He has previously spoken unequivocally about the need to take action against a threat to the US, only for inaction to follow.¹² Will his Climate Action Plan and his impassioned appeal regarding the climate change threat suffer the same fate? Why has the enterprise failed to make the climate change threat a priority and will this pattern persist?

A hint of an answer may be apparent in how the enterprise interprets Obama’s words. The National Intelligence Community (IC) plays a key role within the enterprise in identifying threats to national security. In his March 2013 testimony to Congress, the Director of National Intelligence, James Clapper, detailed a long list of global and regional threats to US national security (Clapper 2013). Terrorism, WMD, and transnational organized crime featured prominently in his statement, as did many states that are belligerent towards the US (e.g., Iran and North Korea), challenge US interests (e.g. China and Russia), or are at risk of instability for various reasons (e.g., Pakistan and Egypt). The cyber threat earned top billing, but the list also included resource insecurity

¹² One noteworthy exception was the establishment by Executive Order 13514 of the Climate Change Adaptation Task Force on October 5, 2009. Obama directed the Task Force “to develop a report with recommendations for how the Federal Government can strengthen policies and programs to better prepare the Nation to adapt to the impacts of climate change” (Council on Environmental Quality 2013).

and competition, health threats, counterintelligence and space-related concerns, and mass atrocities. In short, there appear to be no lack of menaces to US security.¹³

Clapper was less explicit than Obama about the threat of climate change. In his remarks on natural resource insecurity and competition, Clapper testified that “weather conditions outside of historical norms” are affecting food security, water availability, sea levels, and natural disaster frequency and intensity (Clapper 2013, 12). Although he did not identify the drivers of climate change, he clearly recognized that resource scarcity, population growth, and a doubling of the world’s middle class would put intense pressure on states, many of which are important to US national security. As a key leader within the enterprise, Clapper’s threat assessment influences threat prioritization and shapes security strategies. Indeed, most of the items on his list, particularly traditional, actor-based threats, are getting substantial attention by the enterprise.

China and cyber threats have joined terrorism as dominant threat discourses throughout the enterprise. Yet, in spite of Obama’s bold statements and somewhat less emphatic stands by other senior leaders, the enterprise’s embrace of the climate change threat has been slow, minimal, and largely unproductive. Clearly, the president and commander-in-chief’s public declarations of the threat and its magnitude were not enough to engender substantive action by the enterprise. Yet, as a longtime member of the enterprise, I sense that there has been a differential level of uptake by audiences within the enterprise, leading to the research questions at the core of this project. What

¹³ Space-based services provide many advantages, including intelligence gathering and military support.

does the climate change threat mean to different audiences within the national security enterprise, how are these meanings constructed, and to what end?

The Path Ahead

The following chapters are the result of a descriptive project that yields a preliminary map of climate change meanings within the national security enterprise. Chapter Two reviews four bodies of literature. The review situates the project in the literature and begins to lay the conceptual framework that continues to unfold in the next two chapters. I will review traditional and alternative conceptions of national security, different views on the audiences that constitute the enterprise, and the treatment of climate change as a security issue. I also present securitization theory, which informed my approach to the project and which benefits from the project's insights on audiences and threat meanings.

Chapter Three discusses four theories that I selected based on my experiences in the enterprise. These theories inform my data analysis and may help to strengthen the treatment of audiences by securitization theory. First, Stephen Walt's balance of threat theory serves as a suitable proxy for rational actor theories and the realist paradigm that seemingly dominate the enterprise's mindset and processes. Second, a public policy theory is warranted since the enterprise implements strategy through policies that result from a bureaucratic process. John Kingdon's three streams model of public policy formation has garnered some attention by securitization theory scholars and contrasts sharply with rational actor models. Third, social identity theory is aptly suited to a project focusing on meaning making by different audiences, each with distinctive roles

and cultures within the broader enterprise. Social identity theory also provides insights on the differential treatment of actor-based threats such as terrorism and Iran and non-actor based threats such as pandemics and climate change. Fourth, national security practitioners often consider, and ostensibly calculate, the risk presented by specific threats and dangers. The cultural theory of risk offers an explanation for the bounded rationality that affects individual and group choices of risk, dangers, and threats and the options to address them.

Chapter four merges the material from the three previous chapters, presenting the project's research design and methodology. The research design borrows securitization theory's notions of securitizing actors, securitizing moves, and empowering audiences. As noted earlier, audiences may interpret Obama's climate change remarks differently. Thus, the research design focuses on discourses in order to discern what climate change means to different audiences. Given the centrality of meaning making in the research design, I also situate the project within its social constructionist epistemology. The methodology discussion describes the research cases and my approach to data sources, sampling, and analysis. I present a three part analytic framework that combines two different approaches to frame analysis and a set of structured questions derived from the theories discussed in chapter three. I also describe my phased approach to analyzing the texts that constitute my dataset.

Chapter Five presents the project's findings for each of the three audiences under study, consisting of discursive frames used by audiences and their members while discussing climate change. Since frames play a major role in constructing the various

meanings of climate change, chapter five substantially answers how climate change meanings are constructed. Chapter Six presents my conclusions, using the findings from chapter five to construct meaning maps for each of the audiences. The maps answer what climate change means to the audiences and to what end those meanings serve, and they elaborate on how those meanings were constructed. Chapter six further addresses the value of the four theories to securitization theory, and concludes with comments on the contributions of this project, recommendations for improving similar research projects, and ideas for future research.

A Glimpse of the Destination

This project shows that climate change meanings vary across audiences. Sometimes the variations are minimal, permitting audiences to agree generally on the nature of the threat and what to do about it. At other times, the differences between meanings are so broad that there is no agreement on the nature of the threat or actions to address it. Indeed, these meanings are so diametrically opposed that one audience or sub-audience may view climate change as an existential threat while another sees climate action as the threat. Between these meanings are variations that enable audiences to accept climate change while taking minimal actions, or ignore, discount, or downplay climate change as a threat, but still undertake some climate actions.

Paths I Will Not Follow

This project raises questions beyond the research questions and thus it may prove helpful to the reader to know what it does not seek to accomplish. First, as a descriptive

effort, this project does not claim to explain why climate change is or is not securitized by the national security enterprise. However, the project's findings and preliminary maps of climate change meanings do reveal insights suggestive of reasons for the alignment of meanings to audiences, insights that merit follow-on research. Similarly, this project does not seek to make a normative judgment on whether climate change should or should not be securitized. Clearly, securitization is but one path to elevating an issue in importance and taking action to address the issue. Politicizing an issue may prove sufficient to garner attention, or the issue may be cast in terms not conducive to securitization. For example, people may view climate change primarily as an environmental or health issue and thus emphasize non-security options to address the issue. Lastly, this project does not seek to evaluate whether the current or future extent of securitization will prove effective in reducing the threat posed by climate change.

CHAPTER TWO: LITERATURE REVIEW

Why I am getting a lecture on global warming at the National War College?¹⁴

The previous chapter described my motivation for undertaking a study focused on the national security enterprise and threat identification. I narrowed my focus to climate change, a phenomenon that Obama has repeatedly declared a threat and yet the enterprise seems reluctant to treat as a threat. I also ventured that different audiences within the enterprise may not impute the same meaning to climate change, a claim that I explore in this project.

Chapters two through four present the literature, theories, and epistemology that shaped the research design, methodology, and analytic framework presented in chapter four. The literature review in this chapter serves three purposes. Primarily, it situates the project within the literature related to the research questions and to the project's descriptive focus. This project describes the meanings that different audiences within the US national security enterprise accord to climate change. The literature at the nexus of national security and climate change is relatively sparse, and none of it specifically examines what climate change means to national security audiences. While this chapter reviews these works, it will also look at literature related to the entity responsible for national security, conceptions of national security, and securitization theory.

¹⁴ This comment from a fellow student was directed toward me after a lecture on climate change in 2004.

The broadening of the literature review serves two other purposes. First, it examines concepts that are central to this project and, in doing so, reveals the confluence of ideas that led to this study and its methodology. Second, this review builds on my personal experiences as well as the theoretical insights that I will describe in chapter three. Together, these preparations helped me to analyze the data and describe the climate change meanings evidenced in national security discourses.

The following review unfolds in four sections. First, I examine the origins and varying conceptions of the entity responsible for national security. These conceptions reveal different views of the audiences that develop, implement, influence, and contest strategy and policy. This project uses the term *enterprise* to encompass these audiences, a term that merits explanation, especially given its rare use by national security scholars.

Next, I examine the concept of national security. I begin with the origins of the realist notion of national security at the end of the Second World War and the ensuing embrace of political realism by the enterprise. I also examine why the enterprise is resistant to change, focusing primarily on the persistence of the realist paradigm. Then I shift focus to alternative conceptions of national security, particularly those emerging in the waning years of the Cold War when scholars and practitioners to contest conventional ideas of national security.

Third, I review the literature at the nexus between national security and climate change. Although this body of literature has grown in the past ten years, it remains sparse compared to the literature that examines the juncture between national security and more traditional threats such as states, criminal cartels, and terrorist groups. This project

will contribute to the subset of this literature that studies non-traditional threats such as poverty, pandemics, and environmental issues, including climate change.

Lastly, as a project inspired in part by securitization theory, I will summarize the theory and discuss how this project may help to address securitization theory's inadequate attention to audiences.

The National Security Enterprise

My use of the term *enterprise* is not common among scholars and practitioners of national security. Indeed, I did not become aware of the term until I joined the NWC faculty in 2012 and read *The National Security Enterprise* by Roger George and Harvey Rishikof (2011). Yet, the term instantly resonated with me because I had long thought that other labels were misleading or incomplete. Moreover, I found that people unfamiliar with the enterprise assumed that national security is purely a military function, or they conceived of the enterprise as a unitary, rational actor, discounting the roles of the many audiences engaged in national security. This section reviews the origins of the body responsible for national security, describes the more common labels for that entity, and concludes with a description of the enterprise.

Origins

Most scholars trace the origins of the present national security enterprise to the Second World War.¹⁵ Historically, the US had taken a minimalist approach to military

¹⁵ There is broad consensus on the origins of the entity responsible for US national security. For example, see Auerswald and Campbell 2012, George and Rishikof 2011, Rosenwasser and Warner 2011, Snow 2011, Whitaker et al. 2011, Bacevich 2010, Jordan et al. 2009, Sarkesian et al. 2008, Roland 2007, Nelson 2007, Robin 2003, Krause and Williams 1997.

forces and wartime preparations. The luxury of two oceans and relatively weak domestic and hemispheric threats permitted the US to mobilize beyond a small standing force only if conflict seemed imminent. Our belated preparations often earned us bloody and costly rebukes in the opening rounds of new conflicts, including the Spanish-American War and the First World War. However, these wars provided insufficient impetus to usher in an overhaul of the US approach to national security.

Pearl Harbor, the challenges of prosecuting a global war, and the Cold War discredited the minimalist approach. Congress pursued legislative solutions that would reorganize national security affairs for the express purpose of preventing another surprise attack such as Pearl Harbor (Whitaker et al. 2011, 6). These solutions, however, were contested. The old political order, one that scorned foreign imbroglios, feared that constant vigilance and a high state of preparedness would lead to society's militarization. However, those who invoked the memory of Pearl Harbor trumped the old order, waving "the new ideology of national security" (Hogan 1998 quoted in Nelson 2007, 266). President Harry Truman also tied the event to the need to reorganize national security affairs, stating "If we'd all had that information in one agency, by God, I believe we could have foreseen what was going to happen at Pearl Harbor" (Quoted in Whitaker et al. 2011).

Truman's concerns were widely shared. The scope, complexity, and duration of the war had placed unprecedented demands on the government to coordinate its policies, diplomacy, military operations, and mobilization efforts. Although a structure and processes had evolved during the war, they were ad hoc and destined, as in previous

wars, to disband, leaving foreign policy in the hands of an inexperienced president and a decentralized and unwieldy executive branch (Nelson 2007, 267).

The post-war environment proved more complex than the recently concluded war. Although the US earned superpower status in the new geopolitical and economic order, new threats loomed in the form of the Soviet Union and communism. The resulting Cold War confronted the government with the persistent threat of a hot war, one that could lead to a nuclear conflagration against which ocean buffers would provide no protection. The US entered into security guarantees with allies and helped to create new international institutions such as the United Nations and the World Bank. Government leaders realized that the US needed a durable structure to maintain military readiness, gather intelligence on the Soviet threat, and to manage and coordinate US instruments of power “more carefully to properly signal intent and capability to adversaries so as to avoid the catastrophe of nuclear war” (George and Rishikof 2011, 17).

Foremost among these leaders was Secretary of the Navy, James Forrestal. Forrestal saw the Soviet Union as a major antagonist and thus he wanted to ensure that American foreign policy retained a strong military component (Nelson 2007, 268). He knew that both Congress and Truman wanted a unified Department of Defense and a permanent, centrally managed intelligence community (Whitaker et. al 2011, 7). Congress also wanted a formal interagency consultative structure that would advise the President. Truman was resistant at first, concerned that it would encroach on his decision making authority. Forrestal reconciled these conflicting interests, paving the way for the

80th Congress to pass Public Law 80-253, commonly referred to as the National Security Act of 1947.

The Act formally ended the minimalist approach to national security, joining the new ideology of national security with the establishment of a structure and bureaucratic framework for fighting the Cold War as evidenced in the words of the Act itself:

AN ACT to promote the national security by providing for a Secretary of Defense; for a National Military Establishment; for a Department of the Army, a Department of the Navy, and a Department of the Air Force; and for the coordination of the activities of the national Military Establishment with other departments and agencies of the Government concerned with national security. (National Security Act of 1947, sec.1)

Furthermore,

In enacting this legislation, it is the intent of Congress to provide the comprehensive program for the future security of the United States; to provide for the establishment of integrated policies and procedures for the departments, agencies, and functions of the Government relating to the national security. (National Security Act of 1947, sec.2)

In essence, the Act was intended to address the problems encountered in the Second World War and the supposed needs of the Cold War. To this end, the Act created four coordinating bodies—the National Military Enterprise, the Central Intelligence Agency (CIA), the National Security Council (NSC), and the National Security Resources Board (NSRB). The NSRB disbanded in 1953, but the other elements remain central players in the enterprise (Nelson 2007, 269; see also Sarkesian et al. 2008, 78).

To say that these bodies remain the central players is not to imply that they ever operated as intended. The authors of the National Security Act envisioned these new bodies as relatively lean organizations whose function was to coordinate across existing bodies. For example, the National Military Enterprise would merely provide a forum for

coordinating the Services' activities as would the CIA for the intelligence agencies. The NSC initially operated out of the Pentagon and was ignored by Truman until he found it useful after the outbreak of the Korean War. Subsequently, the NSC moved into the Office of the White House where it evolved into the principal forum for deliberation of national security policy issues requiring presidential decision (Whitaker et al. 2011, 12). Since 1947, the three organizations once envisioned as coordinating bodies have grown in size and complexity, and the range of issues subsumed under the mantle of national security has diversified considerably from the initial focus on the Soviet Union.

An Establishment, System, or Complex

National security practitioners and scholars attach a variety of labels to the collective entity and associated processes responsible for national security. The most common labels are *establishment*, *system*, and *complex*. Often these terms are used interchangeably, even by people within the enterprise, and many scholars seem to move between these terms as if they are synonyms for the same idea. I contend that these labels matter because they delineate who is included in the collective entity, suggest what is going on in the entity, and sometimes pass judgment on the entity that they label.

The national security establishment has its roots in the language of the National Security Act of 1947. The authors of the Act wanted to create a permanent structure with responsibilities to coordinate the activities of related organizations, services, and offices. The term *establishment* often surfaces in scholarship that discusses the origins of the entity responsible for national security. Generally, these works refer only to the formal players whose role was codified in the National Security Act and not the processes that

actually produce national security policy. More recently, however, scholars have broadened their conception of the establishment to include processes. For example, a popular primer on US national security uses *establishment* “as a normative-analytical term referring to those responsible for national security decision making as well as the descriptive term that identifies a set of actors and processes that actually produce security policy outcomes” (Sarkesian et al. 2008, 19).¹⁶ In this particular case, the establishment includes the presidency, the NSC, the National Security Adviser, the Secretaries of State and Defense, and the military and intelligence organizations (Sarkesian et al. 2008).¹⁷

The *national security system* is the most commonly used term in the literature.¹⁸ In scholarly circles, the term generally refers to the combination of the formal players of the establishment, the practices used by each player to support their core missions, and the processes that produce national security policies. Since policy making involves other actors, descriptions of the *system* typically include Congress because of its resourcing, oversight, and treaty ratification roles. Different studies tend to include varying combinations of other actors who influence the formal players in the systems, most notably the media, special interest groups, and the public.

President Eisenhower popularized the term *complex* and its negative connotation during his farewell speech to the nation in 1961.¹⁹ Eisenhower warned:

This conjunction of an immense military establishment and a large arms industry is new in the American experience. The total influence—economic, political,

¹⁶ The primer reviews four ways to study national security: the concentric-circle model, the elite-versus-participatory model, the systems-analysis approach, and the security network/power cluster approach.

¹⁷ The section on the *establishment* in Sarkesian et al. (2008) includes a chapter on civil-military relations, but it does not speak to structure as much as it laments the unhealthy rift between the military and society.

¹⁸ For example, see Nelson 2007, Sarkesian et al. 2008, Jordan et al. 2009, and Whitaker et al. 2011.

¹⁹ *The American Presidency Project*, <http://www.presidency.ucsb.edu/ws/index.php?pid=12086&st=&st1=>.

even spiritual—is felt in every city, every State house, and every office of the Federal government. We recognize the imperative need for this development. Yet we must not fail to comprehend its grave implications. Our toil, resources and livelihood are all involved; so is the very structure of our society.

In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military industrial complex. The potential for the disastrous rise of misplaced power exists and will persist.

We must never let the weight of this combination endanger our liberties or democratic processes. We should take nothing for granted. Only an alert and knowledgeable citizenry can compel the proper meshing of the huge industrial and military machinery of defense with our peaceful methods and goals, so that security and liberty may prosper together. (Eisenhower 1961)

Preceding his statements, Eisenhower conceded the need for the national security establishment and for an armaments industry, reminding the nation that the absence of both left the US unprepared for the Second World War. However, he became alarmed at the growth of the military-industrial complex and its powerful influence on the state.

Although Eisenhower popularized the term *complex*, references to the confluence of government, military, and industry interests had been used previously. Economist Winfield Riefler used the term to describe the state of preparedness for war in 1942:

The world was divided into four relatively self-sufficient military-industrial complexes each possessing foodstuffs and raw materials...in the quantity necessary to maintain at least a minimum level of civilian existence and to supply its armies. (Riefler 1947, 95)

Sociologist C. Wright Mills (1956) took a decidedly more critical view of the complex, concerned about the dangerous alignment of military, industrial, and political leaders who pursued their mutual interests outside of normal democratic processes.

Since Eisenhower's famous speech, most treatments of the complex have followed Mill's cautionary tale. There is even a website titled Military-Industrial

Complex that has been tracking expenditures by the complex since October 2006.²⁰ Paris Roland (2007) provides a useful discussion of the two primary meanings of the term, distinguishing between the military-industrial complex as a historical phenomenon and as a political trope. As a historical phenomenon, he credits the complex with winning the Cold War. However, he also acknowledges that the complex served its own interests by exaggerating the threat in order to rationalize policies, budgets, and military equipment acquisition that benefited those within the complex. These malignancies have come to overshadow the practical value of the complex with the term now serving as a trope for all manner of ills related to national security (Roland 2007, 363).

The Enterprise

George and Rishikof use the term *enterprise* “to capture the notion that the enterprise is more than simply the formal government institutions found in the executive branch and the Congress” (2011, 2). The authors describe the enterprise as a series of concentric circles with the executive branch at the center, Congress and the Supreme Court in the next circle, and then a host of informal players, including the media, think tanks, lobby groups, and special interest groups in the outer circle (see Figure 1).²¹

The formal players at the center of the enterprise align closely with traditional conceptions of the national security establishment and their focus on the executive branch. While the president, the Office of the President, the National Security Council, and the Departments and Agencies of the executive branch perform the core functions of

²⁰ See <http://www.militaryindustrialcomplex.com/>.

²¹ The authors do illustrate their concentric circle model. Figure 1 is my depiction of their model.

national security, the other branches of government also play formal roles. Congress has important responsibilities for security policy, foreign affairs, and fund appropriation, and it wields its constitutionally enumerated powers, in part, to check the power of the executive branch. The relationship between Congress and the President is decidedly political as their competing interests collide (Warburg 2011, 227-228; see also Auerswald and Campbell 2012). Thus, contrary to Sarkesian's concerns regarding the flaws in concentric-circle models, Warburg (2011a) clearly understands the pivotal role of politics in the process and its implications for rational decision making.

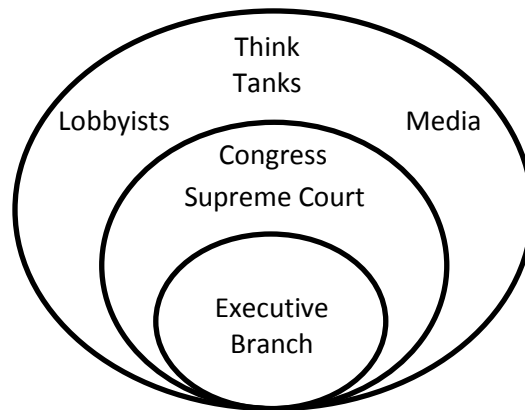


Figure 1. The National Security Enterprise

The US Supreme Court and other federal courts also play formal and, at times, prominent roles in national security. While the courts have historically deferred to the other formal players on matters of foreign policy, national security, and war, recent issues have led to a more active role by the courts. The framers of the Constitution were both thrifty in their use of descriptive language and intent on preserving checks and balances

in the federal government. The resulting framework grants shared and overlapping functions and authorities to the president and Congress with language that is subject to interpretation. Thus, the courts provide legal interpretation and have done so on a range of issues including domestic surveillance and interrogations (Rishikof 2011, 247).

Rishikof and George identify three key sets of informal players—lobbyists, think tanks, and the media. On behalf of their clients, lobbyists attempt to shape national security policy options. Warburg (2011b) describes the four types of engagements most often conducted by lobbyists who may be employed by special interest groups, commercial interests, and even by other countries. First, lobbyists may help to promote specific commercial ventures perhaps involving military hardware sales or a joint business venture such as an energy pipeline. Second, they might work to discourage adoption of policies not favored by their clients such as sanctions or restrictions on technology sales. Third, lobbyists may work to build sympathy for specific causes, bilateral agreements, or security issues. Lastly, lobbyists may partner with nongovernmental organizations to champion policy objectives as varied as arms control, immigration reform, and human rights (Warburg 2011a, 270-271).

Public policy institutes, or think tanks in common jargon, have proliferated in the past twenty years and play an increasingly important, albeit informal role in the enterprise. Ellen Laipson observes:

Think tanks do not make critical foreign policy decisions, face no public accountability, nor do they perform any inherently governmental functions. But they are increasingly integrated into the way the US government conceptualizes its national security interests and devises responses to the diverse challenges and opportunities of national and international security. (Laipson 2011, 289)

Think tanks work with many audiences, including the government, the academic community, the media, the private sector, and the public. The primary service provided by think tanks is the provision of the resources and intellectual space necessary for policy ideas to be “incubated, tested, promoted, and evaluated” (Laipson 2011, 289). Typically, the output of their service is a written product and outreach through a range of media to present their conclusions and to influence policy making. For example, the Center for a New American Security authored a study on defense strategy soon after the Budget Control Act of 2011 required the government to reduce spending over the next decade. The resulting document, *Hard Choices: Responsible Defense in an Age of Austerity*, offered a roadmap and the rationale for reshaping defense strategy (Barno et al. 2011).

The media is the final informal player in George and Rishikof’s conception of the enterprise. Journalist John Diamond (2011) observes that, “In today’s information age, asserting that the media has an impact on national security decision making is almost akin to saying that geography has an impact on national security decision making (Diamond 2011, 301). Indeed, even a cursory look at news headlines underscores Diamond’s point. Army General Stanley McChrystal’s disparaging remarks about Obama, the public disclosure of ninety-two thousand pages of classified documents, and the extent of US domestic surveillance activities were but a few of the stories uncovered by media outlets (Diamond 2011, 302). As these high profile stories suggest, national security-related items attract considerable media attention. The media thus plays a key role in the enterprise by influencing agenda setting, evaluating national security players and their actions, and publicizing alternative viewpoints (George and Rishikof 2011, 3).

This project's use of the term *enterprise* to describe the amalgam of players, organizations, and processes responsible for US national security differs in more than name from competing labels. The enterprise includes the executive branch actors that are the focus of the establishment and other actors, formal and informal, that are addressed by scholars using the term *system*. The enterprise label shuns the judgments associated with the term *complex* in favor of a term that is presently judgment neutral. Regarding processes, the enterprise and system labels offer few distinctions. However, the system label does come with baggage. Since scholars use the term in different ways, I would have to add yet another interpretation to convey my image of the system. Also, while the term system is commonplace in academic circles, I rarely hear it used the same way by practitioners who, more often than not, associate the term system with information technology or intelligence activities.²² Currently, the enterprise enjoys the luxury of definitional precision, largely because it is a new term and few scholars have embraced it.

Conceptions of National Security

The Realist Paradigm Takes Hold

This project is about threats to national security. As straightforward as that seems, I have found that *threat*, *security*, and *national security* can mean different things to different people, even among those who share the same national security logic,

²² For example, Title 40, US Code defines the national security system as telecommunications or information system operated by the Federal Government, the function, operation, or use of which— (A) involves intelligence activities; (B) involves cryptologic activities related to national security; (C) involves command and control of military forces; (D) involves equipment that is an integral part of a weapon or weapons system; or (E) subject to paragraph (2), is critical to the direct fulfillment of military or intelligence missions.

terminology, and processes. This is not a recent development. International relations scholar Arnold Wolfers observed:

When political formulas such as “national interests” or “national security” gain popularity they need to be scrutinized with particular care. They may not mean the same thing to different people. They may not have any precise meaning at all. Thus, while appearing to offer guidance and a basis for broad consensus they may be permitting everyone to label whatever policy he favors with an attractive and deceptive name. (Wolfers 1952, 481)

Wolfers was writing about the early years of the enterprise when government officials and a growing chorus of realist scholars invoked terms such as the *national interest* and *national security* to justify America’s role in the world and the requirement for a strong and enduring enterprise. Yet, even at this early stage of the enterprise’s growth, Wolfers recognized that the notion of the national interest was subject to interpretation and could be wielded as justification for most anything. Perhaps most ominously, when a policy invokes the national interest, it emphasizes the subordination of other interests to those of the nation (Wolfers 1952, 481). Since an assessment of the national interest precedes policy decisions regarding national security, the key questions are *what* is in the national interest and *who* decides.

While he does not answer the questions directly, Wolfers offers that conditions and timing matter. When American historian Charles Beard published *The Idea of National Interest* in 1934 during the New Deal, the question was whether an economically-dominated foreign policy should promote the welfare interests of the nation as a whole rather than to focus solely on the interests of the business community or special interest groups. However, twenty years later in the wake of a world war and

facing the threat of a future nuclear war, the welfare interpretation of national interest yielded to a security interpretation (Wolfers 1952, 482).

The security interpretation of national interests acquired an advocate in political scientist Hans Morgenthau, one of the founders of political realism, who published his seminal books *Politics Among Nations* in 1948 and *In Defense of the National Interest* in 1951. He argued that “international politics is an unending struggle for power in which the interests of individual nations must necessarily be defined in terms of power” (Morgenthau 1951, 13). To Morgenthau, national interest equated to national security interest, which was based mostly on military power, and to a lesser degree, economic power. Moreover, the threats to interests come from outside of the US, and the remedy is for the US to remain an unrivaled power in the Western Hemisphere, and to maintain a balance of power in Europe and Asia (Morgenthau 1951, 5).

The realist interpretation of the national interest found a receptive audience in the emerging enterprise. In short, because of realism’s emphasis on “things like power, conflict, and war, the resulting realist paradigm seemed well suited for describing and organizing the policy response to the emerging Cold War competition between the communist and non-communist worlds” (Snow 2011, 25). Given the early embrace and continued prominence of the realist paradigm in the enterprise, it is helpful to highlight its primary features. International relations scholar Donald Snow (2011, 26-27) reduces the basic dynamics of the paradigm to a series of six propositions:

1. The international system is composed of sovereign states as the primary units in both a political and legal sense.

2. Sovereign states possess vital interests and are the only units in the system entitled to vital interests.
3. Vital interests become matters of international concern when conditions of scarcity exist and are pressed by competing state actors.
4. When issues involving scarce resources are present in the relations between sovereign states, the power must be used to resolve the difference.
5. The exercise of power is the political means of conflict resolution in international relations.
6. One political instrument of power is military force, which is one option for resolving differences between states.

Flowing from proposition-to-proposition, the realist paradigm provided the nascent enterprise with a ready-made narrative and set of guidelines. Moreover, since defense spending usually declines after armed conflicts, the realist paradigm provided reasons for the sustainment and growth of the enterprise. As a result, the enterprise became the key component in the grand strategic vision shaped by American leaders in the early years of the Cold War, a vision that cast the US as the world's indispensable leader and bulwark of freedom (Jablonsky 2003, 18).

In a sense, *realism's* time had come. Although realism can trace its origins to Thucydides and other observers of relations between independent political units, realism made its breakthrough when it proffered a simple, yet comprehensive explanation for the Second World War and the emerging Cold War, a task that had eluded and discredited idealism (Snow 2011, 24). Concurrently, the emerging enterprise saw the value of the realist paradigm in providing a way of thinking about national security as the US became a global power. Thus, realism assumed a dual role, providing “both a leading theoretical approach to the study of international relations and a practical guide for political leaders

as they conduct foreign policy” (Snow 2011, 24). This dualism gave rise to a relationship between national security scholars and practitioners that continues to this day.

Realism remained the dominant view throughout the Cold War, guiding the enterprise’s thoughts and actions. National security became synonymous with defending national interests and those interests were determined by the enterprise and shaped by the insecurity created by the Soviet Union’s growing power and the threat of communism. This insecurity buttressed the domino metaphor often invoked as a rationale for military operations, most notably the wars in Korea and Vietnam, or for covert operations in Guatemala, Cuba, Nicaragua, Chile, and Angola, among many others.²³ The conspicuous focus on an opponent seen to pose an existential threat provided the enterprise with a simplistic view of a world divided into two camps, one moral and one immoral. This view shaped the culture and organization of the enterprise, permeating its thinking, planning, training, and resourcing, and making the enterprise resistant to change.

An Enterprise Resistant to Change

Although the Soviet Union has faded into history, the definitions of US national security used by security scholars and practitioners remain strongly reminiscent of the Cold War alignment between national security and national interests. For example, one of the most popular textbooks used to introduce students to security studies defines “national security as the ability of national institutions to prevent adversaries from using force to harm Americans or their national interests and the confidence of Americans in

²³ The domino theory or principle postulated that the loss of one country or region to communism would make neighboring countries or regions more likely to fall to communism. President Eisenhower first used the term in 1954 during a news conference regarding communism in Indochina (Eisenhower 1954).

this capability” (Sarkesian et al. 2008, 4). Some scholars have challenged the value, but not the presence of this alignment between national interests and national security. For example, James Miskel, a scholar at the Naval War College, offers that national interests are rarely if ever defined precisely and that statesmen are often inclined toward vague definitions in order to permit flexibility in future policies (Miskel 2002, 96). Yet, “allusions to the national interest are sentimentally attractive because they reaffirm the presumption that the expenditures and exertions that result from strategic decisions are made for worthy purposes” (Miskel 2002, 98). Joseph Nye, Jr., a distinguished scholar and practitioner of national security, adds that the national interest is “a slippery concept, used to describe as well as prescribe foreign policy” (Nye 1999, 22).

Other scholarship examines the inward or outward focus of national interests. Invoking an argument similar to Charles Beard’s distinction between welfare and security interpretations of the national interest, economist Alan Tonelson contends that a focus on external threats and the resulting military victories have brought few benefits to the home front. “Indeed they seem scarcely relevant to the daily lives and pressing concerns of most Americans today or to the economic and social problems that bedevil the nation” (Tonelson 1991, 35). In contrast, national security scholar and practitioner, Condoleezza Rice, argues that “democratic state building is now an urgent component of our national interest,” an interpretation of the national interest certainly tied to the wars in Iraq and Afghanistan and one that differs sharply from Tonelson’s critique (Rice 2008, 3). In fairness, in a section titled “A Uniquely American Realism,” she offers that the foundations of US power—a strong economy and a quality education for all—are also in

the national interest. However, one should not construe her version of realism as a concession to Tonelson. Rather, she sees strength at home as the basis for the instruments of power wielded in pursuit of national security.

Interestingly, in an article written in 2000 and thus prior to the attacks of September 11, 2001, Rice had a slightly different view of national interests. While critiquing the Clinton Administration's affinity for humanitarian and nation-building operations, she concluded that such operations "fueled concern among other great powers that the United States has decided to enforce notions of 'limited sovereignty' worldwide in the name of humanitarianism" (Rice 2000, 5). Moreover, "this overly broad definition of America's national interest is bound to backfire as others arrogate the same authority to themselves" (Rice 2000, 5). Obviously, interests are whatever is made of them by the person with the requisite authority, usually formal players in the enterprise who also decide how to contend with threats to national interests.

The alignment between national interests and national security is not the only reason that realism holds sway over the enterprise, making it resistant to alternative ideas of national security. As described earlier, realism's dualism has produced a collusion of "thinkers" and "doers" that shapes and helps to maintain realism's hold on the enterprise, and this relationship continues to make the enterprise resistant to change. In addition to Morgenthau, the champions of realism include Kenneth Waltz, John Mearsheimer, Robert Jervis, Robert Art, Robert Pape, Robert Gilpin, and Stephen Walt. While each of these scholars advocates a variant of realism, they all share the view that self-interested states are the primary actors in an anarchic international system and thus power is the

most important element in safeguarding and pursuing national interests.²⁴ More importantly, their writings are standard fare in international relations and security studies programs, and the language and core beliefs of realism permeate the strategic logic used to develop national security strategies in the enterprise.

Notable “doers” of political realism include George Kennan, Henry Kissinger, Zbigniew Brzezinski, Brent Scowcroft, and Condoleezza Rice. Kissinger is perhaps the avatar of 20th century realism and, as an accomplished writer himself, has exhibited an affinity for Prussian statesman Otto von Bismarck, arguably the exemplar of 19th century realism and balance of power politics (Kissinger 1994). Indeed, many “doers” subsequently publish their memoirs or write books that become standard fare in security studies programs.²⁵

My use of the term *collusion* in the earlier discussion of “thinkers and doers” is intentional and borrows from critical security studies literature and my own experiences in the enterprise. As discussed previously, the early alignment between realism and the emerging national security enterprise was timely and fitting given the post-Second World War context. National security scholars P.G. Bock and Morton Berkowitz observe that “the atmosphere of urgency generated by the unremitting stress of the Cold War and the emergence of a fabulous new technology of violence” were the two key transformations that gave rise to national security affairs as a new field of inquiry (1966, 122). Historian Ron Robin adds that “there was certainly a conflation of theory and policy in the Cold

²⁴ For the sake of this project, the term *realism* summarizes the dominant narrative. However, the realist school includes neorealism, hegemonic theory, and structural, offensive, and defensive realism.

²⁵ See, for example, *Diplomacy* (Kissinger 1994), *The Grand Chessboard* (Brzezinski 1997), and *A World Transformed* (Bush and Scowcroft 1998).

War military-industrial complex, which were observers of, and active participants in, defining the meaning of the Cold War” (Robin 2001, 15 quoted in Grondin 2004).

However, realism has maintained a lopsided influence on the enterprise despite the end of the Cold War.

International relations theorist Ken Booth offers an explanation based on the collusion between realist “thinkers” and “doers.” During the Cold War, strategic studies specialists built their professional identity around the containment of the Soviet threat, acquiring “identity bearing bonuses” such as professional recognition, funding, and access to national security elites (Booth 1997, 89, quoted in Grondin 2004). These “thinkers” quickly identified new threats that warranted their insights, and they found a receptive audience in the “doers” who were also concerned about the loss of power, prestige, and funding. In short, the team that had worked together for forty years and successfully defeated the Soviet Union was quickly rewriting a security narrative that would be mutually beneficial.

My own experiences in the enterprise suggest that this mutually reinforcing relationship between national security scholars and practitioners persists today, especially as manifested in the political realism and strategic logic that guide practitioners as well as students of national security. The purpose of strategic logic is to help strategists “to see clearly the extraordinarily complex interrelationships among the elements of strategy” and to use that understanding in making choices and setting priorities (Deibel 2007, 24). The strategic logic framework taught at NWC and widely embraced throughout the enterprise, consists of five elements:

- Analyzing the strategic context
- Defining the desired ends
- Identifying and/or developing the means you need to bring to bear
- Designing the ways to use the means to achieve the ends
- Assessing the risks and costs of the strategy

According to Terry Deibel, one of the foremost authorities on strategic logic, the relationships between these elements “exhibit no simple linear cause-and-effect relationship” and thus “if one element of a strategic design changes, all the others must change, too (Deibel 2007, 24).²⁶

On the surface, the use of a framework to aid in developing national security strategy is logical and suggestive of a rational approach to an important undertaking, particularly given the potential costs in blood and treasure attendant to any strategy. Based on my own application of the strategic framework as a student, as a practitioner, and as a faculty member charged with teaching the framework, I am keenly aware of its usefulness. However, the framework also represents the institutionalization of a particular way to look at national security, a way that promotes a national security culture that has changed little since the early days of the Cold War.

A closer examination of some of the elements of strategic logic reveals realism’s influence. One of the first steps in the strategic logic framework is to analyze the strategic environment, including an assessment of national interests. According to the 2010 National Security Strategy, the enduring American interests are

The security of the United States, its citizens, and US allies and partners;

A strong, innovative, and growing US economy in an open international economic system that promotes opportunity and prosperity;

²⁶ Terry Deibel was one of my instructors at NWC in 2004-2005.

Respect for universal values at home and around the world; and

An international order advanced by US leadership that promotes peace, security, and opportunity through stronger cooperation to meet global challenges. (White House 2010, 7)

Clearly, these are broadly defined interests and thus strategists must look at specific countries, regions, or issues to assess if American interests are threatened, or if there is an opportunity to advance American interests. Note that the referent object of security within these interests is the state with the exception of one reference to citizens. In practice, however, this reference is about citizen survival and not citizen welfare. The underlying assumption is that the well-being of the state sets conditions, provides the freedoms, and secures the liberty that are necessary, but not sufficient for citizens to flourish. Other assumptions are also operative. Perhaps most notable is the assumption that US leadership is indispensable for sustaining the present international order, an order that the US was largely responsible for building and from which it continues to benefit.

Given that these interests are mainly about securing the well-being of the state vice the welfare of citizens, strategists seek to identify “the *threats* to [national interests] that come out of the international environment and the *opportunities* for advancing them that may be found in both the international and domestic environments” (Deibel 2007, 27, italics in original). Deibel’s statement shares a common theme with all of the national security discussions highlighted above—the threat to security is exogenous, coming from the behaviors of other states or groups of people. Rarely do national security scholars and practitioners concede that a security threat may be endogenous, resulting from our own behaviors.

Having identified threats and opportunities, strategists next determine the *ends* (objectives) that must be achieved to safeguard or promote the interests. In terms of the elements of strategic logic, the *means* are the instruments of national power used to achieve the objectives.²⁷ After all, “power is the motive force of statecraft, the capacity to act in foreign affairs” and “states in an anarchic world have no choice but to seek power in order to survive” (Deibel 2007, 157). In these statements, Deibel betrays his realist leanings and lays bare the realist foundations of strategic logic. To his credit, he challenges Morgenthau’s assertion “that statesmen think and act in terms of *interest defined as power*,” stating that power should rarely be a goal of policy (Morgenthau 1978, 5 quoted in Deibel 2007, 157). On the other hand, he also reminds aspiring strategists that they cannot “overlook the role of power and assume that simple statements of intent will achieve important ends” (Deibel 2007, 158).

The preceding discussion argued that the enterprise—at least the portion tasked with developing national security—is resistant to change and that this resistance results largely from realist discourses that are embraced by national security practitioners and scholars, and from the strategic logic that underpins national security strategy. Critical theory scholars carry the argument further with the notion of the national security state. Political scientist David Grondin argues that “realist discourses subjectively and artificially lock US national identity into a Cold War-like national security focus. As such, the United States remains constructed as a national security state in realist

²⁷ Instruments of national power are generally divided into diplomatic, informational, military, and economic instruments, the so-called DIME. Occasionally, financial, intelligence, and law enforcement instruments are added to the mix, yielding the DIME-FIL construct of the instruments of power.

discourses” (Grondin 2004, 4). A national security state feeds on insecurity and thus the enterprise must remain vigilant against threats and prepared for war. Since the enterprise is responsible for threat identification, it has a vested interest in constructing threats worthy of the state’s attention and resources (Grondin 2004, 15).

Historian Anna Nelson elaborates on the concept of the national security state, referring to it as the “handmaiden of the ‘war’ on terrorism, using the structure created more than fifty years ago to fight terrorism” (2007, 265). In her conception, the national security state extends well beyond the boundaries of the enterprise into every part of society. The state thrives on secrecy, requiring its citizens to “to put their blind trust into government actions, including those about which they know nothing” (Nelson 2007, 265). Moreover, national security justifications underpin losses of liberty and exceptions to laws, rules and regulations (Nelson 2007, 265).

The militarization of society is a consequence of the national security state’s existence. People find work and some prosper by supporting efforts to secure the state. Defense industries disperse their operations into as many congressional districts as possible, reinforcing the importance of national security at the local level. The language of war and security permeates our vocabulary. The interplay of national security, security, and threats provides grist for films and television that magnify the importance of the enterprise in securing the state and its citizens (Nelson 2007, 265). We hail our service members as heroes for defending our freedom, but most people do not understand or question the causal relationship. After all, national security is the purview of the state and only a small percentage of citizens are members of the enterprise with even fewer

within its formal audiences. Nelson laments that “the national security state does not encourage discussion of its premises. In the name of security, we are asked to bury our questions” (Nelson 2007, 266). Of course, most citizens do not have questions to bury since they accept the national security state as a normal part of the social contract. As presently constructed, the national security state is all that most people have known and its recent growth and empowerment have been coincident with national emergencies.

Earlier I stated that the assessment of national interests, a step that precedes decisions regarding national security, requires us to consider what is in the national interest and who decides. Both Grondin and Nelson believe that the questions are inextricably linked because the referent object of national security is primarily the state and the appraisal of threats to state security is the purview of the enterprise that is imbued with realist discourses. But what constitutes a threat to the state? The realist paradigm would have us believe that the enterprise discerns threats through a rational process. However, ideational factors matter, and the process is anything but objective. As political scientist David Campbell points out, “danger is not an objective condition...it is not a thing which exists independently of those to whom it may become a threat” (Campbell 1998, 1-2 quoted in Grondin 2004, 12).

Critical theorists Keith Krause and Michael Williams also emphasize the subjective nature of *threat* identification, arguing that threats are what prevailing conceptions say they are, and security follows suit (Krause and Williams 1997, 35). Their comment is especially noteworthy because they are arguing that the field of security studies, a field dominated by the realist paradigm and a key influencer on the

enterprise, cannot grow intellectually if it adheres to dated and rigid conceptions. They add, “it amounts to saying that threats are what schools of security studies say they are, and that anything else (no matter how great a concern for human survival it may be) is merely a problem” (Krause and Williams 1997, 35-36). If national security, security, threats, and their referent objects are socially constructed, then we must consider the relationship between them and the audiences that imbue them with meaning. Grondin addresses this relationship, observing that “the realist analysts and state leaders who invoke national security and act in its name are the same individuals who hold the power to securitize threats” (Grondin 2004, 12).

Grondin’s observations are consistent with my experiences in the enterprise. While the enterprise touts the important of critical thinking regarding national security, the narrative of the dominant realist paradigm constrains such thinking. As suggested by the quotation at the beginning of this chapter, one of my colleagues found the inclusion of global warming in a national security curriculum to be peculiar. When my Marine colleague spoke, I knew that he was deeply influenced by the first battle of Fallujah, Iraq, in April 2004 and the ongoing second battle of Fallujah, in November and December 2004.²⁸ In his mind, global warming was not a threat to US national interests or to national security, at least not on par with the war in Iraq. However, what other influences contributed to his comment?

As suggested in this section, he is part of the enterprise, which is dominated by the realist paradigm. He has been exposed for twenty years to national security

²⁸ The Second Battle of Fallujah, termed Operation Phantom Fury, earned the distinction as the bloodiest battle fought by US forces since Vietnam.

practitioners and scholars grounded in political realism. He attends the premier national security strategy program in the country and learns a strategic logic framework that puts national interests above all else. He is surrounded by many likeminded people. He is a Marine and Marines have a legacy of fighting America's enemies, not climate change or other faceless threats. The influences on his thinking also predate his enlistment. The national security state in which he grew up shaped his thinking about the role of the enterprise and the nature of threats and security. In short, my intelligent, accomplished, combat experienced colleague was unable or unwilling to think differently about national security, security, and threats.

The Interplay of Realism, Liberalism, and Idealism

Realism's hold on the enterprise is significant and largely made possible by inertia—the inertia of history, mutually reinforcing relationships, long-standing structures and processes, and, most importantly, dominant discourses grounded in the logic and language of realism. The authors of these discourses are products and co-producers of the national security enterprise, a situation perpetuated, in part, by the relatively closed nature of the enterprise and the common language and logic that permeates national security thinking and activities.²⁹ Nonetheless, as evidenced by my own experiences, there is tension within the enterprise, suggesting that competing discourses are at work and thus meriting a review of the related literature and some of the fault lines between competing views. This section will examine realism's traditional

²⁹ A common criticism of the enterprise is that it is largely a closed system, a characteristic I will examine in more detail in the next section (See Bacevich 2007, 2011, 2013, Friedman 2008).

competitors, liberalism and idealism, before turning to alternative conceptions of threat and security that began to emerge toward the end of the Cold War.

Although realism figures prominently in the enterprise, liberalism exerts ample influence on its discourses while idealism influences the enterprise in less obvious and more diffuse ways. I will briefly differentiate the concepts by their core beliefs and main instruments. The central tenet of realism is that self-interested, sovereign states compete in a geopolitical struggle for power and security in the service of their national interests, and resorting to force is one way that states can achieve their interests. Realists, as the label implies, seek to describe the world as it is, and “argue that the sensible approach for policy makers is to determine how to adapt to and make the best of the world as it is” (Snow 2011, 13). To realists, power is the ultimate arbiter and thus they focus on changes in the distribution of power among states (Snyder 2004, 53). Accordingly, realists tend to emphasize military and diplomatic instruments, refusing to consider that international organizations will ever displace the state as the guarantor of state security.

Anchored in the ideas of Adam Smith and Immanuel Kant, liberalism sees the strengthening of peace through the spread of democracy, global economic ties, and international organizations. While realists focus on the distribution of power, liberals emphasize the increasing number of democracies and the many challenges that they face in making the transition (Snyder 2004, 53). Liberalism acknowledges that the transition from the current anarchic system of states toward a democratic peace will be slow and fraught with setbacks, thus the community of democratic states may have to intervene to assist the transition. Liberalism does not rule out the use of force, but is more reluctant

than realism to rely on it to effect change. However, the nexus of liberalism's goal of spreading democracy and realism's view of force as the ultimate arbiter became the niche occupied by neo-conservatism during George Bush's presidency.³⁰

Noteworthy "thinkers" and "doers" of liberalism include Michael Doyle, Joseph Nye, Robert Keohane, G. John Ikenberry, and Presidents Wilson and Clinton. Many others could be added to the list, however, because "liberalism has such a powerful presence that the entire US political spectrum, from neoconservatives to human rights advocates, assumes it as largely self-evident" (Snyder 2004, 56). Whenever a global problem emerges for which the US chooses not to play a leading role, policy makers quickly call upon the international community and its institutions to take action. However, liberalism's role in justifying neoconservative policies, including the wars of choice under President George Bush, engendered a renewed emphasis on realism in recent years, leading to more modest policy objectives based on actual strength and power rather than the hopes of a democratic peace.

Idealism has largely been overshadowed by realism and liberalism and yet it has deep roots in America's belief in morality, ethical behavior, and legal standards, a faith that played a prominent role in US policy prior to the Second World War. Idealism contends that persuasive ideas, collective values, culture, and social identities shape international politics, placing a premium on nurturing ideas and values that promote security (Snyder 2004, 54). Basically, idealists accept the realist's description of the

³⁰ *The Pentagon's New Map* (Barnett 2004) provides a neoconservative narrative and set of guidelines. Citing disconnectedness as the security task of our age, he claims that the US has a moral obligation to bring nations into the fold of globalization. The book's popularity in the enterprise has waned since 2008.

global condition, but unlike realists, idealists join liberals in their belief that an imperfect world can and should be reformed. For liberals, reform may still require the use of force and international institutions are useful only to the degree that their agendas align with US interests. In contrast, idealists argue that the use of force to pursue national interests or to effect change is the greatest impediment to reform (Snow 2011, 13).

After idealism's failure to account for the Second World War, national security scholars and practitioners generally treated idealism as naïve. However, idealism has returned to security discussions in the guise of constructivism as promoted by scholars such as Alexander Wendt, John Ruggie, Kathryn Sikkink, Michael Barnett, and Martha Finnemore. With its emphasis on "the role of ideologies, identities, persuasion, and transnational networks, [idealism/constructivism] is highly relevant to understanding the post-9/11 world" (Snyder 2004, 60). Faced with non-state threats that defied explanation in terms of the realist narrative and for which the realist paradigm did not provide clear guidelines for action, the enterprise borrowed ideas from idealism. For example, Al-Qaida threatens US interests, but the threat that the group represents requires an understanding of the appeal of Al-Qaida's ideology, message, and global brand. Thus, while realism's description of the structure and workings of the system lends itself to strategy development, idealism may better convey the complexities of the post-9/11 world.

On the other hand, idealism may provide useful insights on the strategic environment, but it has yet to offer a convincing narrative or alternative framework that can compete with realism in the enterprise. Perhaps idealism simply lacks prominent

“doers” in the enterprise. Indeed, I have been unable to uncover any of them by name and certainly none that are the enterprise’s equivalent of a Mahatma Gandhi. However, I know that many members of the enterprise are attracted to public service because they believe that they are serving a greater purpose. Often I hear colleagues invoking American ideals and values when they are discussing the need to help other countries in order to contribute to US and global security. These ideals and values are engrained in American culture and underpinned by notions of American exceptionalism, and “Americans have always possessed a sense of moral and other superiority that is accompanied by an evangelical desire to share that vision with the rest of the world” (Snow 2011, 14).

In practice, all three approaches are evidenced in the enterprise as “policymakers and public commentators invoke elements of all these theories when articulating solutions to global security dilemmas” (Snyder 2004, 54). Of course, context matters and thus the ratios of their contributions fluctuate according to the strategic environment and the inclination of a given administration to favor one approach over another. Regardless of the mix of approaches, what remains axiomatic about their influence on national security is how they continue to overwhelmingly situate the state as the referent object of security and that security threats to the state are exogenous. Thus, the most that can be said about the interplay of realism, liberalism and idealism is that each acts as a kind of “check on the irrational exuberance of the others” (Snyder 2002, 61). Snyder continues:

Realists should have to explain whether policies focused on calculations of power have sufficient legitimacy to last. Liberals should consider whether nascent democratic institutions can fend off powerful interests that oppose them, or how international institutions can bind a hegemonic power inclined to go its own way.

Idealists should be asked about the strategic, institutional, or material conditions in which a set of ideas is likely to take hold. (Snyder 2002, 62)

Snyder's conclusions are consistent with my own observations. There is tension among practitioners who raise the types of questions highlighted by Snyder. However, this tension is still bound within the confines of a narrative dominated by the realist paradigm where national interests could be equally characterized as state, or perhaps even enterprise interests. So, if realist, liberal, and idealist discourses merely provide nuanced interpretations of national security, security, and threats, what are the major discourses that provide alternatives to traditional conceptions of national security?

Efforts to Redefine National Security

The more radical challenges to dominant national security discourses often arise from outside of the enterprise and gain resonance within the enterprise as practitioners seek explanations for changing conditions and solutions to new problems. Many of these alternative conceptions of national security contend that the state should not be the only referent object of national security. Some notions go so far as to argue for a human security focus. Alternative ideas also broaden the definition of threats, breaking with the realist paradigm to include endogenous, non-actor based, and non-imminent threats.

David Baldwin refers to efforts to redefine security as “something of a cottage industry” (Baldwin 1997, 5). He was describing the emergence of new ideas about security that began as a trickle in the late 1960s and proliferated with the end of the Cold War. Much of this literature offered alternative views on threats, security, and national security. Absent a singular overarching enemy, the enterprise lacked focus and struggled

for years to redefine itself in the post-Cold War era. While traditional actor-based threats remained on the security agenda, the enterprise sought a new security paradigm and enemies worthy of its attention. The realist paradigm reflexively cast about for imminent and purposive threats, but found none of the caliber of the Soviet Union. Think tanks, special interest groups, and scholars offered lists of candidates, often branded with terms such as rogue or failing states. Some of these lists looked beyond state-centric threats and the military aspects of security to human, economic, cyber, and environmental concerns.³¹

Some scholars take the view that the enterprise was simply trying to see what had always been there, but had been obscured by the focus on the Soviet Union. Regarding non-military threats, physicist Joseph Romm remarks, “to say that the only valid national security threats are military ones is to give national security a definition that is has not had for at least two decades and perhaps not for two hundred years” (Romm 1993, 81). National security experts Carl Connetta and Charles Knight take a more cynical view, suggesting that the enterprise needed new threats in order to justify its size and costs:

With real enemies not menacing enough defense planners have learned to let their imaginations run riot...the focus of defense planners has shifted from the ‘clear and present danger’ of Soviet power to the intractable problem of ‘uncertainty.’ (Connetta and Knight 1998, 32)

Regardless of the motivations at work, alternative conceptions of threats and security were multiplying and the enterprise was paying attention. Given this project’s focus on climate change, the rest of this section will examine alternative conceptions of national security, particularly those that consider the implications of the environment.

³¹ The Copenhagen School’s Securitization Theory was one of these efforts to redefine security.

The idea that the national security definition should include non-military threats can be traced to the 1960s and 1970s when peace and environmental movements inspired new thinking about security. Biologist Paul Ehrlich's *The Population Bomb* provided three future scenarios at the intersection of overpopulation, resource scarcity, and conflict, all of which included war and starvation (Ehrlich 1968). Anne Ehrlich and John Holdren joined him to advance a neo-Malthusian argument, concluding that "finite resources in a world of expanding populations and increasing per-capita demands create a situation ripe for international violence" (Ehrlich et al. 1970, 909).³² *The Limits to Growth* (Meadows et al. 1972) followed, analyzing the Malthusian dilemma. The authors used computer modeling of the interaction of five variables (population, pollution, food production, industrialization, and resource depletion) to predict how the world might achieve a sustainable future by altering trends in the variables. Two of the three outcomes resulted in the "overshoot and collapse" of the international system by the end of the twenty-first century.³³

Lester Brown, founder of the WorldWatch Institute, was one of the first people to suggest that a redefinition of security was necessary and that the enterprise was not prepared to contend with the insecurity caused by environmental threats. He argued that military forces were ill-suited to contend with this type of insecurity. Accordingly, a new security paradigm was needed to meet the mix of traditional and non-traditional threats, a

³² Thomas Malthus argued that food production could not keep pace with population growth (1798). Neo-Malthusians note that the population has surpassed the earth's carrying capacity.

³³ See also *Beyond the Limits* (1993) and the *Limits to Growth: The 30-Year Year Update* (2004).

paradigm that would require the reallocation of funds and new ways of thinking about what constitutes national security (Brown 1977, 38).

Political scientist Richard Ullman echoes Brown's call for a redefinition of national security, offering that threats to national security are those that either degrade the quality of life for a state's inhabitants or severely constrain a state's policy options. While Ullman's definition may lack some conceptual precision, particularly his vague reference to "quality of life," it illustrates a few themes that recur in the literature calling for a redefinition of national security. First, it downplays the emphasis on purposive actors, including threats and the referents of security. Second, the referent of security is no longer just the state, but may include a range of other sub-state actors to the individual level. Lastly, Ullman seems to leave room for traditional conceptions of national security since actor-based threats such as states could clearly fit inside his definition.

Brown and Ullman's calls for a redefinition of security garnered little attention while the Cold War dominated the enterprise's thinking. However, the fall of the Berlin Wall and the eventual demise of the Soviet Union engendered rapid growth in environmental security and related literature, and the enterprise began to take notice. Jessica Mathews is one of many scholars who stress the poor alignment between the institutions and assumptions that had governed national security since the end of the Second World War and the realities of the post-Cold War world (Mathews 1989, 162).

Environmentalist Norman Myers adopts a view evocative of Brown's concerns over environmentally-induced insecurity, emphasizing the link between the physical effects of environmental degradation and their adverse social effects. However, Myers

provides a rationale for including the environmental dimension in security planning, a rationale that resonated with practitioners who were looking at events in the developing world, particularly in failing states. In his *Foreign Policy* article, he answers the realist paradigm's central question—what is in this for the US? Myers quotes Secretary of State Schultz who said in 1984, “in our world today, there can be no enduring economic prosperity for the United States without sustained economic growth in the Third World” (Myers 1989, 24-25). Myers then takes the reader on a tour through countries in which the US has economic and security interests, highlighting how their environmental issues threaten their security and, by extension, US interests (Myers 1989).

The posited link between the environment and national security garnered much attention. In “On the Threshold,” Thomas Homer-Dixon argues that environmental degradation can cause conflict, especially in poor countries lacking adaptive capacity. Changes in the environment can reduce the availability or quality of resources. State and sub-state actors may worsen the situation by restricting resource availability to specific groups or by failing to address the problem. As markets fail and social friction increases, conflict becomes more likely (Homer-Dixon 1991).³⁴ Homer-Dixon also challenges the realist paradigm's view of states as territorially distinct and mutually exclusive, offering that environmental problems do not respect boundaries and thus require multi-state cooperation. The realist paradigm's inclination to leave states to their own devices creates incentives for one state to free-ride on another (Homer-Dixon 1991, 84).

³⁴ For a more detailed treatment based on case studies, see Homer-Dixon and Blitt 1998.

When paired with Myers' focus on states important to the US, Homer-Dixon's model seemed to offer a causal model, a narrative, and guidelines suitable for empirical testing as well as for use by the enterprise. As part of the Project on Environment, Population, and Security, Homer-Dixon and Jessica Blitt published some of their findings, concluding that scarcities definitely interact with other factors to produce adverse social effects. However, they could not show that a given environmental factor was a necessary or sufficient cause of conflict because the multitude of intervening variables proved too complex to prove causality (Homer-Dixon and Blitt 1998).

International relations scholar Barry Buzan eschews the singular focus on the environmental dimension in favor of a broader security framework. In *People, States and Fear*, Buzan provides a comprehensive agenda for international studies in the post-Cold War era. First published in 1981, Buzan revised the book in 1991, admitting that in the interim period, "the concept of security has become much more prominent, and in some ways better developed, than the portrait I then painted of it" (Buzan 1991a, 12). Yet, Buzan provides a broader framework and a holistic view of the concept of security that few scholars have undertaken as effectively.

Buzan blends structural realist and constructivist approaches. While he treats the state as the referent object of security, he problematizes the meaning of the state to tease out relationships between the individual and the state, and the state and international systems. Moreover, he is critical of the realist view that security should be seen primarily in terms of national power, a view that he deems obsolete (Buzan 1991a, 6-7). The result is a multi-level analysis of security. Buzan offers that security is simply the freedom

from threat. States seek to maintain their independence in the international system, but the focus on state survival does not ensure harmony between the state and society. Members of society face a perplexing array of challenges, many of which may warrant labelling as security threats. However, while states should pay attention to the conditions faced by its citizens, Buzan concedes that “security is primarily about the fate of human collectivities, and only secondarily about the personal security of human beings (Buzan 1991a, 19).³⁵

Five factors, or sectors, affect the security of human collectivities: military, political, economic, societal, and environmental. The military sector would be most recognizable by the realist paradigm since it focuses on the military capabilities of states and state intentions. The political sector concerns the overall stability and legitimacy of states and their governments. The economic sector considers access to the resources needed to sustain state power and an acceptable level of welfare. The societal sector regards the preservation of traditional patterns of language, culture, religion, national identity, and custom. The environmental sector concerns the protection of the biosphere that supports all human enterprises (Buzan 1991a, 19-20).

Buzan cautions that while each of these sectors provides a focal point for thinking about security and threats, they are interdependent and thus cannot be considered in isolation (Buzan 1991a, 20). Practitioners should assess the threats to each sector, uncover their relationships, prioritize the threats, and then determine what constitutes a legitimate national security agenda (Buzan 1991a, 116). This is a dynamic process,

³⁵ Buzan and Ole Waever developed the Copenhagen School’s securitization theory that seeks to theorize when the *security* label is applied. Securitization theory will be discussed at the end of this chapter.

requiring continuous reassessment since changing conditions in any sector might affect conditions in other sectors. More importantly, this notion of security means that threats to the military sector remain of vital concern to states in an anarchic international system. However, this recognition should not obscure the fact that the relevance of military threats in most states has declined relative to other sectors and thus threats to other sectors should move higher on the security agenda (Buzan 1991a, 133).

The concept of human security is another effort to broaden the security agenda. Central to human security is the idea of promoting human well-being and protecting individuals “even in situations where the existence of the state is not threatened by other states” (Dahl-Eriksen 2007, 17). Ullman did not use the term, but he alluded to it when he linked national security to the quality of life of a state’s residents (Ullman 1983, 14). Conceiving of human security as freedom from fear, freedom from want, and freedom to live in dignity, the United Nations (UN) officially embraced the term in 1994:

The concept of security has for too long been interpreted narrowly: as security of territory from external aggression, or as protection of national interests in foreign policy or as global security from the threat of a nuclear holocaust. It has been related more to nation-states than to people. (UN Development Program 1994, 22)

Accordingly, the UN expanded the scope of global security threats to include threats to economic, food, health, environmental, personal, community, and political security. (UN Development Program 1994, 24-24).

Gayle Smith makes the case that the US cannot achieve a sustainable level of security unless it pursues both national and human security.³⁶ She refers to the UN

³⁶ Gayle Smith is presently Special Assistant to Obama and Senior Director, National Security Council.

definition of human security as the protection of “the vital core of all human lives in ways that enhance freedoms and fulfillment” (Smith 2007, 65). She also mentions the Human Security Network, a group of states supportive of the idea of human security, which describes its vision as a “humane world where people can live in security and dignity, free from poverty and despair” (Quoted in Smith 2007, 65). She then offers:

There is a tendency among national security experts to discount the human security paradigm as idealistic and soft, while advocates of human security criticize those favoring national security for placing too much emphasis on narrow nationalism and military power. (Smith 2007, 65)

Although I share her thoughts on the rigidity of the realist paradigm, human security’s lukewarm reception by the enterprise is due, at least in part, to the fuzziness of the term *human security* in contrast to the simplicity of realist propositions.

As described earlier, the realist paradigm is state-centered. Realist guidelines are straightforward, simple, ordered, and security policy focused. Yet, the price of simplicity may be a distorted view of reality. Indeed, I have often had to remind students that statements such as “Iran chose the nuclear path” or “China wants to undermine US influence in Southeast Asia” are misleading, seemingly discounting the multiplicity of audiences that comprise states and influence a state’s policy choices. As a human centered paradigm, human security requires multiple levels of analysis, spanning, but not limited to the state level. In contrast to the realist paradigm, human security is complex, chaotic, and process focused, and, significantly, the provision of human security requires states to address the root causes of issues rather than just the symptoms.

Economist Des Gasper describes human security as both a concept and a discourse. As a concept, human security is concerned with freedom, rights, basic human

needs, and a concern for stability as well as levels of human development dimensions. Gasper explores the meaning of the term by showing how basic human needs and human security discourses often overlap and how the discourses work to mobilize attention on behalf of an expanded security agenda (Gasper 2005, 221).

International relations scholar Peter Uvin concedes that defining the term clearly is impossible, stating that his definitional approach reflects its “undefinable nature” (Uvin 2004, 352). He offers that what needs defining is the process of human security. Uvin contends that the process involves mental and policy changes and thus insights on these processes are likely to be seen in the interactions between the fields of humanitarianism, development, human rights, and conflict resolution (Uvin 2004, 353).

The preceding definitional issues may explain why the concept of human security has made few inroads in the enterprise. I took interest in the concept when it first debuted, but I have yet to observe anything more than an occasional reference by people in the enterprise.³⁷ I share Roland Paris’ conclusion that human security does not presently offer a readily available and useful framework for scholars or policy makers (Paris 2001, 96). However, human security certainly provides the epistemological ground upon which a framework could be built.

Efforts to include environmental or human agenda items in the definition of national security have elicited resistance from scholars, most notably during the peak publishing years of the environmental security literature from 1989 to 1994.³⁸ Even

³⁷ One exception is the 3P Security Program that attracted some interest by the enterprise, particularly with regards to Afghanistan.

³⁸ See, for example, Brock 1992; Conca 1994; Dalby 1992; Deudney 1990, 1991; Finger 1991; and Lipshutz and Holdren 1990.

among those scholars who advocate for environmental issues, some argue against a redefinition merely to add the environment, while others, including Peter Gleick (1991), argue against redefining national security simply to account for environmental threats. Gleick observes that traditional military conflicts are increasingly intertwined with underdevelopment, poverty, and environmental problems that threaten human health, economic well-being, and international security. Referring to the environmental damage wrought by the 1990-1991 Gulf War, he concedes that there is a push to include the environmental in the definition of national security. However, he takes a different tact, arguing that security practitioners and scholars should seek to understand how resource and environmental problems contribute to conflict and, if they do, are international institutions adequate to prevent or contend with conflict (Gleick 1991, 21).

Political scientist Daniel Deudney also opposes a redefinition of national security, but not on the merits of whether environmental issues pose a danger. Rather, he favors the realist paradigm, stating that national security is about protecting the state from organized violence. The inclusion of other issues in the definition would lead to a loss of definitional as well as analytical usefulness of the term *national security* (Deudney 1990; 1991). Thus, he dismisses the importance of environmental issues because the only problems that can be considered security issues are those that fit the realist paradigm. Deudney concedes that he was motivated to write the essay by the tendency of “many liberals, progressives and environmentalists” to link environmental issues to national

security (Deudney 1990, 461-462).³⁹ Deudney's motivation for writing the article is insightful and perhaps suggestive of realism's control of the dominant security discourse and illustrative of the practitioner-scholar link in the enterprise.

Political scientist John Mearsheimer does not address environmental or human security, but his caution against widening the national security agenda is typical of those who favor a narrow, military-based definition of national security. In his article "We Will Soon Miss the Cold War," Mearsheimer captured a sentiment shared by many of my colleagues in the enterprise, stating we may "wake up one day lamenting the loss of the order that the Cold War gave to the anarchy of international relations" (Mearsheimer 1990, 35). Continuing this theme in a book chapter titled "Disorder Restored," he added,

The passing of the Cold War does not spell the end of the state system, nor does it mean that states will have to worry less about security than they did during the Cold War. International politics will remain a fundamentally competitive activity involving other states that have the capacity to inflict massive harm on each other. States invariably understand that they are involved in a competition that can have deadly consequences if they adopt flawed security policies. (Mearsheimer 1992, 235-236)

International affairs scholar Stephen Walt (1991) shares Mearsheimer's concerns, but grants the importance of other issues. In "The Renaissance of Security Studies," Walt defends the security studies sub-field of international relations, the focus of which has long been on states and organized violence. He admits that non-military problems, such as poverty and environmental hazards, among others, are reminders that military power alone does not guarantee well-being. However,

³⁹ The Princeton Project on National Security was not swayed by Deudney's argument and thus included the environmental dimension of national security in its final report (see Fidler 2005).

This prescription runs the risk of expanding "security studies" excessively; by this logic, issues such as pollution, disease, child abuse, or economic recessions could all be viewed as threats to "security." Defining the field in this way would destroy its intellectual coherence and make it more difficult to devise solutions to any of these important problems. (Walt 1991, 213)

In his view, the expansion of the security agenda runs the risk of downplaying traditional threats that continue to persist even in the post-Cold War era.⁴⁰

Deudney, Mearsheimer, and Walt's logic against redefining national security and expanding the security agenda echoes the comments that I hear in the enterprise, mainly among those who apply the strategic logic framework to assess threats to US interests. However, what is noteworthy about all of their comments is not that they are wrong, but that their notion of security is limited by habits of practice and mind. In contrast, David Baldwin, whose comment on the "cottage industry" of security began this section, provides a nuanced critique of efforts to redefine security and widen the security agenda.

Referring to Wolfers (1952), Baldwin notes that "national security can be a dangerously ambiguous concept if used without specification" (Baldwin 1997, 12). Baldwin begins by reformulating Wolfers' characterization of security from "the absence of threats to acquired values" to "a low probability of damage to acquired values" (Baldwin 1997, 13). Baldwin illustrates his definition by showing how it allows for military and non-military threats:

In response to threats of military attack, states develop deterrence policies. Such policies are intended to provide security by lowering the probability that the attack will occur. In response to the 'threat' of earthquakes, states adopt building codes. This does not affect the probability of earthquakes, but it does lower the probability of damage to acquired values. (Baldwin 1997, 13)

⁴⁰ Walt maintains this position, but offers that there is room in the field for other security threats. For example, see *Theory Talks*, <http://www.theory-talks.org/2009/08/theory-talk-33.html>.

Baldwin's emphasis on value preservation over the presence or absence of threats allows for security to be defined in terms of two specifications: security for whom and for which values (Baldwin 1997, 13). Thus, the referent of security can be a person, state, or any other social actor, and the values may well include protection of the environment or basic human needs. Interestingly, Baldwin cautions against linking values to vital interests because it may prejudice one policy over another (Baldwin 1997, 14).

Baldwin's construct is akin to Buzan's notion of security sectors, defining the concept of security, but not providing much guidance for security policies. Baldwin remedies this gap by adding five more specifications that would certainly resonate, in part, with national security practitioners: how much security, from what threats, by what means, at what cost, and in what time period (Baldwin 1997, 10-17). The difference, however, is that national security practitioners and the realist paradigm that guides them treat the state as the sole object of security. Since the enterprise exists to provide national security, it regards security as the most important value and deliberately privileges security policies by tying them to national interests. In contrast, advocates of environmental security, human security, and other items on a broadened agenda consider a more diverse set of specifications as they think about the meaning of security. Moreover, they also recognize that security is but one of many important values.

Climate Change and National Security

This section defines climate change and reviews the literature that considers the threat of climate change to US national security. Definitions of climate change,

particularly with regards to causation, vary widely in the enterprise, permitting a given speaker latitude in seizing upon a definition that conforms to her position on the issue. Clearly, a skeptic is more likely to invoke a definition that emphasizes natural cycles and processes that produce changes in climate and weather. Yet, even among those who accept climate change as a threat, not everyone subscribes to anthropogenic causation. Indeed, the enterprise has long prepared for and often reacted to natural disasters at home and abroad, and efforts to manage the consequences of natural disasters have not relied on a commonly shared definition. As far as the enterprise is concerned, large scale-disasters have the potential to precipitate undesirable social effects that may then threaten US interests. Even if US interests are not threatened, the enterprise has the capacity to react to large scale-disasters since many military capabilities are inherently multipurpose. Thus, an enterprise that can project thousands of soldiers and millions of tons of equipment anywhere in the world can use the same forces for humanitarian purposes.⁴¹

As long as the enterprise's focus stayed on traditional consequence management using multipurpose assets, definitional precision was unimportant. However, Obama's words and actions regarding climate change, especially his unequivocal acceptance of its anthropogenic causes, have implications for the enterprise. The enterprise must consider its own role as a contributor to climate change via greenhouse gas emissions, the likely increase in humanitarian operations related to natural disasters, and the potential changes

⁴¹ Multipurpose capabilities include transportation, medical, logistics, construction, maintenance, and intelligence assets. For example, after Typhoon Haiyan hit the Philippines on November 8, 2013, USMC helicopters delivered supplies to remote locations.

in force structure and budgets. Of course, different enterprise members and audiences will have different perspectives on the definition and its implications.

The literature reviewed for this project used or referred to the IPCC definition of climate change:

A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use. (IPCC 2012, 557)

Of note, the IPCC definition includes the contributions of both natural and anthropogenic causes. In contrast, the United Nations Framework Convention on Climate Change (UNFCCC) definition emphasizes the human factor, defining climate change as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods” (Quoted in IPCC 2012, 557).

During my review of enterprise-related websites, I found that the IPCC definition was the most commonly used, especially by the executive branch. However, since this project seeks to map climate change meanings across enterprise members and audiences, I will not adopt a single definition, accepting that many definitions may be operative.

The recent surge in the literature regarding the national security implications of climate change largely dispenses with the definitional issues that accompanied the debate over environmental and human security in the 1990s. Most of the literature reviewed in this section looks at how the physical effects of climate change produce social effects with security implications. Most of this literature also considers why the US should be

concerned with the security consequences of climate change. A few scholars look at the implications for the enterprise. None of the literature challenges the reality of climate change although most scholars review at least some of the underlying science.

Mark Lacy (2005) is one of the few scholars to revisit the definitional issues of the 1990s as they relate to climate change. Using John Mearsheimer's work *The Tragedy of Great Power Politics* (2003) as a foil, Lacy argues that realists will not elevate a non-traditional threat such as climate change to the first order status of traditional military threats. Realists see insecurity as a feature of the anarchic global environment, an environment that produces many tragedies. Realists are inherently pessimistic about human behavior, believing that "the 'tame zones' of human existence can descend into anarchy, disorder and violence with alarming speed; insecurity is always around the corner" (Lacy 2005, 2). Thus,

It is the duty of the Realist to do what others may find offensive or may simply wish to ignore: the Realist must survey the geopolitical scene to work out what dangers the state should secure itself from, whom or what is the clear and present danger to the tame zone. (Lacy 2005, 3)

In this realist conception of strategy, climate change and other non-traditional threats are sideshows that take attention away from the real threats to national security. However, Lacy adds that Mearsheimer and others of the realist paradigm are part of a "broader network of power and influence, a network that has a good reason to construct climate change as a Second-Order problem" (Lacy 2005, 26). If a national security expert, practitioner, or scholar takes climate change seriously, they run the risk of being excluded from the network. Thus, realists often attack climate change as an illegitimate threat, claiming that it is too uncertain or is not a problem for the US (Lacy 2005, 131).

Public affairs scholar Joshua Busby (2008) says that a “return to the definitional disputes of the 1990s could be a cul-de-sac,” so he offers that even a narrow definition of national security still leaves adequate room to consider whether climate change is a threat to US national security (Busby 2008, 470). Thus, he steers clear of environmentally-inspired conflict and argues that climate change constitutes a national security issue because it directly threatens the country as well as broader US interests. Climate change will disrupt infrastructure, alter borders, generate refugees, lead to deaths and loss of property, threaten the government’s monopoly on the use of force, and potentially undermine the legitimacy of government. Although the US may not directly experience these effects or may be able to manage them, the effects of climate change in another country or region may still threaten US interests and security (Busby 2008, 477-479). Effects that would most endanger US interests include loss of US overseas assets, violent conflict, failed states, and humanitarian disasters (Busby 2008, 504).

Legal scholars Jody Freeman and Andrew Guzman (2009) challenge the notion that climate change is not a problem for advanced societies and also dispel the myth that climate change will actually benefit some states. They focus on the economic impacts, showing that the US underestimates the costs of climate change and the damage that it will do to the economy. According to the authors, these economic revelations should encourage the US, in its own self-interest, to combat climate change (Freeman and Guzman 2009, 1531). As part of their study of the omitted costs of climate change, they also look at economic impacts as a source of instability, particularly in states where US interests are at stake because of US dependence on raw materials, products, and markets.

A common theme in the literature is how climate change interacts with other factors, acting as a threat multiplier. John Podesta and Peter Ogden (2008) focus on the social effects produced by climate change, looking at how they intertwine with US interests. They contend that climate change will play a growing role in instability, violence, and failed states and these conditions will threaten US interests. Even if the threats to US interests are marginal, the US has the capacity and a history of assisting other nations and thus, while “some of the emergencies created or worsened by climate change may ultimately be managed by the UN, nations will look to the United States as a first responder in the immediate aftermath of a major natural disaster or humanitarian emergency” (Podesta and Ogden 2008, 132).

James Woolsey, former CIA Director, worries that the magnitude of some social effects from climate change will exceed US capacity to help others. Using rising sea levels for illustration, he declares,

In a world with millions of people migrating out of coastal areas and ports across the globe, it will be extremely difficult, perhaps impossible, for the United States to replicate the kind of professional and generous assistance provided to Indonesia following the 2004 tsunami. (Woolsey 2008, 175-176)

Woolsey also distinguishes between malevolent and malignant threats. Malevolent threats such as terrorism exhibit intentionality whereas malignant threats such as climate change do not. However, he contends that both risks are “extraordinarily grave and much too urgent” to wait on a lengthy debate why one and not the other constitutes a threat to US interests (Woolsey 2008, 180).

Michael Klare (2007) reprises his arguments from *Resource Wars* (2002), applying them to the problem of climate change. He traces the physical effects of climate

change to their social consequences, showing the potential for conflict. He describes resource and water wars, state collapse, militia or gang-like rule (the “Mogadishu effect”), and migratory conflicts. Unlike Busby (2008), Klare emphasizes that chaos, violence, and civil conflicts are the most immediate and concrete consequences of climate change. Moreover, these consequences demand different priorities for national security, a transformation of the role of US armed forces, and swift action to curb greenhouse gas emissions (Klare 2007, 360-361).

Andrew Guzman (2013) finds that climate change is already having widespread economic effects and taking lives. However, he is more concerned about the cataclysmic impacts on the horizon that “may kill tens of millions or hundreds of millions and severely disrupt the lives of perhaps billions” (Guzman 2013, 1). He concedes that he may sound alarmist, but believes it is warranted, particularly with regards to the violence that climate change effects will unleash. Guzman shares Klare’s view on resource scarcity, seeing resource competition as the “triggering event in many places, leading to warfare, death, and suffering that might have been avoided in the absence of climate change” (Guzman 2013, 135). He offers that Sudan is the first war attributable to climate change, but that others will likely follow, particularly in places where water scarcity is acute. Regarding national security, he notes that the enterprise often invokes the term *threat multiplier*, an idea to which he adds the metaphor of climate change creating a shower of sparks, igniting existing tensions (Guzman 2013, 149). He highlights the enterprise’s creation of United States Africa Command (AFRICOM) as recognition of the

confluence of factors for which a spark could threaten US interests in Africa, especially with regards to resource extraction and terrorist sanctuaries (Guzman 2013, 167).⁴²

Social psychologist Harald Welzer (2012) is also concerned with climate change-induced violence, but adds a cultural element. He contends that the security risk from climate change is not due to its physical manifestations, but rather can be found in the uneven distribution of the social consequences, and that the “resulting injustice, both geographical and generational, contains a serious middle-term potential for conflict” (Welzer 2012, 38). Moreover, these differences tend to materialize in conjunction with issues of class, religion, and resources. For Welzer, climate change and violence go hand-in-hand. While some scholars discount climate conflicts or speak of them as future issues, he contends that climate change-induced tensions are already building and will give rise to violent conflicts, civil wars, and mass refugee flows. His cultural insight poses an ontological question. For example, what is the problem of Sudan? Welzer says that policy makers are mislabeling the problem, viewing today’s tensions and conflicts through old lenses. Like Guzman, he refers to Sudan as the first climate war, but states that most people still think of it in ethnic terms (Welzer 2012, 61). The implication is that if security policies focus on the perceived ethnic basis of the conflict without addressing the climate change-induced tensions, then the security policies will fail.

Paul Herman, from the National Intelligence Council (NIC), and Gregory Treverton, from Rand Corporation’s Center for Global Risk and Security, downplay

⁴² Although AFRICOM is certainly interested in the physical and social factors that may produce instability and violence in Africa, the commander of AFRICOM made no mention of climate change during his March 7, 2013 annual posture statement to the Senate Armed Services Committee.

climate change-induced resource wars, failing states, and climate refugees. They argue that climate change impacts may be imperceptible, defying simple causality and clear one-on-one linkages. Instead, climate change will “exacerbate existing difficulties such as economic weakness, infrastructural shortcomings, communal strife, weak governance, and tenuous political legitimacy, often with spillover effects beyond borders” (Herman and Treverton 2009, 137). Thus, they look at existing problems and consider how climate change might interact with other factors. Resource competition between hostile groups may increase as rising temperatures and changing precipitation patterns contribute to food and water insecurity. Water diversion projects may further amplify regional tensions, a situation that is already playing out in many riparian basins. Impacts on subsistence farming may encourage shifts to hardier drug crops (Herman and Treverton 2009, 142). Climate change may lead to new international institutions even as it shows the ineffectiveness of other institutions. Unfortunately, these effects are difficult to tie directly to climate change and thus the authors recommend that policy makers include the climate change dimension in all policy considerations rather than trying to brand it as a threat (Herman and Treverton 2009, 146).

The German Advisory Council undertakes a detailed look at the causal linkages between climate change, physical effects, and social effects, and then ascertains the implications for international politics and security. The authors frame their study as one interested in “knowledge about risks and dynamics that threaten to trigger destabilization of collective actors, i.e. societies and states” (Schubert et al. 2008, 23). “New wars” are the most likely sort of conflict to arise within the context of climate change, and are

characterized by the fact that they combine elements of organized crime and human rights violations with a generally international dimension, and that the distinction between public and private and political and economic actors is increasingly blurred. (Schubert et al. 2008, 23)

The study then seeks to show under what conditions new wars or other conflicts may arise. The study's novel contribution is the idea of conflict constellations, which are causal linkages at the interface between the environment and society that are capable of inducing social destabilization or violence. For example, one conflict constellation is climate-induced degradation of freshwater resources. Each of these constellations is accompanied by two narrative scenarios, one that leads to cooperation and the other to confrontation (Schubert et al. 2008, 77). Based on the scenarios, the authors recommend how to avoid or alleviate the problems attendant to the constellation. Ultimately, they conclude that climate policy is security policy, preventing conflict by avoiding dangerous climate change and by applying adaptation strategies (Schubert et al. 2008, 193).

International Relations scholar Christian Webersik (2010) continues with the theme of climate change as a threat multiplier in the sense that insecurity results from increasing vulnerabilities and a limited capacity to adapt to the impacts. He reminds us that climate change effects on humans are not new. The issue today is the scale and speed at which the climate system is changing (Webersik 2010, 19). He then turns to the socioeconomic and security implications of climate change, examining resource scarcity, natural disasters, migrations, and climate change maladaptation. Although his focus is primarily on human security, he still considers state capacity, collective violence, and structural issues such as poverty and poor governance. His insights on the unintended consequences of climate change mitigation are useful, showing how nuclear energy,

biofuels, carbon sequestration and geo-engineering, and ocean fertilization have ripple effects on human, national, and international security (Webersik 2010, 105).

The international team of scholars who contributed to the book *Climate Change and National Security* assessed the intermediate risks that climate change poses to the US, its allies, and to regional and international order. This book explores the causal relationships between climate change's physical effects and the resulting social effects, posing six standard questions to each scholar who then undertakes a study of a given case. The questions are those that a national security strategist or a policy maker would ask in a quest for "actionable answers" (Moran 2011, 5). For example, one of the questions is "considering the disruptive possibilities that you have described..., how would you assess the risk that the net result will be a complete failure of the state?" (Moran 2011, 4). The case studies correspond to states and regions in which disruptive sociopolitical change would threaten US interests, including China, Vietnam, Philippines, Indonesia, India, Pakistan, Bangladesh, Russia, Central Asia, the European Union, and Turkey. Notably absent from the list is any mention of Africa, which is consistent with the relatively low priority that Africa receives in national security considerations.

Some of the literature considers the implications of climate change specifically for the enterprise. International relations scholar John Ackerman looks at climate change from the perspective of DOD. DOD is concerned with how climate change might endanger US interests. Ackerman refers to this intersection as the climate change threat domain (Ackerman 2008, 60). Typically, DOD considers four types of security challenges: traditional, irregular, disruptive, and catastrophic. Ackerman examines how

the climate change threat domain affects these security challenges. He finds that the US may have to deploy traditional forces to prevent conventional conflicts driven by climatic changes (Ackerman 2008, 60-64). Irregular challenges include the potential for mass migration resulting from resource scarcity or geo-engineering efforts to counter climate change effects, such as a water diversion project (Ackerman 2008, 64-67). Climate change may disrupt societies, increasing food and water insecurity and undermining human health. The US and states important to the US will not be immune from these disruptions, thereby negating relative US advantages to contend with other security issues (Ackerman 2008, 6-69). Finally, catastrophic challenges in the climate change threat domain are analogous to the employment of weapons of mass destruction. Rising sea levels and ecosystem collapse would have catastrophic security implications (Ackerman 2008, 69-74). Ackerman's concern is that two or more challenges will merge into the "perfect storm," overwhelming the ability of US forces to respond. Thus, he advocates a sustainable security strategy that shifts DOD's capabilities portfolio from its focus on traditional and irregular challenges to one that is more balanced to contend with the range of security challenges in the climate change threat domain (Ackerman 2008, 74-75).

As an advisory body to the Secretary of Defense, the Defense Science Board (DSB) shares many of Ackerman's concerns, adding that "climate change has the potential for significant impacts on all three basic elements important to national and international security—defense, diplomacy, and economics" (DSB 2012, 6). The DSB states that climate change is having "major consequences for the political, economic and geographic world as we know it" and that the shift in the climate "is a fundamental one

that inevitably will alter factors critical to US global interests” (DSB 2012, 63). Like much of the literature, the DSB sees climate change as a threat multiplier that exacerbates existing tensions while granting that sometimes “climate change will seem more like Mother Nature’s weapon of mass destruction” (DSB 2012, 64).

The DSB downplays a military role, stating that DOD will support other agencies in a management and cooperation structure “to focus increased attention to assisting vulnerable regions in adapting” to climate change (DSB 2012, 8). Preventive, non-military responses are recommended to help vulnerable societies mitigate the effects on populations and to adapt to changes, although the US must also preserve a military capability to respond. After all,

Climate change will more likely first affect human security, resulting in population and political instability that threatens nonmilitary US interests (access to natural resources, criminal activity and terrorism, economic damage, or political agreements) then escalate to kinetic military conflict. (DSB 2012, 64)

The DSB uses the Winter 2011 food riots in Egypt as an example of how climate change effects, even those felt elsewhere, can affect US national security. The riots before the Egyptian government’s downfall can be traced, in part, to the wheat crop failure in Russia and rising food prices in Egypt, which is critically reliant on food imports. In turn, the government crisis jeopardized the Egypt-Israel peace agreement—a matter of US national security (DSB 2012, 64).

The Government Accounting Office (GAO) (2012) echoes much of the DSB’s findings although it does not specifically mention national security. Adaptation planning and implementation, especially infrastructure projects, is its foremost recommendation. However, it concludes that federal climate change strategic planning is wholly inadequate

and lacks sufficient information to guide policy decisions. Interestingly, the GAO refers to the totality of federal efforts as the “climate change enterprise” although it does not define it any further (GAO 2012, 149).

The National Research Council (NRC) seeks to improve government decision making and public policy. In this vein, a 2013 study sought to

evaluate the evidence on possible connections between climate change and US national security concerns and to identify ways to increase the ability of the intelligence community to take climate change into account in assessing political and social stresses with implications for US national security. (NRC 2013, 1)

The NRC concludes that climate change can lead to social and political stresses and national security issues related to water, food, health, humanitarian crises, migration, severe political instability and state failure, interstate and intrastate conflict and violence.

The NRC is cautious to add, however, that causality is seldom clear because

The effects of climatic events on outcomes of security significance are contingent on a variety of specific social, political, economic, and environmental conditions in affected places. (NRC 2013, 135, italics in original)

Among these conditional factors are pre-existing grievances and stresses, the extent of the climate change impact, the population’s makeup and coping capacities, and government capacity and legitimacy. Like Ackerman (2008), the NRC highlights the potential of a “perfect storm,” in which climate events interact in

a country or region of importance to US national security that experiences an extreme climate-related event or the effects of a climate-related shock to a global system that meets a critical need, that has significant human and economic assets in harm’s way, where those assets are highly susceptible to harm, where local coping ability is static or decreasing, and where official response systems prove to be ineffective. (NRC 2013, 140)

NRC recommends that the IC should monitor the factors that contribute to such a perfect storm and participate in a whole-of-government effort to inform choices about adapting to and reducing vulnerability to climate change (NRC 2013,140, 147).

Some scholars offer a markedly different perspective on climate change and security. Sociologist John Urry observes that scholars cannot study human systems without considering the environment's influence on how those systems operate. Thus, he favors a "resource turn" in sociology whereby societies should be examined through the patterns, scale, and character of their resource-dependence and resource-consequences, a turn he refers to as a post-carbon sociology (Urry 2011, 16). He says this turn is necessary because climate change is not about individuals who need to adapt but about whole social and physical systems. Consequently, societies must be brought into the reality of climate change, including the uncomfortable realization that adaptation will require profound changes. However, even profound changes will not preserve the status quo. Rather, the four alternative future scenarios Urry offers exact high costs on human lives, democracy, and social life, and all entail new vulnerabilities (Urry 2011, 154). Urry's insights are noteworthy because he suggests that humans are stuck on a trajectory from which they are unlikely to escape until the perfect storm reveals the absurdity of the unsustainable society that they have built. In other words, climate change eclipses concerns of national security, and efforts to promote security, which is focused on preserving the status quo, fosters less favorable future scenario outcomes.⁴³

⁴³ Urry (2011) adds a twist to a familiar term, referring to the military-industrial complex as the "carbon military industrial complex" throughout his book.

Investigative journalist Christian Parenti (2011) is also critical of the enterprise's lack of interest in the climate change problem. Using the term military-industrial complex, he says that the enterprise's interest in climate change relates to the "gap" problem. Parenti borrows the term from *The Pentagon's New Map* (2002), in which author Thomas Barnett contends that the defining problem of the era is the divide between the globalized core and the gap, or countries that have yet to join the core. Barnett argues that the US may have to perturb the system in order to bring those states into the core. Parenti extends that line of reasoning. Taking the reader on a global tour, he shows how "the metabolism of the world economy is fundamentally out of sync with that of nature" (Parenti 2011, 225). Moreover,

Social impacts of climate change are already upon us, articulating themselves through the preexisting crises of poverty and violence, which are the legacies of Cold War militarism and neoliberal economics. (Parenti 2011, 225)

Thus, climate change exacerbates existing conditions, leading to state failure. The empire that helped to create the conditions of failure, now steps in to safeguard the interests threatened by that failure.

This section concludes with *The Hockey Stick and the Climate Wars* (2012) by Michael Mann. Mann, one of the foremost authorities on the science of climate change, reminds us about the politics of climate change in the enterprise. The enterprise is a political and social construct and thus the meaning of climate change to audiences within the enterprise is certainly influenced by politics and social factors. Mann talks about "the forces of climate inaction" that step in to stop discussions of climate change, or even to discredit climate change reports (Mann 2012, 109-110). He also discusses the

coordinated attacks by government officials, special interests, and other deniers who seek to put climate change into a category of uncertainty (Mann 2012, 123).

Securitization Theory

Some scholars have applied the Copenhagen School's securitization theory to non-traditional security threats, including climate change. This section reviews this literature, showing that the theory provides a useful framework for the project while concurrently benefiting from the project's focus on threat construction and audience responses to securitizing moves. Moreover, securitization theory and the research and literature it has spawned, inspired this project's focus on audiences and discourses.

The Copenhagen School's securitization theory casts "security [as] the move that takes politics beyond the established rules of the game and frames the issue either as a special kind of politics or as above politics" (Buzan et al. 1998, 23). A social issue may remain non-politicized with no state involvement or public debate, politicized as part of normal public policy, or securitized (Buzan et al. 1998, 23-24). When an issue is securitized, an authoritative person or body labels the issue as an existential threat to a referent object, an act referred to as a securitization move that may focus efforts, generate leadership attention, mobilize resources, and set in motion emergency measures to contend with the threat or to minimize the referent object's vulnerability. Typically, security language accompanies the securitization of an issue. For example, newly appointed "czars" lead the state's response to the threat, task forces coordinate and implement emergency measures, and leaders release or create contingency funds. The state enlists citizen support to guard against the threat and may restrict liberties and

forfeit citizens' rights, including privacy, to empower security organizations. Tangible signs of the government's focus on populations vulnerable to the threat are evidenced in "Drug Free Zone" signs around public schools and government sponsored anti-drug advertising in the media aimed largely at the youth demographic.⁴⁴

Making its debut in 1998, securitization theory has amassed a substantial body of empirical research, particularly by European scholars, and stimulated much debate over the meaning and process of securitization. The originally conceived version of the Copenhagen School's theory emphasized the performative effect of securitizing moves:

The security speech act is not defined by uttering the word *security* [emphasis in original]. What is essential is the designation of an existential threat requiring emergency action or special measures and the acceptance of that designation by a significant audience. (Buzan et al. 1998, 27)

Although this definition acknowledges the importance of the audience and the intersubjective nature of the process, several scholars have aptly noted inherent contradictions in the original version and the need to refine the theory's concept of audience (Balzacq 2011, Leonard and Kaunert 2011, Williams 2011). International relations scholars Sarah Leonard and Christian Kaunert note that Buzan et al. seem to contradict the importance of the intersubjective nature of the process by emphasizing the central role of the securitizing actor in deciding what is to be handled as an existential threat (2011, 58). International relations scholar Michael Williams concurs with the need to better conceptualize the role of the audience. He offers that the theory must take into account what the audience already knows before the speech act. He also adds that the

⁴⁴ Recent debates over internet monitoring and the domestic use of remotely piloted air vehicles are illustrative of the ongoing evolution of the social contract, particularly the balance between personal privacy and state-sponsored security.

audience may not exist independently of the securitization. In other words, securitization “can create a receptive audience [emphasis in original], by bringing it to consciousness of itself as a unified audience” (Williams 2011, 215).⁴⁵

This project adopts international relations scholar Thierry Balzacq’s definition of securitization:

An articulated assemblage of practices whereby heuristic artifacts (metaphors, policy tools, image repertoires, analogies, stereotypes, emotions, etc.) are contextually mobilized by a securitizing actor, who works to promote an audience to build a coherent network of implications (feelings, sensations, thoughts, and intuitions), about the critical vulnerability of a referent object, that concurs with the securitizing actor’s reasons for choices and actions, by investing the referent subject with such an aura of unprecedented threatening complexion that a customized policy must be undertaken immediately to block its development. (Balzacq 2011, 3)

Balzacq’s definition differs somewhat from the original conceptualization of securitization theory, and addresses some of its weaknesses, including the role of audiences. Securitization is an intersubjective process in which context and audience are essential to the success of a securitization.⁴⁶ Thus, a securitizing actor’s move (a speech act) to label an issue a threat must have a persuasive or perlocutionary effect, meaning that “perlocution is central rather than tangential to understanding how a particular public issue can change into a security problem” (Balzacq 2011, 6). In short, the audience plays a central role in an intersubjective process that yields a decision on what issue constitutes a threat and when. Recognizing the centrality of audience, Balzacq offers it as one of the three core assumptions of securitization theory, emphasizing that,

⁴⁵ The idea of creating a “receptive audience” is reminiscent of Pablo Friere’s work on critical pedagogy, which emphasizes that education is not a neutral endeavor and thus can maintain or challenge the status quo (Friere 1970). Although this project does not offer a Friere-like theory of change, its findings suggest that the enterprise is resistant to change.

⁴⁶ In chapter four, I describe the social constructionist epistemology that underpins my research design.

For an issue to be pronounced an instance of securitization, an ‘empowering audience’ must agree with the claims made by the securitizing actor. The empowering audience is the audience which: a) has a direct causal connection with the issue; and b) has the ability to enable the securitizing actor to adopt measures in order to tackle the threat. In sum, securitization is satisfied by the acceptance of the empowering audience of a securitizing move. (Balzacq 2011, 8-9)⁴⁷

Many scholars have attempted to theorize further the role of audiences. Balzacq notes that a securitizing actor is more likely to be successful if she perceives the needs and feelings of the empowering audience and thus uses language that resonates with that audience (Balzacq 2005, 184; see also Leonard and Kaunert 2011, 61). Another idea is that multiple audiences comprise the securitizing audience (Balzacq 2005, Vuori 2008, Salter 2008). Political scientist Juha Vuori argues that these “audiences depend on the function the securitization act is intended to serve” (2008, 72). In some cases, a general audience may be the target of the securitizing actor while in other cases the audience may be an elite group. Vuori notes that it is difficult to define who constitutes that audience in securitization theory because the audience depends on the context attendant to each issue (Vuori 2008, 72; see also Leonard and Kaunert 2011, 61). Although Vuori’s statement suggests a limitation to conceptualizing audiences, he makes a useful recommendation to the model, offering that “what could have been said within the model is that the audience has to be such that they have the ability to provide the securitizing actor with whatever s/he is seeking to accomplish with the securitization” (Vuori 2008, 72).

⁴⁷ The other two core assumptions are the co-dependency of agency and context, and the dispositif and the structuring forces of practices. Both may have application in this project, particularly the latter because of the long-standing structure, practices, tools, and methodologies of the national security enterprise as a whole and the variability across its audiences.

Balzacq (2005) and international relations scholar Paul Roe (2008) build on the idea of distinct audience roles, offering that each audience may support securitizing actors differently. Securitization requires emergency action and special measures, and these generally take the form of policy changes for which the actor needs the formal support of key institutions. In contrast, moral support—often from the public—is usually insufficient to effect policy changes (Balzacq 2008, 185; see also Leonard and Kaunert 2011, 62). Roe (2008) further develops this idea, contending that two audiences are involved in securitization. The general public provides moral support by concurring that an issue is a security issue while the policy making audience provides formal support by implementing the security response to the threat (Leonard and Kaunert 2011, 62).

Political scientist Mark Salter (2008) has made the most elaborate attempt to conceptualize the audience in securitization theory. Drawing on the dramaturgical approach, especially sociologist Erving Goffman’s concept of “setting,” Salter explores the relationship between the securitizing actor and the audience. He argues that each setting is unique with its own set of actors, debates, audience expectations, specialized language, conventions, and procedures. “A securitization act may be successful with a scientific or technocratic community, and yet fail in the elite and popular realm, such as the debate over global warming during the 1980s and 1990” (Salter 2008, 325 quoted in Leonard and Kaunert 2011, 62). Salter (2008, 328) specifies four settings: popular, elite, technocratic, and scientific, while acknowledging that there could be others. Setting matters because it influences the form, content, and success of securitization:

In each of these different settings, the core rules for authority/knowledge (who can speak), the social context (what can be spoken), and the degree of success

(what is heard) vary. This goes far beyond linguistic rules towards norms and conventions of discourse, as well as bureaucratic politics, group identity, collective memory and self-defined interest. (Salter 2008, 322 quoted in Leonard and Kaunert 2011, 62)

This project shows that different audiences in the enterprise embraced different meanings of the climate change threat, meanings that often did not align at all or only in part with Obama's high-profile securitizing moves.

Situating the Project in the Literature: A Summary

This chapter reviewed concepts and literature that bear on a project seeking to map the discursive complexity of climate change meanings within the national security enterprise. In return, this project will contribute to each of the literatures to varying degrees. The literature review regarding the national security enterprise briefly traced the history and various other terms used to describe the collectivity of people, organizations, and processes responsible for national security. Most national security scholars focus on the formal players in the process, generally preferring the term *establishment*. Other scholars look more narrowly at national security, using a defense or military lens and thus further delimiting the participants in the national security process. Many of the scholars in this last group restrict their study to the military-industrial complex, often in a quest to show the negative consequences of the relationship. This project adds to the scant literature that sees national security as a social construction in which numerous audiences participate, hence the adoption of the term *enterprise*.

The section on national security highlighted the political realism that helped to produce and continues to dominate national security discourses, culture, institutions, and

processes. Yet the literature also revealed competing ideas of national security that seem to rise and fall in popularity according to the state of emergency facing the nation. Efforts to redefine and broaden the national security agenda were highlighted, especially those related to environmental or human security. Although none of this literature addresses my research questions, I deliberately and consciously listened for insights and competing notions of national security as related to the meaning of the climate change threat. The project's findings contribute to a greater appreciation for the treatment of non-traditional threats by an enterprise dominated by a strategic logic grounded in political realism. Moreover, the project's methodological approach adds to a limited body of research that explores national security discourses and meanings.

The review of the literature at the nexus of climate change and national security revealed a small but growing body of scholarship to which this project contributes. Much of the existing literature examines why and how climate change constitutes a threat to national security. A smaller subset of the literature looked at the implications of climate change for all or part of the enterprise. Some authors were suspicious of enterprise motives to address climate change, a worthy reminder in a project focused on meanings. None of the literature explained why climate change is not treated by the enterprise as a threat to national security. Although this project is descriptive vice explanatory, the findings in chapter five and the discursive maps in chapter six offer some insights on possible explanations and set the stage for future projects to examine the *why* question.

This project is not an empirical study in the service of securitization theory. However, securitization theory inspired the project's emphasis on audiences and

discourses. The literature review showed that some securitization theory scholars have looked at non-traditional threats, including climate change, and that some of these scholars also used discourse analysis. The review further revealed that securitization theory under theorizes the role of audiences.

In chapter three, I review the balance of threat theory, the three streams model of public policy, social identity theory, and the cultural theory of risk. I chose these theories based on my experiences in the enterprise and the suggestions of the securitization theory scholars discussed above. The theories serve two purposes. First, they enrich my analysis by providing alternative perspectives on the construction of climate change meanings. Second, they assist in describing audience behavior following securitizing moves, thereby helping to fill a gap in securitization theory. To these ends, I integrate the theories into the analytic framework that I present in chapter four.

CHAPTER THREE: THEORY REVIEW

*Too much theory, not enough attention to the real world.*⁴⁸

Chapter two described the national security enterprise and the realist paradigm that guides how the formal audiences in the enterprise conceive of national security threats. While the realist paradigm is clearly dominant, there are other ideas about threats and security that circulate within the enterprise and challenge or temper realism's influence. I traced the history of non-traditional ideas about security, including human and environmental security, showing that scholars as well as members of the post-Cold War enterprise have considered expanded notions of security. The literature at the nexus of climate change and national security was scant, particularly with regards to what climate change means within the enterprise. I also presented securitization theory from which I borrow the concept of securitizing actors, moves, and empowering audiences. In chapter four, I will discuss how securitization theory informed my research design.

In this chapter, I summarize four theories and discuss how they might provide analytic insights on climate change meanings and help to describe audience reactions to securitizing moves. Specifically, I discuss Stephen Walt's balance of threat theory (Walt 1987), John Kingdon's three streams model of policy formulation (Kingdon 1984), social

⁴⁸ I received this comment from a student as part of an anonymous end of course survey. Clearly, my efforts to enrich students' theoretical knowledge were not always well received.

identity theory (Tajfel and Turner 1979), and the cultural theory of risk (Douglas and Wildavsky 1982). However, before I discuss them, my reasons for selecting and therefore privileging these theories merits explanation.

Why these Theories?

For this descriptive project, I selected these theories to aid my analysis, guard against my personal biases, and consider for reinforcing securitization theory's treatment of audiences. I did not enlist these theories to explain why audiences construct specific climate change meanings nor to explain the differential uptake of Obama's securitizing moves by enterprise audiences. These are efforts worthy of a follow on project as I will discuss in chapter six. This distinction is important because the theories contribute, but are not essential to the research design that I present in chapter four. Nonetheless, they serve important roles and earned a place in this project for three reasons.

First, I selected these theories, in part, because I have heard and read enterprise discourses on threat and security suggestive of the concepts in these theories. In short, I privileged the discourses over the theories, permitting the discourses to point me towards theories that may be relevant for describing the discursive complexity of climate change. As I revealed in chapter one, I am a product of the enterprise and have certainly contributed to the production of the dominant realist narrative. Yet, as both an enterprise insider and a scholar, I have also experienced the cognitive dissonance that results from trying to reconcile competing notions of threat and security. The discomfort I felt on Akosombo Dam is representative of this dissonance. My interest in alternative conceptions of security increased my sensitivity to enterprise discourses, from which I

picked up on the comments that led me to select the theories that I integrated into my analytic framework. Concurrently, these theories help me to guard against the biases that I have undoubtedly acquired from a thirty year relationship with the realist paradigm.

Second, I selected these theories because securitization theory scholars suggested them. Many scholars specifically mentioned the value of the three streams model, chiefly for its potential in addressing audience reactions to securitizing moves. Salter's notion of the role of audience settings, as described in the previous chapter, most influenced my choice of theories. In particular, he concluded that bureaucratic politics, group identity, collective memory, and self-defined interests shape discourses and thus meaning making in the securitization process (Salter 2008, 322). His remarks are suggestive of the three streams model, social identity theory, and the cultural theory of risk.

Third, all four theories are well supported by empirical evidence. Scholars from numerous academic disciplines have applied these theories in a wide range of social science projects, including those related to national security, threats, or meaning making. I reference many of these studies in the following pages.

I used these theories to inform my project in two ways—as analytic tools and as descriptive tools. As analytic tools, the theories complemented my knowledge of the enterprise by sensitizing me to a broader range of possible climate change meanings. Based on different assumptions and questions that explore social behavior, these theories forced me to consider discourses from diverse vantage points while asking what is going on here and how is the speaker and/or audience constructing climate change meanings? In other words, as I analyzed the discourses, I considered how I might interpret them

through the lens of each theory. The findings presented in chapter five resulted from an in depth analysis informed by my experiences, the theories presented here, and the analytic framework that I discuss in chapter four.

I considered the value of the theories as descriptive tools in order to assess whether they might strengthen securitization theory's treatment of audiences. As noted in the preceding chapter, securitization theory provides a useful framework for thinking about the climate change threat relative to the enterprise. Yet, securitization theory does not describe audience reactions to securitizing moves. Thus, in addition to using the theories as lenses for discerning climate change meanings through frame analysis, I also included the theories as a part of the analytic framework itself. Using a standard set of questions for each theory, I identified whether any of the theories helps to describe the climate change meanings embraced by enterprise audiences. In chapter six, I show that each of the theories helps to describe audience behavior after securitizing moves.

In the following pages, I summarize each of the theories, including some critiques of the theories, and then highlight their insights on threat meanings and audiences. While these theories are grounded in different epistemologies and assumptions, they are not mutually exclusive. Thus, I also point out where they overlap, work together, or offer conflicting insights. In chapter four, I present a set of questions discerned from these theories as part of an analytical framework for querying enterprise discourses.

Balance of Threat Theory

*Climate change won't buy us F35s to deal with future threats.*⁴⁹

Summary

Many theories address threat identification and legitimation, but rational actor theories tend to dominate the enterprise's thinking, a legacy of the entrenched realist paradigm. Although the enterprise's behavior certainly does not adhere to rational actor approaches to national security, my experience suggests that policy makers within the enterprise believe that they follow a rational actor approach. As discussed in the previous chapter, even among practitioners who do not give much thought to theory, their discourses are laden with terminology from the realist paradigm.

Walt is a staunch proponent of the realist school with impeccable bona fides. Kenneth Waltz, who reformulated Hans Morgenthau's balance of power construct to father the neorealist school, directed Walt's dissertation, and he collaborated with Mearsheimer on a project critical of US-Israel policy.⁵⁰ As noted in chapter two, he challenged efforts to redefine national security. Yet, Walt has been critical of realism's inability to explain the real world, especially its inattention to sub-state actors, and he has tempered his views on the expansion of the security agenda, no longer resistant to include non-state threats. Further, unlike neorealism's focus on the structural components of the international environment such as its anarchic nature and the distribution of power across states, Walt concedes that ideational factors also matter to policymakers (Walt 2009).

⁴⁹ An Air Force officer made this comment in January 2011 while we were speculating on what happens after the wars in Iraq and Afghanistan. I referred to threats noted in the 2010 NSS, eliciting this response.

⁵⁰ See Mearsheimer and Walt (2007).

For these reasons, Walt has gained recognition by practitioners who generally subscribe to realism, but whose experiences with the real world were creating dissonance as they found realist guidelines increasingly lacking for the purpose of policy development.

Walt's balance of threat theory is an innovative approach to the subject of alliance formation and its threat identification model is a useful proxy for rational approaches. As in all rational actor models, Walt's policy makers are agents of the state and the state is the referent object of security (Walt 1987, 15). As rational actors, policy makers order their preferences based on expected utility, pursuing their highest preference. However, Walt challenges traditional balance of power theory, finding that states often join stronger states rather than balancing against them. He concludes that states are attracted to strength and "the more powerful you are and the more clearly this is demonstrated, the more likely others are to ally with you" (Walt 1985, 7).

In order to explain why states sometimes ally against more powerful states while at other times aligning with them, Walt offers that policy makers must consider other factors when identifying threats and allies (Walt 1985, 8). His key indicators of potential threats are power, geographic proximity, offensive capabilities, and offensive intentions (Walt 1987). Like most realists, Walt sees power as the key factor, stating that "All else being equal, the greater a state's resources (e.g., population, and industrial, military and technological capabilities), the greater a potential threat it can pose to others" (Walt 1987, 22). Geographic proximity accounts for a state's ability to project power and thus states that are closer tend to pose a greater threat than those farther away. Offensive capabilities give a state the ability to threaten another state's sovereignty or territorial

integrity. In recognition of ideational factors, Walt adds that offensive intentions must be coupled to offensive capabilities to pose a threat (Walt 1987, 22-25). Rising powers whose intentions are unknown are particularly worrisome to the US as they contest the status quo. Although the US has not called China a threat, the enterprise is posturing to address the potential threat as noted by enterprise's so-called pivot-to-Asia strategy.

Walt has been one of his own harshest critics. He concedes that his original theory did not consider the importance of the proliferation of global information systems. He now acknowledges the power of the individual and of networks of people that can challenge states, leveraging information systems to promote ideas and coordinate the actions of individuals. He also concedes that other factors, including history, culture, and demographic issues, can engender insecurity (Walt 2009). Even with these concessions, however, Walt's theory seems to leave little space for consideration of non-traditional threats such as climate change, a common critique of all realist theories as highlighted in chapter two.

Three other critiques of the balance of threat theory are noteworthy. First, it fails to account for domestic constraints on state decision making. The theory treats policy makers as rational agents of the state without addressing the organizational cultures, bureaucratic processes, and government politics that inevitably shape decisions and policy development.⁵¹ For example, political scientist Robert Kaufman notes that democratic processes delayed the balancing behavior of states vis-à-vis the rise of

⁵¹ Political scientists Graham Allison and Philip Zelikow's seminal work on the Cuban missile crisis, *Essence of Decision* (1971), critiques the rational actor model's ability to explain the outcome in the crisis. They conclude that the bureaucratic process and government politics models provide more holistic explanations.

Germany under Hitler (1992). Second, the theory does not account for how some Third World leaders use balancing to consolidate their domestic political positions (Levy and Barnett 1992, see also David 1991). Third, the theory cannot explain why similarly situated states behave in opposite ways (Larson 1991). Perhaps the realist assumption that all states naturally balance against threat only holds if threats are objectively determined vice socially constructed.

Taken together, these shortfalls would limit the theory's ability to explain why some states balance against threats that may be overstated or not exist while other states fail or choose not to balance against clearly identifiable threats. With regards to this project, none of these critiques are an issue because I am problematizing the nature of threat construction within the enterprise and have already called into question the dominant realist paradigm's influence in the enterprise.

Insights on Threat Meanings and Audiences

If rational actor models, including Walt's balance-of-threat theory, seem to discount non-traditional threats such as climate change, then why include a realist theory in this study? As discussed in the literature review, the realist paradigm provides the language and logic for many audiences in the enterprise. Moreover, my experiences suggest that policy makers and the IC believe that they are rationally assessing the threats to US security. There is certainly a concerted effort by the enterprise to quantify potential threats based on capabilities and intent to inflict harm. Although the meanings that emerge from the discourse do not suggest a purely rational approach to evaluating

climate change as a threat to national security, the fact that the enterprise believes it applies this approach warrants inclusion of a rational actor theory.

Walt's theory offers three broad insights on threat meanings and audiences related to realism's language, logic, and referents. First, Walt's theory and the audiences in the enterprise share a common language grounded in realism. This commonality does not imply that the enterprise's thinking about threats is necessarily rigid, only that it may not have the language to construct a threat meaning around a non-actor-based threat. For example, scholars and members of the enterprise usually consider social, economic, demographic, and environmental factors, among others, in their threat assessments. The literature review showed that scholars usually treated climate change as one of many factors contributing to insecurity. Since the physical effects of climate change precipitate social effects, the enterprise might be using different labels for the causal linkages. The enterprise may also punctuate the sequence of causation such that proximate effects such as state failure merit the *threat* label and more distant causes such as rising food costs and water scarcity merit the *issue* label.

Second, national security scholars and practitioners use an approach to national security that has endured since the Second World War, and as shown in chapter two, this realist paradigm is resistant to change. Thus, Walt and the audiences in the enterprise share realism's logic and affinity for states, intentional actors, exogenous threats, and power. Perhaps some audiences do not consider climate change an issue of worthy of or relevant to national security. Concomitantly, audiences that are not as invested in the realist paradigm may be less resistant to constructing climate change as a threat.

Third, the referent of security in Walt's theory is the state and a state's power is the final arbiter with regards to its security. Perhaps non-traditional security issues such as climate change hold meaning for a state's relative power and thus could be construed as a threat with power as the threatened object. The physical effects of climate change, such as the loss of a naval port or low-lying airfield to rising seas, may threaten a state's ability to project power. Organizational and budget changes that favor humanitarian assistance over military readiness may degrade the state's coercive instrument of power as suggested by my colleague's comment on climate change and F35s. Since power in the realist construct is relative, policymakers may view unilateral efforts to address a collective action problem as an opportunity for free riders to boost their relative power.

Three Streams Model

*Now isn't the time to deal with it, we have more pressing issues.*⁵²

Summary

I have heard the preceding comment, and ones like it, often in the enterprise. During the Cold War, the Soviet Union and communism were the pressing issues. Other issues merited attention to the degree that they related to falling dominos. The tragic events of 9/11 engendered a similar dynamic with respect to terrorism, replacing the Cold War with the Global War on Terrorism. In both cases, the overarching nature of the enemy relegated other issues to the periphery. Today, as operations in Afghanistan come to an end, China and cyber threats are challenging terrorism for top billing on the security

⁵² Other commonly heard versions include *that isn't a priority, it can wait until later, it isn't a big enough problem to focus on, and no one is concerned about that right now.*

agenda. Yet once again, the earlier comment is heard as some threats ascend on the agenda while others struggle for attention.

In his three streams model, Kingdon uses the question “what makes an idea’s time come?” as shorthand for the larger question “what makes people in and around government attend, at any given time, to some subjects and not to others?” (Kingdon 1984, 1).⁵³ Since agenda setting reduces the number of issues under consideration, what accounts for changes in the agenda? Kingdon examines the processes by which agenda items and policy options become prominent and the role of the active participants in the process. He offers that there are three major process streams to explain changes in the agenda: the problem stream, the politics stream, and the policy stream. Concurrently, visible and hidden participants work within and across these streams. Together, the processes, participants, and their interactions promote or constrain a particular issue.

The problem stream, politics stream, and visible participants explain how governmental agendas are set. The problem stream regards the means by which officials learn about conditions and the ways in which conditions become defined as problems (Kingdon 1984, 197). Typically, officials canvass for indicators of potential problems, drawing from data and trends, constituent feedback, information from trusted agents, and their own experiences. Yet rarely are conditions tagged as problems based solely on indicators. Rather, a focusing event, such as a crisis, is needed to get an official’s attention (Kingdon 1984, 94). However, attention does not translate into recognition of an enduring problem unless the problem resonates with an official’s preexisting

⁵³ Kingdon attributes the notion of “an idea whose time has come” to Victor Hugo who wrote “Greater than the tread of mighty armies is an idea whose time has come.”

perceptions, or stronger indicators of a problem arise that cannot be ignored. Kingdon observes that “we put up with all kinds of conditions every day, and conditions do not rise to prominent places on policy agendas” (Kingdon 1984, 198). Only when officials believe that something should be done about a condition do they push for its inclusion on the agenda. Even then, a problem may be classified in many ways. For instance, I am looking for climate change cast as a security problem, but one can conceive of it as an environmental problem, a health problem, or an economic problem.

Ascending to the agenda does not ensure remaining there. Officials may correct, mitigate, or reduce the perceived severity of the problem, or they may not do anything or claim that there is nothing that can be done. In both situations, “attention turns to something else, either because something has been done or because people are frustrated by failure and refuse to invest more of their time in a losing cause” (Kingdon 1984, 198). Of course, the conditions that gave rise to the problem may change for the better or, with the passage of time new problems may displace old problems. People also adjust and may come to view a problem as part of the normal condition (Kingdon 1984, 198).⁵⁴

Since issues compete for placement and ranking on the agenda, policy entrepreneurs play a pivotal role in selling problems to officials. Lobbyists and special interest groups are the most obvious policy entrepreneurs. However, members of Congress, military leaders, intelligence analysts, scholars, journalists, and even celebrities, among others, may act as entrepreneurs for specific conditions or issues.

⁵⁴ *Creeping normalcy* is the idea that most people do not perceive a slow change in conditions over time. For example, in *Collapse*, Jared Diamond (2005) surmises that the last Easter Island inhabitant to cut down the last tree likely did not take note of the event because the island was deforested over many generations.

The politics stream includes a range of powerful influencers on agenda setting, including “swings of national mood, vagaries of public opinion, election results, changes of administration, shifts in partisan or ideological distributions in Congress, and interest group pressure campaigns” (Kingdon 1984, 93). Given these influences, bargaining rather than persuasion is the primary tool for building consensus, and concessions are often the price of getting one’s issue on the agenda. Even when bargaining is possible, national mood and elections tend to trump organized interests. Special interests may block aspects of an item on the agenda or adapt to an item high on the agenda, but seldom do they succeed in offering an agenda item of their own (Kingdon 1984, 199).

Another useful distinction for a project focused on audiences is the difference between visible and hidden participants. Visible participants are those who receive substantial press and public attention. This cluster of visible participants includes the president, high level presidential appointees, prominent members of Congress, the media, and political party and campaign spokespersons. Kingdon found that elected officials are particularly influential in setting the agenda, far more so than hidden participants such as career civil servants or those outside of government (Kingdon 1984, 199).

Once an issue is on the agenda, what explains the process by which alternative policy choices are specified? Kingdon offers that the policy stream and hidden participants generate and narrow the list of alternatives. The policy stream is a selection process in which alternatives vie for adoption. Hidden participants such as congressional staffers, career bureaucrats, and academic specialists play a key role in shaping policy options. These communities of specialists tend to network across organizational

boundaries, sharing their specialization and familiarity with the issues. Concurrently, policy entrepreneurs continue to push for particular alternatives, often linking ideas and people in order to build support for an option and to soften resistance to it (Kingdon 1984, 200-201). Whereas bargaining was the dominant approach used in the politics stream and agenda setting, persuasion is the key approach in the policy stream.

Two other concepts in the three streams model merit explanation, *coupling* and *policy windows*. Although the three streams described above have their own attendant processes and participants, any two or all three of the streams may align, improving the likelihood that an issue will make it to the decision agenda, rise in importance, and result in a policy decision. The alignment of problem, policy proposal, and political receptivity into a single package is rare, but it does occur and can be nurtured. Partial couplings are more common such as when there are solutions to problems but an unreceptive political climate, or when politics align with proposals but the problem does not seem compelling. Kingdon concludes that the alignment of all three streams is more likely to result in the elevation of an item on a decision agenda. In contrast, partial couplings relegate an item to governmental agendas, “lists of subjects to which government officials are paying serious attention” (Kingdon 1984, 202). These lists consist of problems without solutions attached or proposals without political backing.

Policy windows are chances for people to advocate their solutions or to gain recognition of a special problem. Changes in administrations, crises, technological breakthroughs, election results, and changes in the national mood may present openings that were previously unavailable. Policy entrepreneurs often prepare and then wait

patiently for a policy window. They may have a solution waiting for a problem, or a problem that needs a clear solution. Sometimes advocates have to wait for a change in the ideological makeup of Congress or in the national mood before a problem and an attached solution can be offered for decision (Kingdon 1984, 203). Of course, policy windows are rare and limited in duration and thus when the window opens, competition is fierce. Because of the competition, policy entrepreneurs attempt to align at least two of the streams in anticipation of policy windows. For example, entrepreneurs try to link problems and/or solutions to the most influential political advocates possible. Yet even the most skilled, experienced, and well-resourced policy entrepreneurs often fail in their efforts to align all three streams, so they head back to the metaphorical drawing board to rework the couplings and await another policy window.

The three streams model has incurred four primary critiques. First, the model's terminology suffers from a lack of conceptual precision, limiting its explanatory power and the consistent application in empirical studies (Howlett et al. 2013). Of course, the scholars who invoke this critique also applaud the model's metaphors as a welcome alternative to stage-based public policy models. Second, some scholars contend that the theory lacks testable propositions and that even Kingdon used his metaphors as background for a qualitative assessment of the process rather than a guide to empirical analysis (Soroka 1999, see also Robinson and Eller 2010). Third, the model does not address post agenda-setting processes (Howlett et al. 2013). In fairness, Kingdon deliberately focused his model solely on agenda-setting. However, the same scholars who lament this narrow focus have offered new streams for the post agenda-setting gap,

suggesting the addition of a decision stream and a program stream. Fourth, the model alone may be insufficient to explain fully policy decisions as evidenced in actual case studies (Zahariadis 1998, Brunner 2008). However, like the previous criticism regarding post agenda-setting processes, this critique appears to expect more of the model than Kingdon intended. Indeed, one of the scholars advocated for the use of three different lenses to explain fully policy choices (Zahariadis 1998).

None of these critiques of the three streams model weakens the model's analytic or descriptive utility. As an analytic tool, the model provides a suitable counterbalance to the balance of threat theory, ensuring that I look at the subjective nature of threat construction and the politics of agenda-setting. Since this project focuses on the inclusion and prioritization of climate change on the security agenda, the model also provides useful terminology for describing how meanings are constructed and to what end. Again, this project does not seek to explain audience behavior and thus criticisms regarding the model's explanatory power do not undermine its value in this project.

Insights on Threat Meanings and Audiences

The three streams model provides three key insights for this project. First, Kingdon's constructivist model contrasts sharply with Walt's rational actor model, providing a nuanced view of the nature of the participants and their interactions in the policy making process. Whereas rational actors presumably prioritize preferences based on expected utility, enterprise audiences and their members are affected by factors such as identity, self-defined interests, group affiliation, ideology, institutional cultures, and bureaucratic politics. These factors combine to influence, motivate, and constrain people

as they set the agenda and specify policy options, and these combinations vary over time and by issue. While the audiences in the enterprise are ostensibly involved in a single national security policy-making process, they respond to different logics of persuasion (Leonard and Kaunert 2011, 64). Thus, an audience may accept climate change as a threat, but others may ignore, downplay, or refute that meaning, thereby impeding climate change from ascending on the agenda or constraining policy options.

Second, the model offers insights on where, when, and how meanings are constructed by audiences. The problem stream relates to whether or not climate change gets the attention of the enterprise, or at least its formal audiences. In the problem stream, an actor attempts to construct climate change as a policy problem, drawing on indicators and external events. Obama attached many labels to climate change, ranging from *problem* to *threat*, and he tied climate change to climate science, national interests, observable climate trends, and even unusual weather events. He has also gauged the response from formal and informal audiences, accounting for his more assertive position on climate change during his second term. Often, however, multiple actors, alone, or on behalf of specific audiences offer their interpretation of the problem and those interpretations compete for recognition. In terms of the enterprise, the *threat* label matters and anything less will get treated differently by the formal audiences.

In the policy stream, enterprise audiences are actively developing policies related to climate change, and some audiences are selectively implementing policies absent enterprise-wide endorsement and within the constraints of their authorities and budgets. Policy development does not require a single climate change meaning to emerge as

dominant. Rather, different audiences develop an eclectic mix of policies that supports their interpretation of the climate change condition, a linkage that is the equivalent of an audience specific coupling of the problem and policy streams. For example, as directed by Obama, the executive branch has taken steps to mitigate its own contributions to the climate change problem and is implementing regulatory controls to achieve broader effects under existing laws such as the Clean Air Act.

In the politics stream, climate change is subject to highly contentious bargaining processes to keep it off the agenda, change its priority, or to shape alternatives to respond if it makes it on the decision agenda. Other audiences may not consent to the *threat* label and, even if they do, they may not consent to the actions to address the threat. For example, Congress is the most visible venue in which the politics of climate change unfold. Some sub-audiences endorse Obama's securitizing move, while others offer different perspectives on climate change. However, the differential uptake on meaning does not mean that nothing happens with regards to climate change. After all, climate change may not require the *threat* label to justify measures to address its many cross-cutting issues. For example, Congress may object to agricultural assistance to another country in order to mitigate the effects of climate change. However, if the assistance was intended to reduce poverty and deforestation in a country or region of US national interest, then the climate change threat *label* was probably unnecessary to garner support.

Third, Kingdon's model provides several conceptual tools that help to look at specific audiences and their interactions. Visible participants in the process are those within the enterprise who are the public figures most associated with making claims on

the meaning of climate change. Clearly, Obama is such a figure, but others matter, including department secretaries, committee chairpersons, senior military leaders, party leaders, and prominent national security experts and journalists. These visible participants offer their own climate change meanings or meanings on behalf of their specific audiences, and all of them watch for indicators of whether a particular meaning has resonance with their own as well as other audiences.

Hidden participants operate out of the public eye. There are many such participants within the enterprise, a by-product of the size, secrecy, and largely closed system that is the enterprise. Although Kingdon offers that these are the people who can work across audience boundaries to construct alternative policy options, they can also impede option development or implementation. Moreover, they participate in the construction of climate change meanings through the same processes that label other problems as threats. Thus, an intelligence analyst who is looking at the socio-economic underpinnings of unrest in a country of national interest may make no mention of the physical effects of climate change that are exacerbating social conditions in that country. By omission, the analyst is contributing to the meaning of climate change.

Lastly, climate change policy entrepreneurs market specific climate change meanings and policies. They are found in every audience in the enterprise, and their objective is to couple the three streams at a time and in a manner supportive of their climate change meaning. Entrepreneurs know that focusing events can work for or against them. After all, climate change is a long-term issue for which audiences may not feel inclined to invest much equity since the worst effects will be felt elsewhere or in the

future. On the other hand, the proximity bias created by recent droughts, wildfires, heat waves, natural disasters and similar events may elevate climate change on the agenda.

Social Identity Theory

*I like bad guys that look like bad guys...we aren't the bad guys.*⁵⁵

Summary

Developed by Henri Tajfel and John Turner, social identity theory is a social psychological theory that offers an explanation for how people acquire a sense of membership and belonging to specific groups, and how the dynamics between resulting in and out groups can lead to prejudice, hostility, and eventually, threat identification (1979).⁵⁶ Scholars have applied social identity theory to a wide range of inquiries, including those related to state security. For example, political scientist David Laitin (1998) examines how Russian speakers constitute an atypical diaspora in many countries. Left behind by receding borders at the end of the Cold War, Russian-speaking populations have become a social identity with security implications for former Soviet states. Most recently, for example, the Ukraine witnessed substantial violence when the Russian population of the Crimea seceded and joined Russia. International relations scholar David Rousseau (2006) examines threat perceptions between states, concluding that neither realism nor liberalism adequately explain why states view one another as

⁵⁵ This comment was made by a student in one of my seminars. The topic of the seminar was energy security and the discussion turned to the relationship between energy independence and climate change. Another student commented that consumer behaviors may threaten national security, eliciting this response and the sharp tone that accompanied it.

⁵⁶ Social identity theory is described in detail in many works, including Oakes, Haslam, and Turner 1994; Hogg 1992, 1993; Hogg and Abrams 1988; Turner 1982; Turner and Giles 1981; Tajfel and Turner 1979; and Tajfel 1978.

threats. He offers an identity-based model of threat construction that posits how individuals and societies draw lines between in and out groups. In this project, audiences and members within the enterprise exhibit a tremendous variety of identities that likely influence how they interpret and respond to Obama's securitizing moves, and how they conceive of threats.

Social identity theory asserts that three mental processes yield *us-them*, or *in-group-out-group* distinctions: social categorization, social identification, and social comparison. As social beings, individuals try to understand their place in the world by using any number and type of discrete, simplistically labeled variables to create categorical distinctions between people (Brewer and Gaertner 2004, 303). These variables may be dichotomous, such as male-female or democrat-republican, or nominal with categories limited only by imagination. Even continuous variables, such as a person's conservatism or patriotism, are simplified into discrete classes that conceal the nuance that would more accurately describe a person's attitudes and behaviors. Categories provide us with a cognitive shortcut, giving us enough information about the functions, attitudes, and behavioral norms of people, including ourselves, to understand our social environment. These categories exaggerate the similarities within groups and the differences between groups, thereby simplifying identities and relationships into stereotypes. Categories help us to define appropriate as well as deviant behavior by reference to the norms associated with specific groups. For example, a soldier who risks his life in a battle in service of the nation or to protect his comrades conforms to expected norms for military service members. In contrast, an elected official who takes bribes to

enrich himself at the expense of his constituents deviates from the expected norms of public service. Categories are also self-referential, telling us things about ourselves based on the categories to which we belong.

After individuals categorize themselves into a group, they adopt that social identity as their own. Group membership embeds the individual in a broader social context, providing the individual with a sense of purpose, belonging, and self-worth (Brewer and Gaertner 2004, 303). Membership also “describes and prescribes one’s attributes as a member of that group—that is, what one should think and feel, and how one should behave” (Hogg et al. 1995, 260, see also Tajfel 1978, 28-29). If the social identity is salient in a particular context, a person’s thoughts and actions tend to become group stereotypical and normative (Hogg et al. 1995, 260). Indeed, group norms and an individual’s behavior become mutually reinforcing as the person promotes the group in order to sustain the benefits that she derives from the group. Depending on the type of group and its salience, individuals may accrue a variety of benefits from membership, including security, self-esteem, emotional support, material benefits, and cultural and symbolic capital.⁵⁷ Cultural capital consists of the knowledge, skills, education, and even attitudes that provide individuals with a higher status in society (Bourdieu 1986). Symbolic capital results from the fulfillment of social obligations that earn the individual honor, prestige, or recognition (Bourdieu 1984).

⁵⁷ Sociologist Pierre Bourdieu (1984, 1986) offers that individuals choose how they want to present themselves to the world, and he claims that differences in social, economic, cultural, and symbolic capital account for the distinctions between social classes.

The benefits that an individual derives from membership to a particular group rely on the person's belief that their group compares favorably to other relevant groups. In the process of making these comparisons, people tend to exaggerate the similarities with others in their group while amplifying the differences between groups (Stets and Burke 2000, 225). This stereotyping helps to preserve a favorable intergroup comparison because the group label distills the out-group into a caricature that highlights distinctions without leaving room for nuance. Moreover, groups and their members adopt strategies that seek to achieve, preserve, or reacquire favorable comparisons (Hogg et al. 1995, 260). Of course, these comparisons occur in the context of mutual evaluations and thus rely on group dissimilarities and some degree of conflicting goals to promote positive differences (Cook-Huffman 2009, 24, see also Tajfel and Turner, 1979). In other words, people need to find differences between groups otherwise it calls into question why they identified with a particular group in the first place.

Since mutual evaluations seek out differences rather than similarities, the interactions between groups may devolve into distrust, hostility, and grievances, which further degrade the quality of communications between groups. Boundaries between groups harden as they find evidence that reinforces their negative images of one another and resist contradictory information. Left unchecked, this process can yield a situation where hostility towards the other group becomes normatively prescribed (Kelman 2009, 175).

Social psychologists Marilynn Brewer and Samuel Gaertner (2004) further describe the characteristics of the intergroup dynamic, using a set of three principles. The

intergroup accentuation principle refers to the process by which an individual sees members of her in-group to be more similar to her than are members of the out-group. This person is also likely to trust and prefer the company of people in her own group, even those she does not personally know, over people in the out-group, a tendency referred to as the in-group favoritism principle. Finally, the social competition principle describes the perception of negative interdependence between the in-group and the out-group, a perception that downplays or ignores group interdependencies.

Clearly, people belong to many social identity groups and thus one identity may prove more salient than another in a specific context. As part of their research on reducing intergroup conflict, Brewer and Gaertner summarize categories of social identities that are helpful to this project. Although categories may only be limited by the imagination, there are many categories that tend to cross-cut other categories. Age, gender, religion, ethnicity, occupation, and citizenship, among many others, are cross-cutting identities. Individuals could conceivably share an in-group with someone who is also a member of a significant out-group (Brewer and Gaertner 2004, 310). For example, political parties create distinctive groups in Congress, yet cross-cutting categories such as gender, state affiliation and committee membership create overlapping in-groups and out-groups.

Another concept that resonates with this project is the idea of hierarchical dual identities. Group identities sometimes exist in a sort of hierarchical typology in which people may perceive themselves as members of different identity groups at one level while being part of the same group at another level (Brewer and Gaertner 2004, 310,

Turner et al. 1987). Continuing with a congressional example, senators of different parties also conceive of themselves as members of the Senate or in the category of public servants and as members of an even higher superordinate identity as Americans.

The multiplicity of social identity groups returns us to the issue of salience, particularly given the wide variety of identity groups to which members of the enterprise may belong concurrently. Identity salience is essentially the importance that an individual associates with a particular self-categorization in a given context (Haslam et al. 1999, 810). In Congress, party affiliation may prove the most salient among a member's multiplicity of identities and yet voting records reveal that party affiliation alone is not always the best determinant of where members stand on issues. Perhaps other identities are more salient than party affiliation in certain situations.

Social identity scholars have explored the question of what makes an identity salient, generally offering that salience is a product of accessibility and fit (Turner et al. 1987, Oakes 1987, Hogg et al. 1995, Haslam et al. 1999, Stets and Burke 2000). Accessibility depends on the characteristics of the person perceiving the situation. Each person has any number of categories that they may activate in a situation, but they do not enjoy the same degree of readiness. Readiness correlates to the person's current focus and whatever the person believes will occur in the situation (Stets and Burke 2000, Oakes 1987). In Congress, party, committee, or state affiliation might be a member's most readily accessible social identities because he expects them to be relevant in the hearing in which he is about to participate.

Fit is a function of the alignment between a person's stored repertoire of social categories and his perception of whether the activated category provides a meaningful representation of social relationships in the current situation (Stets and Burke 2000, Haslam et al. 1999, Oakes 1987). There are two types of fit, comparative and normative. Comparative fit is a measure of how well a specific in group corresponds to a social environment (Haslam et al. 1999). A comparative fit results "when an individual perceives within-group differences to be less than between-groups differences," a comparison known as the meta-contrast principle (Stets and Burke 2000, 230, Turner et al. 1987). For example, a member of Congress may consider himself a Virginian while campaigning in Virginia, a democrat when supporting a national party fund raiser, or a simply a member of Congress when participating as part of a delegation to another country. A normative fit results from a person's assessment of whether the activation of the identity in a particular context would be consistent with the norms of that social identity and their pre-existing stereotypical beliefs (Stets and Turner 2000, Turner 1985). If a member of Congress believes that Republicans are substantially different than Democrats with regards to the right to bear arms, he will be more inclined to embrace his Republican identity than his identity as a member of Congress when attending a National Rifle Association event. In short, it is the meaning of in-group identity that matters for a normative fit (Turner 1985).

While social identity theory has enjoyed substantial popularity across many academic fields, five critiques warrant highlighting. First, a prominent critique is that the theory is so popular that scholars wield identity factors to describe any conflict while

downplaying other factors and other theoretical explanations (Brubaker and Cooper 2000). Clearly, identity cannot explain fully all social conflicts, including situations in which a person resists his own group or supports a rival group (Simmons 2009, 116-118).

Second, and related, the theory's popularity has led to widely diverse conceptions of identity, ranging from "essentialist and static" to "fluid and situationally constituted" (Cook-Huffman 2009, 25-26, see also Howard 2000). One set of scholars went so far as to declare that identity "bears a multivalent, even contradictory theoretical burden. Do we really need this heavily burdened, deeply ambiguous term?" (Brubaker and Cooper 2006, 8). However, the majority of scholars seem content to caution that identities are socially constructed and thus necessarily contingent on context and subject to change. Consider cultural identity, which "is not in fact a unitary or Boolean variable that a person 'has' or 'hasn't,' we 'share' culture more or less perfectly with others; [and] we all control...multiple cultures with varying degrees of competence" (Avruch and Black 1993, 140). Similarly, people manage a range of identities within and across multicultural contexts and rarely, if ever, embrace or act in accordance with the norms of a single identity (Brown 2000).

The number and variety of social identities gives rise to a third critique regarding the salience of identities. Thus far, social identity theory has yet to operationalize and widely test salience as an independent variable, or to explain how multiple identities can be salient in the same context (Hogg 2006, 127, see also Mullen et al. 2003). Since social identity scholars generally acknowledge that people embrace multiple identities and that

identities play a key role in intra and intergroup behavior, the value of determining when and how specific identities become salient is evident.⁵⁸

A fourth critique is that there is a limited accounting within the theory of the cognitive processes underlying identity formation (Billig 1985, Rabbie et al. 1989). While the mental processes described earlier are essential for describing the theory and the resultant product— an identity, they do not provide a sense of causation or reveal the mechanisms that lead to specific choices. Much like the previous critique, the variety of identities and the implications of selecting an identity suggests the value of understanding and ultimately predicting how mental processes yield specific outcomes.

Lastly, some scholars argue that social identity theory discounts or undervalues social context (Billig 1985, Brubaker and Cooper 2000, Huddy 2001). A notable theme within this general critique is that individuals may not have the freedom to acquire an identity fully even if they categorize themselves in that group. In short, the group gets a vote on its membership and thus self-categorization may not yield all of the benefits and costs, norms and constraints on behavior attendant to the identity. Concomitantly, groups may impose membership on individuals, labelling them with an identity that they may or may not want.

These critiques do not detract from the value of social identity theory for this project. As stated previously, I am not seeking to explain why audiences embrace certain meanings of climate change. Rather, as I analyze the texts, I want to be sensitive to correlations between identities (specific audiences and sub-audiences, cross-cutting and

⁵⁸ In fairness, some scholars are skeptical of the claim that identity alone actually engenders specific behaviors. See, for example, Martin 1995 and Malesevic 2006.

hierarchical identities, and other seemingly salient identities) and the meanings that emerge from the texts. These correlations may be suggestive of why particular groups embrace a given meaning, but I merely want to tease out those meanings and describe them thoroughly. Concurrently, I do not want to privilege social identity theory as either an analytic or a descriptive tool over the other three theories, particularly given the easily discernible identities at my disposal within the enterprise. In a sense, the other theories help me to ensure that contextual factors are not trumped by identity.

Insights on Threat Meanings and Audiences

Social identity theory provides insights on two broad areas. First, this project is about the threat of climate change to national security, but climate change differs from threats traditionally embraced by the enterprise. As suggested by the engineer's comments in Ghana, terrorism and climate change are different threats. Actor-based threats have intentionality and direction, and their identity is distinct from ours. They follow the pattern of "them and their behaviors" in contrast to "us and our behaviors." Al Qaeda, North Korea, drug cartels, and cyber-attack perpetrators are all actor-based threats that the enterprise has deemed as threats (White House 2010; Clapper 2013).

The enterprise, guided by the realist paradigm and its attendant language and logic, is primed to look for exogenous, actor-based threats. Members of the enterprise like worthy threats and they seem to measure their worth, or at least justify budgets, by the level of menace afforded by a threat. The Soviet Union was cast as a major threat, an image that probably long exceeded the threat it actually posed. As discussed in chapter two, the enterprise looked for new threats upon which to focus its attention, eventually

settling, by choice, on rogue states and, by events, on terrorism. Now China is emerging as a worthy, if not actual threat. Perhaps, the enterprise is disposed toward finding, identifying, and promoting worthy enemy others.

Sometimes “us” can become “them,” such as when a person or group commits an act so heinous that they are labeled deviant. For example, Timothy McVeigh raised the specter of domestic terrorism when he bombed the Murrah Federal Building in Oklahoma City in 1995. After 9/11, fear of domestic terrorism was heightened by the chance that foreign terrorists could recruit domestic agents of terror. Applying the label “deviant” permits the creation of a new “them” identity that is distinct from the betrayed “us.”

In contrast to actor-based threats, non-actor-based threats lack intentionality and direction. They often “cross state borders but generally cannot be linked directly to the foreign policy or behavior of other states” (Matthew and Shambaugh, 1998, 163). Non-actor-based threats may be incidental to societal structures and patterns of behavior, including climate change, disease, poverty, immigration, and poor governance.

As a product of the Cold War, the enterprise conceives of threats primarily as external, and in an in-group/out-group construct where the “other’s” character and behaviors may constitute threats to the in-group. The climate change threat is, in large part, much more about our behaviors and us. Moreover, our American identity, especially as defined by national security actors, is sustained through a dominant narrative of American exceptionalism that recognizes the unique US role in building, leading, and protecting the current global system from which the US benefits. It is a

system highly dependent on fossil fuels, consumption, and growth, all justified through a narrative that espouses the primacy of democracy, free markets, and individual rights.

Securitizing actors and national security strategists may believe that designating climate change a threat of our own making would threaten our identity. When internal actors are viewed as threats (e.g., homegrown terrorists), they are labeled deviants, reestablishing an *us-them* construct with which we are able to rationalize without threatening our group identity. However, all Americans contribute to climate change to varying degrees, so the perpetrator cannot be cast easily as deviant, particularly when consumptive behavior is built into our defining narrative.

The second area of insight provided by social identity theory concerns the audiences that make up the enterprise. Even a glance at the enterprise reveals a complex mix of identities, including hierarchical and cross-cutting identities. People belong to branches of government, specific departments, agencies, and communities. They belong to a variety of political parties, occupational fields and states as well as age, gender, and ethnic categories. They may be government employees, contractors, civilians, or uniformed personnel. Yet, these audiences and the social identities that align with and cross-cut them are all presumably focused on protecting and advancing US national interests. How might climate change meanings be affected by competition between social groups?

Climate change meanings are likely to be caught up in group norms and thus the acknowledgement or denial of the threat of climate change might threaten a specific identity. Are coal miners likely to accept the human causes of climate change? Consider

the predicament of a senator from a coal producing state who legislates in favor of curtailing fossil fuel use. As an intelligence officer, I am expected to find and assess threats, but what if there are not any traditional actor-based threats that genuinely pose a threat to US national security? Maybe climate change does not fit the role because that is not the type of threat worthy of the enterprise that defeated the Soviet Union, toppled Saddam Hussein, and killed Osama bin Laden.

Cultural Theory of Risk

*I used to believe in climate change until I saw how much it cost.*⁵⁹

Summary

People face a broad array of real, perceived, and predicted threats, risks, and dangers. Yet, the priority placed on these threats does not always coincide with their probability of happening or their potential harm. German artist Susanna Hertrich uses graphics to confront people with alternative realities that challenge conventional wisdom and accepted norms, including those associated with risk (see Figure 2).⁶⁰ Based on statistical data, including from US government agencies, she posits relationships between perceptions and reality, leaving observers to draw their own conclusions. These portrayals suggest that something other than rational calculations leads people to emphasize certain risks while ignoring others.

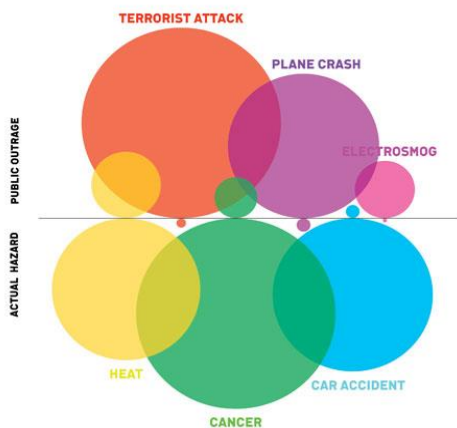
In *Risk and Culture*, Mary Douglas and Aaron Wildavsky explore this puzzle, offering a cultural theory of risk perception. People socially construct risks, selecting the

⁵⁹Senator James Inhofe (OK-R) made this statement on *The Rachel Maddow Show* (Inhofe 2012).

⁶⁰See <http://www.susannahertrich.com/risk.php>.

dangers for public concern according to value-laden judgments rather than empirical data. Each culture, consisting of a set of shared values and supporting social institutions, exhibits biases toward risks. While real dangers abound, “dangers are selected for public concern according to the strength and direction of social criticism” (Douglas and Wildavsky 1982, 7). For example, the authors note that water quality in fourteenth century Europe was a major, longstanding health hazard, but the public focused on it only when it was suggested that a specific group, in this case Jews, was poisoning the wells.⁶¹

RISK PERCEPTION AND ACTUAL HAZARDS



COMPARISON OF FATALITIES CLIMATE CHANGE VERSUS TERRORISM (YEAR 2000)

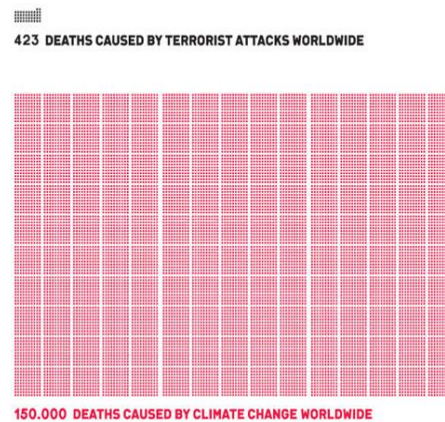


Figure 2. Selected Works on Risk by Susanna Hertrich

⁶¹ Adam Alter (2012) offers a climate change version of this argument, suggesting that humans might have a different view of climate change if they knew it was the work of a malevolent engineer.

The cultural theory of risk seeks to explain why modern society has singled out pollution as a concern. People create ideas about pollution as part of an ongoing debate about what constitutes the ideal society. Discourse constructs a social problem about guilt and innocence, consisting of something judged impure, the cause of the impurity, victims, and the means of purification. Note that physical dangers alone are insufficient to explain pollution ideas. Rather, people need to fix blame and thus critics of society believe that “impurities in the physical world or chemical carcinogens in the body are directly traced to immoral forms of economic and political power” (Douglas and Wildavsky 1982, 47).

The cultural theory of risk claims that individuals form perceptions of risk that are consistent with their commitment to one or another “cultural way of life” (Thompson et al. 1990). Each way of life emphasizes harms that transgress its preferred view of societal norms and institutions. Douglas (1970, 1982) identifies two cross-cutting dimensions; grid and group, which yield four ways of life (see Figure 3). The group dimension considers the degree of collective control, or the boundaries that people construct between themselves and others. The grid dimension considers the degree of social stratification, or the “social distinctions and delegations of authority that they use to limit how people behave to one another” (Douglas and Wildavsky 1982, 138). This typology yields four discrete ways of life: hierarchist (“high” grid), egalitarian (“low” grid), individualist (“weak” group), and solidarist/communitarian (“strong” group).

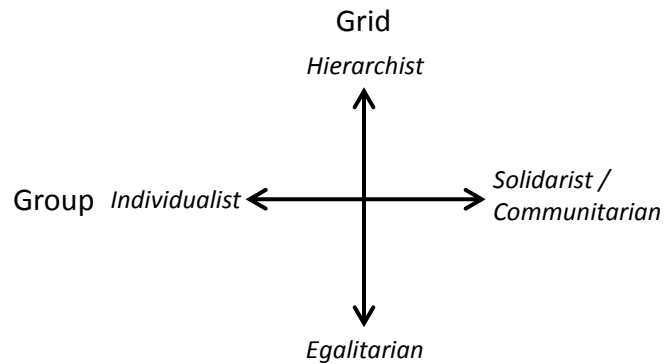


Figure 3. Douglas' Group-Grid Scheme

People who embrace a “weak” group way of life hold an individualistic worldview that sees competition as natural and thus people are expected to care for themselves and their families without collective assistance or interference (Rayner 1992, 87). Individualism emphasizes utilitarian behavior where people rank objectives, choose the ones with the highest value, and pursue them. Individualists are entrepreneurs who enjoy their autonomy to pursue self-interests, but who also recognize the importance of well-defined and universal rules for governing marketplace competition. In general, individualists thrive on competition to achieve profits and advantages in the short-term, and are not disposed to long-term strategic planning (Douglas and Wildavsky 1982, 96).

In contrast to individualists, communitarians evidence a “strong” group way of life in which interdependent people “interact frequently in a wide range of activities” to achieve their ends (Rayner 1992, 87). Communitarians generally occupy the “border,” an abstraction that refers to “the consciousness of the people who perceive their lives as uncommitted and essentially critical of some defined other part of human society where power resides” (Douglas and Wildavsky 1982, 103). Communitarians promote values of

solidarity and human equality rather than competitiveness and speak out against the perceived injustices of those who hold power at society's center.

A "high" grid way of life favors role delineation where duties, offices, and entitlements are all "distributed on the basis of explicit public social classifications such as sex, color...a bureaucratic office, descent in a senior clan or lineage, or point of progression through an age-grad system" (Gross and Rayner 1985, 6). Thus, a hierarchy is a relationship between entities that has endured over time, expanding its control and suppressing internal rivalries in order to protect the collective good. Typical hierarchies include churches, corporations, the military, and the government. Subunits would attempt to break away if they saw no benefit in remaining with the collective. As a result, hierarchies employ strategies of compromise, "of not pressing problems to the point of defining a single overriding objective, and of creating a complex and obscure tradition in which each subunit can find its place" (Douglas and Wildavsky 1982, 91). Moreover, hierarchies promote multiple vague goals, satisfying different constituents and allowing hierarchies to rationalize whatever goal is attained. These goals also tend to be modest and there is no requirement to satisfy all goals concurrently. Risk taking follows the same pattern, resulting from a process rather than a personal decision. Thus, hierarchies tend to address problems in sequence and to assign urgency based on whether a solution is feasible. Absent a clear solution, hierarchies do not concern themselves with long term threats because a stable social system that has protected people in the past will continue to do so in the future (Douglas and Wildavsky 1982, 93).

In contrast to hierarchists, egalitarians prefer a “low” grid way of life in which “no one is prevented from participation in any social role because he or she is the wrong sex, or is too old, or does not have the right family connection” (Rayner 1990, 87). Accordingly, people disposed to an egalitarian worldview oppose a hierarchy of rankings that guides the distribution of duties, offices, entitlements, and opportunities. Moreover, egalitarians tend to distrust authority, holding a particular distaste for the “trappings of hierarchy—secrecy and classification, chains of command, obscure military jargon, and the like” (Ripberger et al. 2011, 715). Like communitarians, egalitarians tend to exist on the borders, sometimes moving in and out of the center with the ebb and flow of public interest in issues related to equality and the environment. However, egalitarians co-mingle uncomfortably with hierarchists and individualists and rarely acquire any substantial power, preferring to challenge the center from the periphery.

People inclined toward individualism or hierarchy usually dominate society’s power structures, including the enterprise, and share similar ideas about threats, risks, and danger. Both give high priority to threats to their respective systems and both claim that they can solve problems through market expansion or growth in the collective. For different reasons, neither group places trust in the ability of individuals to make rational decisions. Hierarchists believe that organizational processes produce rational decisions in spite of individual self-interests. Individualists trust in their own rational decision making, but competition leads to distrust of others. However, the groups differ on their views of history and future problems. The hierarchy trusts in its traditions to solve future

problems and thus it is in no rush to make decisions. In contrast, individualists are always in a hurry and they generally distrust tradition (Douglas and Wildavsky 1982, 97).

Hierarchists and individualists tend to promote the status quo. Hierarchists believe that maintaining the current system gives future generations the best chances for success. Individualists support the current system as long as it preserves their liberty and safeguards against those who free ride on their successes. Individualists accept long-term risks as long as the risk taker is the one allowed to collect the rewards. With their faith in the Darwinian nature of markets, individualists abhor government interference with markets. Neither group expects long-term risks to actually occur. Hierarchists believe that even if they live long enough to witness a calamity, “institutional arrangements stop mutual recrimination” (Douglas and Wildavsky 1982, 100).

Hierarchists and individualists are equally averse to readily apparent, high probability risks that threaten radical societal change. Thus, both groups most fear foreign invasion and economic decline. While they tend to unite on defense issues, they differ on the acceptable level of government interference with the economic life of individuals. They also tend to agree on environmental risks, largely discounting them unless there are immediate, undeniable dangers to their institutional well-being (Douglas and Wildavsky 1982, 100).

The cultural theory of risk has its detractors. Legal scholar Cass Sunstein offers the most critical appraisal of the theory.⁶² People exhibit various forms of bounded rationality in their assessment of risks, ensuing from the cognitive and social mechanisms

⁶² Cass Sunstein served as the Administrator of the White House Office of Information and Regulatory Affairs from 2009 to 2012.

that influence how they process information. As a result, people are prone to “misfearing: they fear things that are not dangerous, and they do not fear things that impose serious risks” (Sunstein 2006, 1110).⁶³ Sunstein contends that cultural profiles are merely a reflection of bounded rationality and that cultural explanations lose explanatory power for risks that are not caught up in hotly contested and divisive cultural or political issues. Thus, “while people are divided about the risk of global warming, they are not so divided about the risks associated with bridges” (Sunstein 2006, 1115).

Some risk scholars have challenged the evidence supporting the cultural theory of risk. Sunstein finds that the evidence underpinning the causality claims for the cultural theory of risk could easily be reversed. In other words, “does culture predict risk perceptions, or is the converse true?” (Sunstein 2006, 1115). Other risk scholars are even more critical of the evidence, noting that it is surprisingly meager and that the limited evidence that is available explains only a minor part of the variance in how people perceive risks (Oltedal et al. 2004, 5, 25). These scholars also observe that the research design of studies supporting the cultural theory of risk discounted how people may adhere to different ways of life in different contexts. For example, how do the questionnaire instruments most often used in the studies account for the person who is individualistic at home, hierarchical at work, and communitarian in his social organization affiliations (Oltedal et al. 2004, 5, 28).

Based on my experiences in the enterprise, I offer one final critique. The cultural theory of risk contends that people choose their preferred way of life and its associated

⁶³ For a complete explanation of bounded rationality see Sunstein 2002, 2005.

worldview. However, what if people are not making a deliberate choice, but instead are being influenced by the institution of which they are part? I originally joined the Army on a four year contract to pay for college. Thirty years later, I retire. However, I only became fully aware in the last ten years of how much I am a product of the institution that I joined without giving much thought to whether it suited me. Perhaps the institutions, jobs, organizations, and other collectivities that people join, as much by serendipity as by choice, play a large role in shaping our preferred way of life.

While these criticisms have inspired proponents of the theory to further operationalize its concepts and to subject them to more extensive testing, the theory remains helpful for the purposes of this study.⁶⁴ As an analytic tool, the cultural theory of risk is representative of a much broader family of risk theories that share much in common, particularly regarding bounded rationality. Thus, the theory encourages me to consider what other influences are weighing on members of audiences within the national security enterprise. Since I do not attempt to explain why audiences embrace certain meanings of climate change, I acknowledge but am not concerned about the theory's explanatory power in this project. Rather, the theory provides concepts and terminology that I evaluate for their descriptive value relative to securitization theory's treatment of audiences.

⁶⁴ The Cultural Cognition Project at Yale Law School is a prominent example. See <http://www.culturalcognition.net/>.

Insights on Threat Meanings and Audiences

The cultural theory of risk provides another perspective for looking at audiences and how they might come to view and contend with threats, including an environmental threat such as climate change. Douglas and Wildavsky offer that egalitarians and communitarians are concerned about environmental risks because the commercial activities that promote these risks are also responsible for social inequality, unconstrained self-interest, and rampant consumerism. Accordingly, they favor the regulation of commercial activities that produce these harms. Individualists downplay or dismiss environmental risks because of “their commitment to the autonomy of markets and other private orderings” (Douglas and Wildavsky 1982, 36). Likewise, hierarchists “perceive warnings of imminent environmental catastrophe as threatening the competence of social and governmental elites” (Douglas and Wildavsky 1982, 36). When Senator James Inhofe made the comment quoted at the beginning of this section, he may have been speaking as an individualist or a hierarchist, discounting the threat of climate change because acknowledging the threat and supporting a solution commensurate with the threat would undermine his worldview, detach him from his cultural group, and likely cost him his job.

Individualists and hierarchists constitute the majority in the enterprise, especially in the executive branch and Congress. As a result, their worldviews shape the dominant discourses of the center, a discourse that is not inclined toward extraordinary measures to contend with environmental threats to collective goods, including the threat of climate change. However, the enterprise is discussing climate change, and competing discourses

are in play. Perhaps egalitarian or communitarian views on climate change are promoted by some audiences, providing climate change a voice in the enterprise. However, a more likely explanation is that individual audience members do not conform rigidly to worldviews. Hence, Douglas and Wildavsky’s parsimonious typology may allow for a sliding scale of views along the group-grid continuum.⁶⁵ For example, a person might have a generally “high” but not extreme grid-group orientation, yielding a hierarchical communitarian way of life. On the other hand, a person with a generally “low” but not extreme grid-group orientation might embrace egalitarian individualism (see Figure 4). Such combinations may provide insights on enterprise member discourses that exhibit environmental concerns more typical of egalitarian or communitarian views.

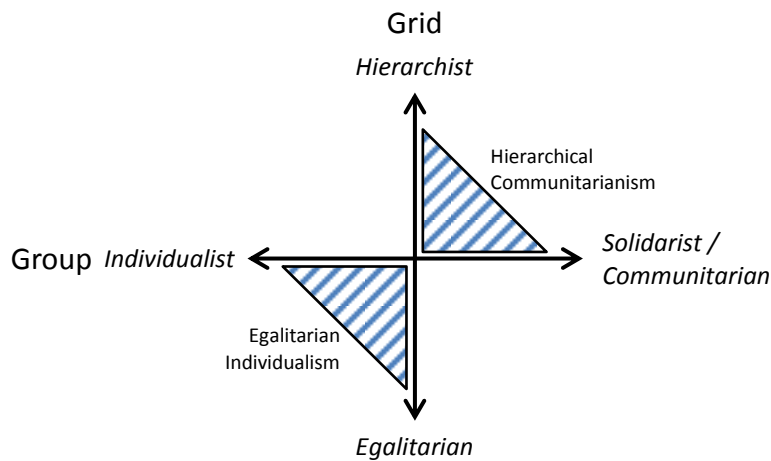


Figure 4. Egalitarian Individualism and Hierarchical Communitarianism

⁶⁵ I derived this idea and its application to the enterprise from Kahan (2012).

Situating the Theories in the Project: A Summary

I selected the four theories described above because my experiences in the enterprise suggested them to me. I did not select them because they were unique, nor because they may or may not complement or contradict one another. I was not looking for theories that overlapped or provided mutually exclusive insights. Rather, as analytic tools, I equate them to the lenses used by an eye doctor to refine a patient's vision with varying combinations providing different refinements.

Alone or in combination, the lenses provide sundry ways to look at discourses related to the meaning of climate change in different audiences. Consider the enterprise's predisposition toward traditional threats. Walt's balance of threat theory follows its pedigree, emphasizing exogenous, actor-based threats that exhibit intentionality. Yet Walt also concedes that ideational factors matter and that the security agenda need not be restricted to traditional threats associated with war and conflict. Regrettably, Walt does not offer much guidance to the reader on how to make sense of his concession. Social identity theory offers a possible way to think about the enterprise's treatment of non-actor based threats. Perhaps the enterprise does not know how to shift from its focus on actor to non-actor based threats, or maybe the prospect of the American lifestyle being part of the threat is simply unpalatable.

Obviously, climate change is being discussed within the enterprise, so the combination of the balance of threat theory and social identity theory only gets us so far. Adding the three streams model might help us to understand the presence and content of climate change discourses by looking at the problem stream and how climate change is

contending for a spot on the agenda. The cultural theory of risk's insights on ways of life and supporting worldviews provides a way to consider discourses that seem to fit largely, but not entirely within a realist enterprise. In short, maybe a mix of worldviews within the enterprise accounts for the presence of climate change on the agenda and also for its relatively weak position on the agenda.

The four theoretical lenses can also be used in different combinations to consider the roles of enterprise audiences and their members. The balance of threat theory allows that ideational factors bound the rationality of enterprise members. Walt offers ideology as an example. However, the balance of threat theory does not provide any more insights on audiences, considering national security the responsibility of rational statespersons who place security of the state above all else. The three streams model tempers that view, showing that the interaction of processes and participants yields outcomes that are not predictable based on expected utility alone. While the three streams model does allude to the roles of different audiences and individual members, it does not offer much conceptual help for looking into those audiences in more depth, down to and including the individual level.

Social identity theory provides a conceptual lens for looking at how audiences compete, as well as how the individual is constrained and emboldened by membership in groups that may be in competition to set the agenda or specify alternatives. The cultural theory of risk adds another lens, proposing that ways of life and their supporting worldviews shape individual and audience perceptions of risk. Since worldviews tend to align with specific identity groups, an individual who deviates from group norms, also

runs the risk of group censure. However, some groups may be more tolerant of individuals who exhibit mixed worldviews. Together, these theoretical lenses provide a way to conceptually explore the climate change discourses in an enterprise composed of many audiences, largely dominated by individualists and hierarchists that generally apply a traditional realist paradigm in the process of making national security policy.

In the next chapter, I present my research design, methodology, and analytic framework, showing how these theories are integrated throughout. I describe how the theories fit within my research design and methodology, and I present a set of questions discerned from these theories as part of a comprehensive analytical framework for querying national security-climate change discourses. Then, as part of the project's findings in chapter five, I highlight how the discourses evidenced the concepts from these theories. Finally, in chapter six, I discuss the degree to which the theories help to describe audience behavior after Obama's securitizing moves, showing that each of the theories may indeed benefit securitization theory's treatment of audiences.

CHAPTER FOUR: RESEARCH DESIGN AND METHODOLOGY

*In my personal military judgment, formed over 38 years, we are living in the most dangerous time in my lifetime right now...*⁶⁶

The material from the three previous chapters merges within this chapter, yielding a research design and methodology. In chapter one, I narrowed my interest in threat identification within the enterprise to a focus on climate change. In chapter two, I situated the project within the literature. I described the enterprise, highlighted the strong influence of the realist paradigm, explored alternative concepts of threat and security that compete for attention in the enterprise, and discussed the role of securitization theory in shaping my thinking about this project. In chapter three, I introduced the balance of threat theory, three streams model, social identity theory, and the cultural theory of risk, discussing how these theories serve as analytic and descriptive tools in this project.

In this chapter, I present my overall research design and discuss the social constructionist epistemology that shaped this project and my thinking about climate change meanings. Next, I describe the specific methodology that I applied to discern answers to the research questions. I narrow my focus from the enterprise writ large to specific sub-audiences of the executive branch, Congress, and national security experts. I

⁶⁶ General Dempsey, Chairman of the Joint Chiefs of Staff, made this comment on February, 2012, while testifying before the US Congress House Armed Services Committee on the FY 13 National Defense Authorization Budget Request from the Department of Defense (Parrish 2012).

also discuss my sample period, data sources, and sampling method. Then, I describe my analytic approach, emphasizing frame analysis as a form of discourse analysis. I conclude with my analytic process, revealing an analytic framework that translates my experiences, approach to frame analysis, and the four theories discussed in chapter three into questions that I use to analyze the texts that constitute the data for this project.

A Research Design for Describing Discursive Complexity

General Martin Dempsey, Chairman of the Joint Chiefs of Staff, made the assertion at the beginning of this chapter while testifying to Congress in 2012. What is peculiar about the comment is that it discounts the greatest existential threat of the past seventy years, a threat that consumed the attention of the enterprise for decades—the threat of nuclear war between the US and the Soviet Union. Do we live in equally dangerous times? Do terrorism, cyber threats, and China really compare to the danger faced during the Cuban missile crisis in 1962, the year I was born? Clearly, I do not share Dempsey’s threat assessment and yet I know him to be a thoughtful, intelligent leader. How can we have such different perspectives on the threats facing this country?

This project started with a puzzle, asking why some issues are perceived as threats while others are not. Informed by my own career experiences, I narrowed the puzzle to a question regarding the treatment of the climate change threat by the enterprise. In short, I wondered why climate change did not hold a prominent spot on the security agenda. As discussed in chapter two, securitization theory offers a way to think about the relationship between securitizing actors and their moves and the audiences that choose to accept or decline an issue as a security problem. Yet, the theory does not fully explore the role of

audiences after the securitizing move and thus I suggested that an examination of climate change meanings might reveal a misalignment between the securitizing actor and one or more audiences. My research design (see Figure 5) draws from securitization theory, the discursive and interactive nature of meaning production, and social constructionism.

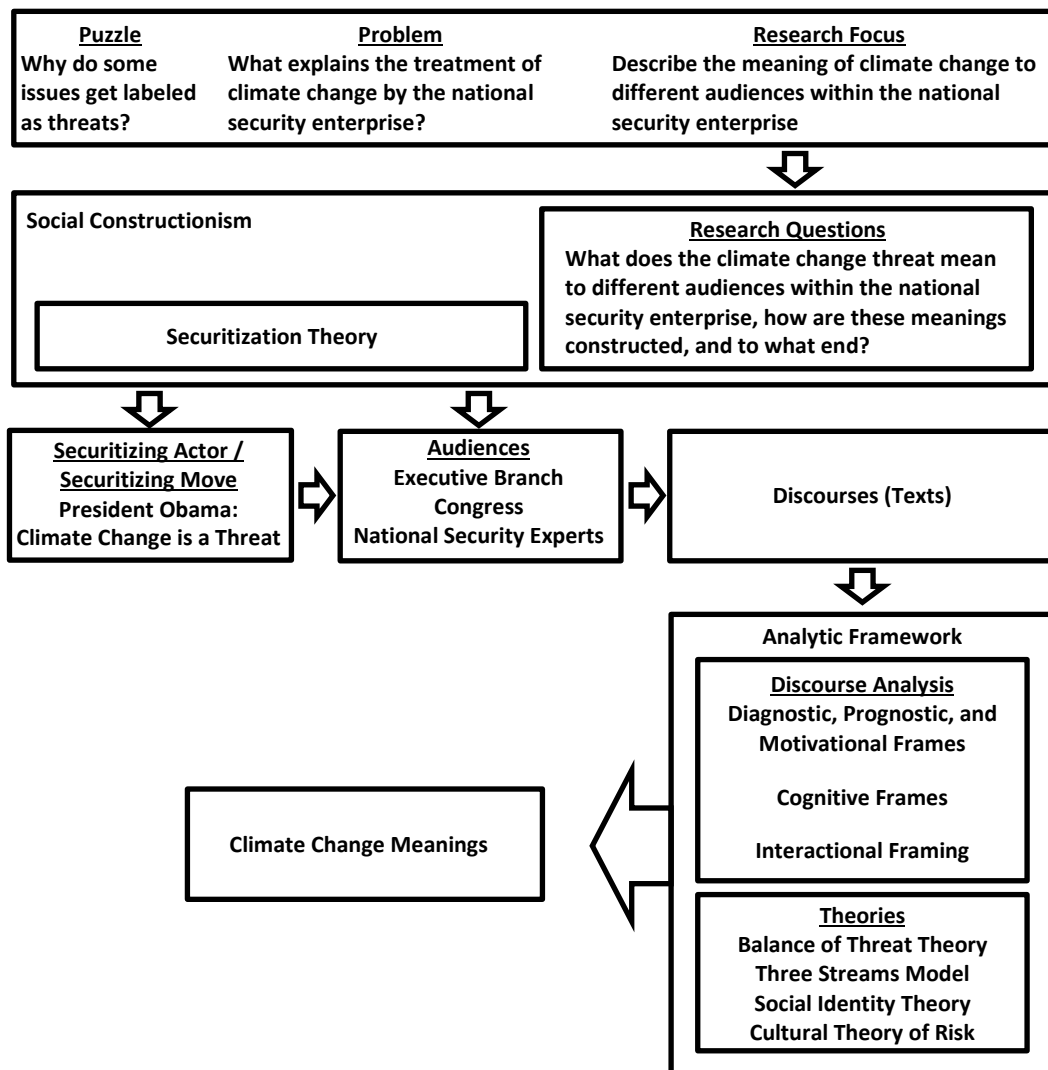


Figure 5. Research Design Schema

From securitization theory, I adopt the concept of securitizing actors, securitizing moves, and audiences. Obama is the securitizing actor who has made several moves in the form of publicized speech acts that declare climate change a threat. Given this project's focus on the national security enterprise, I conceive of the audiences as those that must accept and act on the move in order for the climate change issue to become securitized. I confined my study to three audiences, broadly defined here as the executive branch, Congress, and national security experts.

The social construction of meanings by individuals and groups is the key additive element to the research design inspired by securitization theory. I consider people to be meaning-making beings. We use stories to make sense out of the world and our place in it, and we communicate these stories with their embedded meanings through discourse. Borrowing from Nelson Phillips and Cynthia Hardy, I define discourse as an interrelated set of texts, and the practices of their production, dissemination, and reception, which bring an object into being (Phillips and Hardy 2002). Texts may include both written and spoken words, pictures, symbols, songs, artifacts, and art forms.

Discourses produce the social reality that we perceive as real. Yet, meanings are not set in stone and the discourses that give rise to meanings are often incomplete, contradictory, and ambiguous (Phillips and Hardy 2002). Thus, meaning making is an inherently interactive process in which meanings may be taught and learned, defended or contested, and changed or preserved. Meanings are often unique to individuals and groups, a result of different identities, demographics, contexts, settings, cultures, and institutional norms and practices. Meanings may vary from individual to individual and

group to group as well as over time. In short, meanings are dynamic and result from a complex interplay of factors. Yet meanings also exhibit consistency, particularly when dominant narratives and hegemonic discourses promote specific meanings while resisting counter-narratives and oppositional knowledge. Institutional norms, policies, and practices tend to reinforce meanings and patterns of meaning making. Thus, the texts that people use to tell their stories and to convey and contest meanings become the key data for the puzzle of threat identification and the narrower study of the climate change threat.

Since texts constitute my data, I used frame analysis, a type of discourse analysis, to discern what climate change means to enterprise audiences, how the meanings were constructed, and to what end. I also drew insights from the theories that I described in chapter three, deriving a set of structured questions that sensitized me to the possibility of alternative meanings as I analyzed the texts for frames related to climate change.

Together, frame analysis and the four theories constituted my analytic framework that I will describe in greater detail in the methodology section of this chapter. Ultimately, the application of the framework yielded robust findings, described in chapter five, that show how climate change meanings were constructed by audiences. In turn, these frames revealed the climate change meanings held by audiences and the ends served by those meanings. I present these meanings in the form of meaning maps in chapter six and also discuss how the four theories may improve securitization theory's treatment of audiences.

Given the project's basis in securitization theory and its emphasis on discourses and the construction of meanings, I framed the project within an epistemology of social constructionism in order to consider what the phenomenon known as climate change

means to audiences. In general, social constructionism contends that social interactions produce and maintain knowledge of everyday reality. People interact with the understanding that their individual perceptions of reality are related, and their subsequent actions reinforce their common knowledge of reality (Berger and Luckmann 1967).

Since social constructionism gained attention in the US in the late 1960s, scholars from many disciplines have drawn from and further developed the concept. Psychologist Vivien Burr argues that social constructionism assumes that the world does not present itself objectively to people, but that people experience the world subjectively and largely through social processes, especially language. Social interactions create shared knowledge about phenomena, objects, and identities that is situational and specific to its historical and cultural context. Shared knowledge does not imply uniformity across society. Rather, people continually shape and reshape their understanding of social reality and thus many social constructions are possible, each of which requires or brings with it different forms of human action (Burr 1995, 2-3). Philosopher John Shotter adds “we live our daily social lives within an ambience of conversation, discussion, argumentation...and justification; much of it to do with...the legitimation of claims to truth” (Shotter 1993, 29). In the process of negotiating their social realities, people constitute and reconstitute their identities, and identities contribute to how people understand reality, creating a dialectical process.⁶⁷

⁶⁷ The fields of international relations and political science most influence thinking about security within the enterprise, and social constructionism is well-established in both fields. Daniel Drezner offers that “constructivism is the most recent international relations paradigm to achieve widespread scholarly recognition (2011, 67). Social constructionism also has its critics. Philosophers Ian Hacking (1999) and Paul Boghossian (2006) argue that the attractiveness of social constructionism is that it is inherently relativistic and thus appealing to those who want to manipulate reality into their preferred version.

My use of social constructionism does not call into question the reality of climate change. I accept the scientific evidence of anthropogenic climate change while allowing that the complexity of the threat precludes a full and accurate accounting of when, how, and to what extent the consequences of climate change will present themselves. Rather, social constructionism informed my research in two ways. First, in spite of the evidence, people attach a wide range of meanings to climate change and the degree of threat it represents. As the findings will later show, ideational factors played an important role in what climate changes meant to individuals and audiences within the enterprise. For example, North Korea has far fewer nuclear weapons than Great Britain, yet we regard the former as one of our foremost foes and the latter as a key ally. Clearly, the physical capability to inflict damage is insufficient to earn a threat label, indicating that intentionality, actual or perceived, matters.

Philosopher John Searle's general theory of institutional facts informs my thinking about ideational factors in institutional settings. Searle uses the concepts of collective intentionality, agentive functions, and constitutive rules (practices and procedures) to describe the structure whereby social reality works. Money illustrates his basic theory. Coins are produced at mints and circulated throughout the nation. These coins meet specific requirements (material composition, shape, pattern, color, and official sanction) that constitute satisfying the X term. When an object satisfies X it counts as a coin (Y) in that nation (C). Not merely a shorthand description of X, Y also describes a new status with an attendant set of functions such as a medium of exchange and a measure of value. Constitutive rules ensure that the coin counts as legal tender for debts.

Note that a status function is a type of agentic function that imposes a collectively recognized status to which a function is attached. If the function of the Y term is not accepted, then the function will not be performed (Searle 1995, 46).

To explain the complexity of social reality, the general theory of institutional facts follows the same model of “X counts as Y in C,” but adds the features of iteration, time, status indicators, power, and background. Iteration describes the process whereby an X term at a higher level can be the Y term from a prior level. For example, as a US Army officer, I can command an Army unit. Graduation from an officer-commissioning program and taking an oath counts as becoming an Army officer. US citizenship counts as eligibility to enter a commissioning program. While this example is limited in scope, there does not appear to be a limit on the type and number of iterations. Ultimately, the sum of these iterations provides the logical structure of society and, the more complex the society, the more numerous the institutional facts and the iterations.

The temporal element recognizes that status-functions do not exist for only an instant. Rather, there are linked systems of iterative structures and constitutive rules that operate across time. Marriage, property ownership, and the use of money are examples of institutional facts that require interaction over time. Institutional structures also rely on recognized sets of relationships that do not require physical presence to convey the function. For example, my military identification card enables me to remain a soldier even when I am on vacation, out of uniform, and away from my unit. If necessary, I can produce the identification card (a status indicator that is collectively recognized and accepted) to prove my position to others.

The structure of institutional facts is a structure of power relations that results from collectively imposed status-functions. In the “X counts as Y” model, the Y term specifies a power that the X term does not display based on its structure alone. According to Searle, power relations follow the form that “we accept (S has power A),” and they often manifest as the rights, responsibilities, duties, and penalties that regulate relations between people. In some cases, an agent gains a new power such as the authority to authorize or certify something else. In other cases, the agent is bound, penalized, or obligated to do something or prevented from doing something. Power relations also emerge from the institutional imposition of procedures to acquire or withdraw power or honor (Searle 1995, 115-116). The Illinois legislature had the power to impeach Governor Blagojevich, and his successful conviction removed his power to govern (and arguably dishonored him in the process). This destruction of power is equivalent to saying that we (the legislature) no longer accept that S (Blagojevich) has A (the rights and obligations of being governor).

Human institutions use constitutive rules, yet people rarely know the rules or consciously follow them. Searle accounts for this apparent flaw in his theory with the *background concept*. Background consists of the “non-intentional or pre-intentional capacities that enable intentional states of function” (Searle 1995, 129). These capacities are the abilities, tendencies, and general knowledge of the world that we have acquired by growing up in a particular culture. While background abilities manifest themselves in many ways, I will highlight three. Background, in the form of mental models or schema, enables linguistic interpretations. For example, if a friend with whom I regularly play

asks me, “do you want to hit some balls,” I think of a club. If another friend who is baseball fan asks me the same question, a bat comes to mind even though he was really referring to handball. “Hit” conveys the same general concept in both cases, but interpretation resulted from semantic clues and background. Background structures our consciousness. Searle offers surrealistic art as an example, noting, “The three-headed woman is still a woman, and the drooping watch is still a watch” (Searle 1995, 134). In other words, even when people try, they find it difficult to dissociate themselves from the influence of background. Background also promotes certain kinds of readiness that later structure the nature of an experience (Searle 1995, 136-137). In Iraq, I was ready for unexpected explosions. When I in Florida, I was ready to see manatees. However, at home, I would be surprised if I heard loud explosions or saw a manatee in my bathtub.

Guided by background capacities, people may seem to be following the rules in society because they are acting adeptly within an institution or behaving as expected. Yet, Searle’s key point is that people are unconsciously following the rules. People have developed capacities that make them part of society, and they developed those capacities because those are the rules of society. Thus, a person can participate fully in society without having learned the rules or consciously following them (Searle 1995, 127-128).

In regards to this project, the enterprise is a human institution composed of many audiences. These audiences share a concern for national security and tend to use the same terminology, loosely described as the elements of strategic logic (e.g., context, interests, ends, ways, means, risks, assumptions, costs). However, the unique traits of each audience are likely to influence “X counts as Y in C,” especially for a threat that

does not look like other threats toward which the enterprise has typically focused its resources and energies. How people construct the threat of climate change, including the meaning and functions they assign to it, should be evident in their discourses. Not all functions may be indicative of a threat perception. I have witnessed people in the enterprise discount or downplay the dangers posed by climate change while stressing its potential benefits of resource extraction and new transportation routes in the Arctic Ocean. Perhaps climate change meant something different to these people, a phenomenon with benefits. As I will show in the next chapter, the notion that climate change (X) counts as a national security threat (Y) in the enterprise (C) revealed variability in the interpretation of context (C) and even deniability of the function (Y).

The second way that social constructionism informed my project involves identities. Individual and group identities are not static, rather they are “produced and reproduced, as well as transformed and dismantled, *discursively* [original emphasis]” (Wodak et al. 1999, 3-4, cited in Archakis and Tzanne 2005). The implication is that the introduction of climate change as a national security threat creates changes in the social context. These changes likely affect people and audiences differently, which, in turn, affects the social construction of the climate change threat.

Although the enterprise is generally a closed system that takes national security as its exclusive domain, it is still a socially constructed object subject to change. Climate change is different from most threats faced by the enterprise, lacking intentionality, direction, and a distinct enemy against whom to focus security efforts. I have heard colleagues say that the enterprise lacks the tools to contend with climate change, that

climate change is not our problem, or that a focus on climate change will distract us from the threats that we are supposed to focus on. These comments are all suggestive of specific functions assigned to the social object referred to here as the enterprise, functions that may shape an individual or audience's view of climate change.

Methodology

The literature review showed that existing scholarship has paid scant attention to the discursive complexity of the climate change threat within the enterprise. This project begins to fill that gap by describing what the climate change means to people from different audiences, how those meanings are constructed, and to what end. Given the size of the enterprise, this project is necessarily an initial foray into mapping the meanings of climate change evidenced in the enterprise. Furthermore, I did not attempt to answer *why* the enterprise has not securitized the threat of climate change.⁶⁸

As I move from a research design to a project methodology, I acknowledge that one cannot simply observe socially constructed meanings. Moreover, the interactive and complex nature of meaning construction combined with the limitations of this project, prevented me from directly observing individuals within or between audiences as they constructed, defended, or contested meanings in the moment. I also concede that I could not conclude with certainty what climate change really means to an individual since I was unable to observe such thoughts. However, individuals and their larger audiences leave behind an abundance of evidence in the form of discourses, and these discourses offered

⁶⁸ I view this descriptive research project as foundational for a future project focused on explanation. Undertaking both projects would have exceeded my time and resource limitations.

me insights on the climate change meanings they embrace. Prominent members of the enterprise are public officials who make public statements or host hearings. Some members publish their ideas. In short, the enterprise generates a large volume of discourse (speech, texts, and symbols), which, in turn, spurs further discourse. These discourses provide evidence of meanings and meaning construction from which a researcher can discern insights and draw conclusions, and are thus the essential element of this project's methodology. The remainder of this chapter will present the research cases and describe my data sources and approaches to data sampling and data analysis.

Research Cases

The audiences selected for this project—the executive branch, Congress, and national security experts—represent a cross-section of the enterprise as depicted in Figure 6. However, before proceeding to a detailed description of the research cases, including the specific sub-audiences selected within them, I will describe the refinements that I made to the enterprise model presented in chapter two and explain the reasons for not selecting other audiences.

The revised model makes minor adjustments to the model as originally conceived by George and Rishikof (2011). These refinements aid in describing the audiences under study as well as explaining my rationale for selecting some audiences and not others. In the revised model, the center is occupied by the executive branch, but the president's role as the focal national security actor is highlighted because his securitizing moves drive and reverberate throughout the entire enterprise. Otherwise, the executive branch, Congress, and the Supreme Court remain unchanged from the original model.

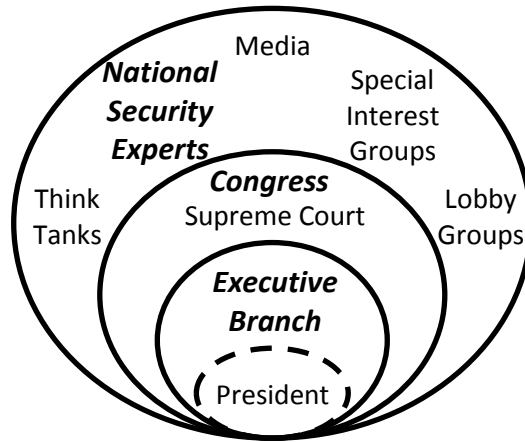


Figure 6. Revised Model of the National Security Enterprise

The outer circle consists primarily of informal participants in the enterprise that do not have a formal role in developing strategy except to the degree that the formal players consult them or bring them into the process. In the original model, the enterprise's outer ring consisted of lobbyists, think tanks, and the media. In the revised model, lobby groups advocate on a particular issue or range of issues, seeking a specific outcome. However, not all groups that influence the enterprise necessarily behave as lobbyists. Thus, I added the term *special interest groups* to account for communities of interest that cooperate, communicate, and often organize to advance a specific area of knowledge. These groups may remain apolitical or choose to advocate on a specific issue. For example, scientific audiences are special interest groups that generally remain apolitical. However, the climate change issue has led many scientists to adopt a more prominent advocacy role. The addition of *national security experts* is recognition of the important role that experts—scholars, practitioners, and some who embrace both roles—

play in the enterprise. While many experts align with think tanks, others avail themselves of social media to maintain their independence from think tanks.

All of the audiences influence how climate change is treated by the enterprise, and all are worthy of study. However, since I must limit the project, I excluded many of them. As one of the formal players, the Supreme Court's role in the enterprise is important, but limited in scope and less about meaning construction than about legal interpretation. For example, it considered the legality of the Environmental Protection Agency's (EPA) role in regulating carbon dioxide, an important policy consideration. However, this legal review did not contend with the meaning of climate change. Rather, the Supreme Court focused on the regulatory authorities of the EPA.

From the outer circle of informal participants, the media is particularly conspicuous for its exclusion from this project, a choice based on two reasons. First, although the media, especially correspondents long associated with the enterprise, cover national security, the media does not play a direct or legally prescribed role in crafting strategy. Second, as I conducted preliminary research in support of this project, I quickly recognized that the media is important and deserving of a separate study.

Of the remaining four groups in the outer circle, I excluded think tanks, lobby groups, and special interest groups for two reasons. First, each security issue tends to attract a different set of informal actors who may be interested in advocating for a particular problem or solution, or who seek to impede recognition of other problems or solutions. Many groups attempt to sway policy related to climate change, but that influence is often revealed in the discourses of the formal members.

Second, while groups with an interest in climate change undoubtedly exhibit some degree of nuance in climate change meanings, I suspect that these meanings flow from the mission, guiding philosophy, and interests of the groups, particularly special interest and lobbying groups. In contrast, the formal participants in the process ostensibly place national security concerns above special interests, or at least make that claim. Regarding think tanks that look at national security, most tend to align by political philosophy and thus I would expect to find a difference in meanings between the more conservative Heritage Foundation and the more progressive Center for a New American Security, for example. Yet, think tanks often serve as places where former and aspiring political appointees or elected officials continue to network and refine their thinking on security issues. These people often write for think tank publications as well as for elite security journals where they gain broader recognition for their expertise in national security.

My selection of the executive branch, Congress, and national security experts emphasizes the formal players most responsible for developing strategy while acknowledging that informal participants have influence on the formal players. I have witnessed many references to key security journals by members of the enterprise and thus I view national security experts and their writings as a breeding ground for ideas on threats and responses to them. Below, I describe each of the three primary audiences and their respective sub-audiences from which I derived my dataset.

Research Case #1: The Executive Branch

The executive branch supports the president and enables his exercise of constitutional powers, including his duty to provide for national security. Within the

enterprise, the executive branch is the most responsive to the president's direction and is responsible for much of the planning and implementation of activities associated with national security. To varying degrees, all of the executive branch's departments, agencies, and intelligence organizations contribute in some way to national security. The Departments of Defense, Homeland Security, and State play major roles, but other departments such as Interior, Justice, Energy, and Commerce can play significant roles, depending on the nature of the security issue. The IC largely exists to monitor and counter existing threats and to anticipate threats to national security. While the IC considers the capabilities and intentionality of threats, it also considers the causal factors that contribute to the emergence of these threats, including environmental factors. The NSC plays a unique role in the enterprise, serving as the president's hub for coordinating whole-of-government strategies to advance national interests and to plan and coordinate strategies and policies to contend with threats to US interests.⁶⁹

I narrowed my study of the executive branch to the Departments of Defense (DOD), Homeland Security (DHS), Interior (DOI), and State (DOS), and the IC. I selected these sub-audiences for three reasons. First, all but DOI are the traditional players most involved with the development and implementation of national security policies. Second, I wanted to examine discourses at the climate change-national security nexus and thus I needed to select audiences that normally engage in security discourses in order to ascertain the meanings they accord to climate change. Third, in my thirty years

⁶⁹ The term *whole-of-government* refers to the desire for all government elements to participate in a coordinated manner to advance US interests. The term gained prominence after the September 11, 2001 attacks when the lack of government coordination was implicated as a significant factor in US security vulnerabilities. The term is commonly heard in the enterprise.

of enterprise experience, I have worked most often with or within DOD, DHS, DOS, and the IC. Thus, I am well suited to analyze their national security related discourses.

I added the Department of Interior (DOI) for three reasons. First, DOI is responsible for managing and protecting much of the nation's vital resources, resources that are imperiled to varying degrees by the effects of climate change. Second, DOI plays a leading role in coordinating US climate-change science and resource-management strategies. Third, DOI traditionally contends with environmental and resource issues, but seldom participates as a major player with regards to national security issues. Thus, DOI presents an opportunity for determining the degree to which national security discourses have become interwoven with resource and environmental discourses.

None of the other executive branch departments, or separate agencies or bureaus provides as lucrative an intersection of national security and climate change discourses. I almost excluded the IC because of the difficulty in finding unclassified materials, but the IC is such a central player in the national security process that I elected to retain it. While many of the other executive branch organizations participate in national security discussions, their roles are either highly specialized or secondary to the major players. For example, I considered the Department of Energy (DOE) given its participation in national security discourses, especially those related to energy security and weapons of mass destruction. However, I excluded DOE because my initial review of national security-climate change discourses revealed negligible DOE participation.⁷⁰ I also

⁷⁰ I will discuss my data sampling for all three audiences in greater detail later in the chapter.

examined the Departments of Commerce (DOC) and Transportation (DOT), but the security functions that they once performed have largely been subsumed by DHS.

With regards to climate change discourses, many other executive branch departments, agencies, and bureaus play varying roles, if for no other reason than to comply with Obama's executive orders related to climate change.⁷¹ But, a preliminary review of these discourses revealed minimal national security related content. For example, I considered the National Aeronautics and Space Administration (NASA) and the EPA, because of their role in climate change science and domestic responses to climate change. James Hansen, an expert on climate change and an outspoken defender of climate change science, retired in 2013 from NASA in order to take a more active role in addressing the climate change issue. However, a review of the NASA and EPA's websites, each with copious material on climate change, showed that they had fully embraced their unique roles related to climate change science or domestic policies, but made no specific mention of national security implications.

Research Case #2: Congress

On matters of national security, the president and his executive branch take the lead. The president is the country's only legal representative with respect to foreign relations and he is the most prominent voice in articulating US national interests (Sarkesian et al. 2008, 11). Yet, Congress plays a vital role by resourcing national security policies and providing oversight of executive branch organizations responsible

⁷¹ Discourses often mentioned EO 13514. On November 1, 2013, Obama issued a more sweeping EO titled "Preparing the United States for the Impacts of Climate Change" (Obama 2013a). However, this EO took effect after my data sample window.

for national security. While both the House and the Senate would provide interesting insights on climate change meanings, I chose to focus on the Senate because its members serve longer terms, offering a degree of continuity over the sampling period that the House does not. Moreover, with fewer members I was able to sample a larger percentage of its membership than would be possible with the House. Lastly, climate change is a global phenomenon with both domestic and international implications, and an issue that requires a global solution. Like the House, the Senate is an elected audience deeply influenced by domestic factors. However, the Senate also plays key roles in approving presidential appointees and in ratifying treaties, including the failed effort to ratify the Kyoto Treaty. Thus, the Senate afforded a relatively small and diverse audience with unique functions within the enterprise.

In spite of its relatively small size, the Senate is a complex organization that executes its responsibilities largely through its twenty committees, sixty-eight sub-committees, and four joint committees. These committees are where the work of the Senate gets done, serving as discrete sub-audiences suitable for closer study. I narrowed my examination to selected committees, using the same strategy that I applied to executive branch departments. Since my interest is in the intersection of national security and climate change discourses, I focused on the committees, inclusive of their sub-committees, that have either national security or climate change as part of their stated jurisdiction.⁷² While many committees include national security as an occasional agenda item, only the Senate Committee on Foreign Relations (SFRC), Senate Armed Services

⁷² I used the jurisdiction statements published on each committee's website. See http://www.senate.gov/pagelayout/committees/d_three_sections_with_tasers/committees_home.htm.

Committee, and the Senate Select Committee on Intelligence specify national security in their jurisdiction statements. My initial review of the SFRC's discourses revealed substantial climate change content. In contrast, the Armed Services Committee made few comments on climate change. However, I did not find this surprising since the committee spends most of its time looking at matters related to manning, equipping, and training the armed forces. Ultimately, I excluded the Intelligence Committee because few unclassified discourses were available and fewer still had any climate change content.

Most Senate committees have taken some interest in climate change as evidenced by the topics that appear on their agendas. However, I focused on two committees whose jurisdictions specifically mention climate change: the Senate Committee on Environment and Public Works (CEPW) and the Senate Committee on Energy and Natural Resources (CENR). My review of the discourses in these committees also revealed substantial national security content.

Overall, the SFRC, CENR, and CEPW produced the most national security-climate change discourses. However, I also wanted to cast a wider net to look for similar discourses occurring at the Senate level. Although most of the Senate's work gets done in committee, Senate-wide sessions are used for votes and general discussion across a range of topics. For discussions, a quorum is seldom present, but the discourse is rich in content. As I will discuss later, I used the *Congressional Record Daily Edition (CRDE)*, yielding discourses from senators not heard through the committee-level discourses.

Research Case #3: National Security Experts

National security experts are as varied as each individual who merits the label and yet there is general consensus on the key experts within and outside of government.

Experts earn the title through word and deed. The enterprise is a relatively closed system and the location of these experts within the enterprise is often dictated by election results and changes in administrations, defying easy alignment with any one group in the enterprise.⁷³ Accordingly, national security experts often move between audiences, often between the executive branch and think tanks, lobby groups, or special interest groups. However, some members of the media as well as current, former, and ostensibly retired national security practitioners also join the ranks of experts.

National security elites and intellectuals often debate and test ideas in prestigious security policy journals. These journals become the venues through which elites and intellectuals seek wider audiences. I consider these journals analogous to the sub-audiences that I chose for the executive branch and Congress. For this project, I selected *The Washington Quarterly*, *Foreign Policy*, and *Foreign Affairs*. Although available to the public, the chief market of these journals is the group of leaders, policymakers, and intellectuals who make or influence national security policy. Moreover, the organizations that produce these publications act as a supporting cast for the enterprise, and the authors are often current or former policymakers.

⁷³ The term *relatively closed* does not equate to rigidity in membership or thinking. Rather, the enterprise evidences consistency, particularly across its formal audiences. Formal players in the inner circles have specific roles in policy formulation, share a common lexicon, hold security clearances, work towards the general goal of national security, and attend the same schools and conferences. Formal players often move into informal audiences as their political careers ebb and flow or more lucrative jobs present themselves. Yet, the size and complexity of the enterprise ensures that meanings are not necessarily ubiquitous across players or audiences. Enterprise membership also shifts over time, creating further chances for change.

The Center for Strategic and International Studies (CSIS) publishes *The Washington Quarterly*. CSIS is a distinguished and influential think tank in Washington, D.C. ranked in 2011 by its peers and a panel of experts on public policy institutes as the top security and international affairs think tank in the world (McGann 2001, 47). *The Washington Quarterly* analyzes changes in the geo-political environment and considers their public policy implications. Contributors to the journal reflect diverse perspectives and multiple nationalities (Lennon 2013). The journal claims subscribers in over 50 countries and an elite readership of policymakers as well as members of academic, corporate, and media communities (McGann 2001, 47).

The Council on Foreign Relations (CFR) publishes *Foreign Affairs*. CFR is also a respected think tank in Washington, D.C., ranking third in 2011 in the security and international affairs think tank category (McGann 2001, 47). *Foreign Affairs* has been an influential publication on international affairs, foreign policy, and national security for over ninety years, promoting itself as a journal that “can do more to guide American public opinion by a broad hospitality to divergent ideas than it can by identifying itself with one school” (CFR, 2013). *Foreign Affairs* ranked among the top five most influential media outlets with its print and digital versions reaching over 225,000 readers monthly in 190 countries, excluding 500,000 monthly unique visitors via online content (CFR, 2012). The journal’s print circulation is just over 161,000, including ten to fifteen thousand in the Washington, D.C. area (Audit Bureau of Circulations, 2012).

The Foreign Policy Group, a division of the Washington Post Company, has published *Foreign Policy* since September 2008.⁷⁴ The Group continues to expand its online content, and has won numerous National Magazine and Digital Magazine Awards. Contributors to the journal are typically international affairs, economics, and national security experts (Foreign Policy Group 2013c). The Foreign Policy Group claims a digital readership of 2.5 to 3 million, a print readership of 280,000, and a print circulation of 100,000. Executive branch members involved with foreign policy, defense, national security, and regulatory agencies constitute a quarter of US government readership (Foreign Policy Group 2013a). David Axelrod, former Senior Advisor to Obama, noted that [President Obama] will read *Foreign Policy* magazine, a treatise on economics, and *Sports Illustrated*⁷⁵ (Quoted in Foreign Policy Group 2013b).

Sample Period, Data Sources, and Data Sampling

This project focused on the uptake of climate change as a threat by different audiences following a securitizing move by President Obama. These moves are easily identified and, although relatively few in number, provided some flexibility in bounding the project's data collection. In general, I was interested in the period corresponding to Obama's time in office, particularly since Obama has been more outspoken on climate change than his predecessors were and yet little action has followed. However, given the constraints of this project, I started the sample in May 2010, beginning with the

⁷⁴ The Carnegie Endowment for International Peace (CEIP) published *Foreign Policy* until 2008. CEIP is another think tank in Washington, D.C. ranked fourth in 2011 in the global security and international affairs think tank category (McGann 2001, 47). Under CEIP, the journal won many National Magazine Awards.

⁷⁵ Most people with whom I have worked in the enterprise subscribe to at least one of these three journals.

publishing of the *2010 National Security Strategy (NSS)*, Obama's definitive speech act for identifying threats to the US and the strategy to address those threats. The *NSS* is noteworthy for addressing the climate change threat in a key, highly publicized national security document and reversing President George Bush's efforts to depoliticize the climate change threat. I ended the sample in September 2013 in order to collect data in the months following Obama's 25 June 2013 speech at Georgetown University where he unveiled his *2013 Climate Action Plan*. This forty-month period provided substantial data, covering all key audiences under study.

The data for this project consists of written texts. The dataset consists of remarks, statements, testimonies, orders, editorials, articles, memos, departmental manuals, and hearing transcripts. These texts serve as proxies for truly knowing the climate change meanings held by individuals and audiences, or for personally experiencing meaning-making processes by large, often secretive audiences within the enterprise. Some of these texts have been produced by individuals or a small number of authors (e.g., journal articles) while others were produced by named or unnamed authors on behalf of an audience (e.g., reports or manuals). Most of the texts are directly attributable to specific members of the enterprise. The non-attributable texts were included only if they fit the sample period and addressed climate change in the context of a specific department's mission, tasks, goals, and operating procedures.

In general, the texts provided insights on the climate change meanings exhibited by specific senior-level individuals from the executive branch, Congress, or by national security experts. Although these discourses were intended for specific audiences, I rarely

could see both sides of the interaction. Notable exceptions were congressional hearing transcripts that captured discursive interaction and sometimes revealed a clash of climate change meanings. Taken as a whole and considered temporally, the dataset revealed the climate change meanings of prominent individuals in specific audiences as well as some of the interactions related to meaning making and meaning contestation within and across enterprise audiences. The dataset tallies by audience are shown in Table 1.⁷⁶

Table 1. Data Set Tallies by Audience

Executive		Congress		National Security Experts	
Defense	23	Energy and Natural Resources	26	<i>Foreign Affairs</i>	20
Homeland Security	10	Environment and Public Works	8	<i>Foreign Policy</i>	16
Interior	25	Foreign Relations	15	<i>The Washington Quarterly</i>	3
State	34	<i>Congressional Record Daily Edition</i>	31		
National Intelligence	2				
TOTAL	94		80		39
213					

The Executive Branch

My general approach to all of the executive branch sub-audiences was to use their respective search engines to run separate queries for “climate change” and “global warming” and, dependent on search engine capabilities, to use the sample period to

⁷⁶ The dataset is provided in Appendix II.

further screen the available texts.⁷⁷ I used both terms because I have observed that the terms are often used interchangeably. I also noticed that many of the speakers who are skeptical about climate change use “global warming” more frequently than those who accept the phenomenon of climate change and its anthropogenic causes. Thus, I did not want to inadvertently exclude climate change meanings linked to more skeptical members of the enterprise. I also sought texts with three or more references to “climate change” and/or “global warming,” or which were largely about climate change but did not necessarily repeat the terms of reference. As I applied this general approach to select a logical and reasonably sized sample, I found that two other criteria were helpful. First, I discovered that the quantity of texts was large. I added the names of secretaries or select other senior leaders to the search criteria as a reasonable way to reduce the overall number of texts. Second, I deliberately looked for manuals, policies, and other organizational texts. While few in number, these sources provided insights on how meanings might have become an official part of institutional discourses.

Next, I will discuss each of the sub-audiences and their contribution to the executive branch dataset consisting of ninety-four texts that make 1,532 “climate change” and nineteen “global warming” references. Since the search engine lacked an option for time parameters, my DHS query produced 4,080 results in October 2013 and adding FEMA to the search produced an additional 7,010 results. Janet Napolitano was the Secretary of DHS for the entire sample period, but after reviewing 435 press releases and

⁷⁷ See DHS (<http://search.dhs.gov>), DOD (<http://search.defense.gov>), DOS (<http://search.state.gov>), DOI (<http://www.doi.gov/library/internet/doi-info.cfm> and <http://elips.doi.gov/ELIPS/Search.aspx>), and IC (<http://www.dni.gov/index.php>)

thirty speeches associated with her time in office, I found only one document in which climate change was addressed as anything more than a passing comment.⁷⁸ Focusing on the dates, reference terms, and organizational texts, produced a DHS dataset of ten documents, including four from FEMA.

DOD's search engine also lacks the ability to search by time. However, the search for "climate change" and/or "global warming" only produced 405 documents in October 2013, most of which were press releases by the Armed Force Press Service (AFPS). I reviewed all of these documents, looking specifically for climate change meanings attributable to specific senior leaders such as the Secretaries of Defense (Robert Gates, Leon Panetta, or Chuck Hagel), the Chairmen of the Joint Chiefs of Staff (Mike Mullen or Martin Dempsey), or other prominent senior military or civilian leaders. I also looked for departmental documents with substantial climate change content, but these were few in number. Since the combatant commands are the action arms of DOD, much like FEMA to DHS, I read the posture statements delivered annually to Congress by the commanders of the six geographically aligned commands. Of the eighteen statements, two had some climate change content and are included in the DOD dataset consisting of twenty-three documents. Unlike the other sub-audiences, I included DOD documents that had only one or two references to "climate change" and/or "global warming." Had I omitted those documents, only five DOD texts would have made it into the dataset based on the three reference criteria used for the other sub-audiences.

⁷⁸ She briefly mentions climate change in her remarks at the National Press Club on August 27, 2013.

The DOI website offers two different search engines, one that works much like the DHS and DOD search engines and another that looks more specifically at internal documents such as DOI orders, manuals, publications, and reports. In October 2013, my queries produced 16,900 results. Since the site was not searchable by time period, I used Secretaries Ken Salazar and Sally Jewell as additional search criteria to narrow the results, finding press releases, video releases with transcripts, and secretary orders to be the most common documents. I also looked for official DOI publications, reports, and manuals, revealing documents about organizational changes in DOI related to climate change. Limiting the sample to only those documents with three or more of the reference terms, or those largely about climate change, yielded a DOI dataset of twenty-seven texts.

DOS has the most useful search engine, allowing a researcher to filter by time and speaker, among other criteria. Using just a time period filter, my query produced 3,890 results in October 2013. Then, I reduced the results to 350 by filtering for Secretaries Hillary Clinton and John Kerry, and for Climate Change Special Envoys Todd Stern and Jonathan Pershing because of their unique roles in representing the US in all climate change-related negotiations. After screening these documents for the reference terms and looking specifically for institutional level documents, I arrived at a DOS dataset of thirty-four texts. Much like the approach taken with DOD and its combatant commands, I also reviewed embassy websites that fell within the same geographic footprints of the combatant commands. My climate change queries using the websites for US embassies in India, Kazakhstan, Germany, Nigeria, Brazil, and Mexico produced few results, and these were postings of official DOS statements, usually those made by the secretaries.

The Director of National Intelligence (DNI) website produced only two results. Running the same query for intelligence organizations produced higher results, but most were related to climate change effects. I found that classified materials offered more insights on the climate change-national security nexus, but those were obviously excluded from this project. Querying unclassified CIA documents on climate change produced 230 results in October 2013 without applying a time window. An interesting subset of these documents related to the opening of the CIA's Center on Climate Change and National Security in September 2009. However, as I read the six documents that did fall within the study period, I found that all of them made scant reference to climate change or were merely repeating a comment made by Obama or other government leader.

Congress

As discussed previously, the SFRC, CEPW, and CEPW were the most active with regards to national security and climate change discourses. For all three committees plus the *CRDE*, I used the US Government Printing Office search engine to query for the reference terms in the period of study.⁷⁹ My query in October 2013 produced 497 results with 340 from the *CRDE* alone. Applying the three-reference threshold yielded a dataset of eighty texts that cited "climate change" 1,898 times and "global warming" 258 times.

National Security Experts

The data for the audience of national security experts comes from *Foreign Affairs*, *Foreign Policy*, and *The Washington Quarterly* journals. I used the ProQuest Research

⁷⁹ See <http://www.gpo.gov/fdsys/search/home.action>.

Library database to query these journals for the period under study, producing 172 results in September 2013. Among these results were many non-attributable articles. I excluded anonymous articles, and I discounted special advertisements that contained climate change content since I could not discern the motivation for writing the material. I also excluded book reviews because they either had minimal climate change content or the critique would have required my reading of the book under review in order to understand the context. These additional filters reduced my results to 126. Then, I searched each document for “climate change” and/or “global warming” references, retaining all articles with three or more references. The resulting dataset for national security experts consists of thirty-nine articles that make 281 specific references to “climate change” and sixty-six references to “global warming.”

Data Analysis

Securitizing actors and their audiences within the enterprise conceive of the threat of climate change in many ways. Indeed, from my experiences in the enterprise, individual reactions to climate change range from alarmed to dismissive.⁸⁰ Among those who give some credence to the threat, the meaning of the issue varies widely. People may view climate change as an environmental, social, economic, or security issue, problem, or perhaps a blend of these. Some even see climate change as an opportunity. Similarly, people have differing ideas on the referent object of security and the role of the state in providing security. These differing conceptions are evident in discourses and

⁸⁰ The range borrows from *Global Warming's Six Americas, September 2012* (Leiserowitz, A. et. al 2012). The project uses a survey tool to categorize respondents as alarmed, concerned, cautious, disengaged, doubtful, or dismissive regarding the issue of climate change.

thus I use discourse analysis to discern what climate change means to individuals within specific audiences and how they come to construct climate change as a threat or not and as a national security issue or not (Snow et al. 1986, van Dijk 1998, Benford and Snow 2000, Brewer and Goss 2005, Dewulf et al. 2009).

Discourse Analysis: Frames and Framing

The use of frames and framing is a form of discourse analysis. There are other methods of discourse analysis, including discourse grammar, narrative analysis, critical discourse analysis, conversation analysis, the ethnography of communication, pragmatics, and the psychology of text processing (van Dijk 1998, 147). Discourse analysis explores what the language is used for, which in this project is how language describes the meaning of climate change in different audiences (Brown and Yule 1983, i).

This project draws from the concept of frame as used in the study of social movements, an idea grounded in Goffman's work. Frames denote "schemata of interpretation" that aid individuals "to locate, perceive, identify, and label" experiences and events (Goffman 1974, 21). Moreover, "frames help to render events or occurrences meaningful and thereby function to organize experience and guide action" (Benford and Snow 2000, 614). "Framing refers to the process of selecting and highlighting some aspects of perceived reality, and enhancing the salience of an interpretation and evaluation of that reality" (Entman 2004, 26). Collective action frames perform a similar function, but with the intent to "mobilize potential adherents and constituents, to garner bystander support, and to demobilize antagonists" (Snow and Benford 1988, 198).

Dewulf et al. offer a comprehensive theory of framing that accounts for how frames differ by nature and by what gets framed. They observe that scholars tend to use “frames as knowledge structures (frames as cognitive representations) or frames that “center on how parties negotiate meaning in interactions (framing as interactional co-constructions)” (Dewulf et al. 2009, 156). As cognitive representations,

Frames are memory structures that help us to organize and interpret incoming perceptual information by fitting it into pre-existing categories about reality. Situations are framed by matching perceptual inputs with an available repertoire of frames. From this perspective, frames are considered relatively static entities that extend indefinitely in time.” (Dewulf et al. 2009, 159)

In contrast, interactional framing is “negotiated and produced in the ongoing interaction through meta-communication that indicates how the situation should be understood” (Dewulf et al. 2009, 160). Dewulf et al. use metaphors to highlight the different natures of the frames:

Cognitive frame theory portrays people as information processors or lay-scientists who use frames as heuristic devices in the gathering and processing of information. Interactional framing theory portrays people as conversationalists or lay-rhetoricians who interact in varying and recurring constellations while co-constructing the meaning of their worlds. (Dewulf et al. 2009, 162)

They add:

In the cognitive approach, meaning is located “between the ears” of each individual and ultimately depends on their private understandings and interpretations of information communicated and processed. In contrast, in interactional framing theory, meaning is located “between the noses” of people and ultimately depends on their reactions to or supplementations to each other’s communication. (Dewulf et al. 2009, 163-164)

Dewulf et al. further distinguish between three types of things that “get framed.” “Issue frames refer to the meanings attached to agenda items, events, or problems in the relevant domain or context. Identity and relationship frames refer to the meanings about

oneself and one's relationships with a counterpart(s). Process frames refer to the interpretations that disputants assign to their interaction process" (Dewulf et al. 2009, 165). Crossing the nature of frames and what gets framed, yields six categories:

Cognitive Issue Frames: Cognitive representations of the substantive issues in a conflict or negotiation. This view of frames considers them relatively static structures or categories that reside in an individual's memory.

Cognitive Identity and Relationship Frames: Cognitive representations of issues held about self, others and relationships.

Cognitive Process Frames: Cognitive representations of interaction processes. It provides individuals with a behavioral script.

Interactional Issue Framing: Focuses on how parties negotiate the meanings of issues in social interaction. Issues are not objective, but are discussion topics.

Interactional Identity and Relationship Framing: Addresses how parties work out definitions of their identities and relationships by negotiating them in social interaction.

Interactional Process Framing: Constructs the meaning of the ongoing communication process. It involves cueing and reacting to each other, so that it takes more than one person to alter process framing. This type of framing centers on communication. (Dewulf et al. 2009, 167-175)

This project looks at audiences through the discourses of audience members.

These members are speaking to members of their own audience as well as to other audiences and the public. Although the enterprise is a purpose-driven activity focused on national security, audiences and their members often contest the interpretation and identification of threats and the ways to contend with threats. Regarding frame analysis, I concur with Dewulf et al. that "the different approaches should not be viewed as mutually exclusive...but instead as different lenses that highlight diverse aspects of the same situation" (Dewulf et al. 2009, 166). I expected to find cognitive frames and interactional

framing at work within enterprise discourses and thus I did not discount the role of any frames identified in the discourse. To this end, I employed three framing tasks often used by social movement scholars—diagnostic, prognostic, and motivational framing (Snow and Benford 1988; 2000).

Clearly, the enterprise is not a social movement, but framing tasks are relevant in any setting in which a social conflict or even just a contest of ideas ensues. In this project, the contest is over the meaning of climate change, a contest not unlike that of the ongoing debate over the risks or benefits of the Keystone XL pipeline or the Pebble Mine near Bristol Bay, Alaska, both of which involve multiple, competing social movements. Like social movements, the enterprise seeks to remedy or alter problems or threatening situations. Obama's securitization moves regarding the threat of climate change are intended to motivate enterprise audiences to embrace a particular meaning that supports a set of corrective actions. In turn, each audience within the enterprise behaves much like a social movement in the sense that it accepts, challenges, or reframes the proposed diagnosis and its related prognosis, and then motivates its members as well as its opponents to adopt its interpretation of the climate change issue.

Diagnostic framing identifies the problem and its attributes. A diagnostic frame may address what the problem is, how it resulted, who caused it, when it became a problem, how serious it is, and for whom it is a problem. My experiences suggest that individuals and audiences may or may not consider climate change a problem, and when it does garner a threat label, interpretations of the threat vary widely. Diagnostic framing also seeks to attribute blame or responsibility since diagnosis of the issue should identify

the source of the problem in order to set the stage for a solution (Benford and Snow 2000, 616). Unlike actor-based threats with intentionality and direction, climate change is a threat that defies the typical us-other approach to threat identification in the enterprise. Thus, I looked for how individuals and audiences attempt to construct meanings related to climate change causality.

Prognostic framing proposes a solution to the problem and a strategy for implementing the solution. A prognostic frame may include one or more specific solutions, sources of these solutions, the costs and risks of the proposed solutions, and the rationale for why one solution is better than another. Clearly, diagnostic framing and other audience-specific factors may constrain the influence of prognostic framing (Benford and Snow 2000, 616-617). If an individual does not see climate change as a problem or denies the human contribution to climate change, then prognostic framing is likely to downplay any role by the enterprise or perhaps narrow that role to improving societal resilience to climate change within the scope of the diagnosis. I suspect that some people within the enterprise do not see climate change as a national security problem even if they accept that humans are causing the problem. Thus, some prognostic frames may downplay the role of select audiences in the solution. Similarly, each audience may view its roles in a solution differently, thereby using different prognostic frames. While the enterprise is ostensibly focused on what is best for national security, audiences within the enterprise also compete for influence and resources and thus, like social movements, must address their opponents, supporters, media, and bystanders. Accordingly, prognostic frames also contest “the logic or efficacy of solutions

advocated” by other audiences and offer “a rationale for its own remedies” (Benford and Snow 2000, 617).

Motivational framing provides the rationale for a group to engage in collective action to resolve the problem. Motivational frames speak to a group’s agency, often using vocabularies of severity, urgency, efficacy, and propriety to speak to other members of their audience, supporters, constituents, and significant others involved in a specific issue (Benford and Snow 2000, 617; Benford 1993). Motivational frames may also address the likelihood of implementing a given solution and the prospects for solving the problem. In the enterprise, each audience tends to have unique cultures, characteristics, and duties and thus motivational frames must resonate with the targeted audience. Since the securitization of national security problems requires the enterprise to act as a whole, motivational framing will also seek to attract support from other audiences as well as the public when solutions require public support or sacrifice.

Analytic Framework

Climate change meanings vary by individual and audience. Since the enterprise consists of a diverse range of individuals and audiences that compete in setting the security agenda and developing strategy and policy responses, the range of meanings could be enormous. However, my experiences in the enterprise also suggest that there is some consistency within audiences and meanings tend to coalesce around a more bounded set of categories. Nonetheless, I did not want to privilege any meanings in advance of my analysis, nor did I want to wade into the data in search of all meanings. In

general, I am interested in meanings at the intersection of climate change and national security, including meanings that attempt to discount or downplay that intersection.

I developed a three part analytic framework for analyzing the 213 texts in order to answer the project's research questions: What does the climate change threat mean to different audiences within the national security enterprise, how are these meanings constructed, and to what end? Each part of the framework is similarly constructed with categories of frames or framing, the related elements for each category, and the questions for each element that I used to guide my analysis.

Part I of the analytic framework (see Table 2) uses the diagnostic, prognostic, and motivational frames often used by social movement scholars. The diagnostic frame seeks to understand how an audience member views the condition of climate change. Not everyone accepts that climate change constitutes a threat. However, even if a person accepts climate change as a threat, there is likely to be tremendous variation in how the threat is characterized. Thus, the referent object of the threat, the reason climate change threatens the object, the extent and proximity of the threat, and the source of the threat are all key elements in understanding how a person diagnoses climate change. For example, a person may accept that climate change is a threat, but only to poor, low lying countries sometime in the distant future. That same person may or may not see or accept a causal link between the energy consumption of wealthier countries and the threat.

Table 2. Analytic Framework (Part I)

Analytic Framework (Part I)		
Category	Elements	Questions
Diagnostic Frame	Threat	Is climate change a national security threat?
	Threat To	Who/What does climate change threaten?
	Threat Why	Why does climate change threaten the referent object?
	Threat Extent	What is the extent of the threat to the referent object?
	Threat Proximity	What is the proximity of the threat to the referent object?
	Threat Source	What is the source or cause of the threat?
Prognostic Frame	Options	What is/are the option(s) to address the climate change threat?
	Option Source	Who implements the option?
	Option Cost	What will this option cost?
	Option Risk	What risks are associated with this option?
	Option Implementation	How will the option be implemented?
	Option Justification	Why is this option better than other options?
Motivational Frame	Supporters	Who agrees or disagrees with option(s) to address?
	Helpers	Who must help or change actions/behaviors?
	Rationale to Act	Why must we act or not act?
	Chance to Implement Option	Will we succeed with implementing the option?
	Chance to Counter Threat	Will we succeed in countering the threat?
	Detractors	How do we deal with those who don't support the option?

The prognostic frame flows from the diagnosis of the condition of climate change, offering options to contend with the threat or other characterization of the condition. Clearly, a rejection of a threat diagnosis may yield a prognosis to do nothing, but there is a wide range of diagnoses that would beget an equally wide range of options. The

prognostic frame also reveals insights on costs and risks, who bears the costs and risks, and how and why the option is implemented. For example, someone who accepts the reality of the threat of climate change to the US may favor changes in energy production and use as well as in American consumption patterns, a prognosis that carries high costs for fossil fuel companies among others. In contrast, a person may view the threat as one to coastal areas only and thus opt to manage the potential risk through less costly options.

The motivational frame provides the rationale for the collective entity to take or not take action to address climate change. Audience members, especially senior leaders, seek to rally their supporters, identify others needed to help or change their behaviors, and target detractors in their ranks as well as in other audiences. For example, a proponent of climate action to contend with the global threat might offer that the US faces a moral imperative to combat climate change, challenging naysayers who say that the threat is only to low lying areas that hold little significance for US national interests.

All three frames provide insights that contribute to answering the three research questions. The diagnosis of climate change will be most suggestive of what climate change means to the speaker and her associated audience. While the threat versus non-threat dichotomy is interesting, the diagnosis is seldom so stark, evidencing a high degree of variability and nuance. Indeed, the variation reveals insights on how the meaning of climate change is constructed as well as to what end.

The motivational frame is often colored with language that seeks to inspire an audience or undermine another audience's argument. Statements that use words of severity, urgency, efficacy, and propriety become flags for further analysis. For example,

a speaker may use the language of the realist paradigm to talk about “combating” the climate threat while another speaker may use the same terms to talk about protecting US instruments of power from climate change. Although both recognize climate change and its impacts, they are clearly motivating different audiences and types of responses.

Part II of the analytic framework (See Table 3) builds on the six types of frames developed by Dewulf et al. (2009), providing another approach to frame analysis. The cognitive frame and interactional framing categories of the framework are not intended to be mutually exclusive from the diagnostic, prognostic, and motivation frames in part I. In fact, there is considerable overlap, particularly between cognitive, diagnostic, and prognostic frames and between motivational frames and interactional framing. Cognitive frames focus on how the individual frames the climate change issue, the identities and relationships involved in the issue, and the boundaries within which she may act. In contrast, interactional frames reveal the person-to-person negotiations that create meanings, define identities and relationships, and influence behavioral scripts.

Since most of the 213 texts are the product of a single person speaking to an audience, either theirs, another, or a superordinate audience, cognitive frames are more commonly observed in the discourse. However, some of the texts, mostly from the Senate, provided windows on interactional framing as Senators reinforced or challenged other Senators’ statements, asked questions, or challenged witnesses. Although many discourses did not reveal the dialectic attendant to meaning making in a dynamic setting, discourses are necessarily created in a particular context and that context helps to identify how a speaker intends to interact with others. Although I cannot hear the reaction or see

the body language of the listener or reader, a speaker may mention a name or highlight a difference in views that suggests how interactional framing is at work.

Table 3. Analytic Framework (Part II)

Analytic Framework (Part II)		
Category	Elements	Questions
Cognitive Frame	Issue	How does the speaker frame the issue of climate change?
	Identity & Relationship	How does the speaker see herself, others, and relationships relative to the issue? Options?
	Process	Is the speaker following a behavioral script?
Interactional Framing	Issue	Are the parties negotiating the meaning of the climate change issue? How?
	Identity & Relationship	How are identities and relationships defined relative to the issue? Options?
	Process	How are the parties communicating to alter the behavioral scripts of the other?

Part III of the framework integrates the theories discussed in chapter four: balance of threat theory, the three streams model, social identity theory, and the cultural theory of risk (see Table 4). As I discussed above, there are two reasons for including these theories in this project. First, they provide a set of lenses for analyzing the data. Second, they help to describe audience reactions to securitizing moves, potentially serving to improve securitization theory's treatment of audiences. Unlike the other parts of the framework, part III does not focus exclusively on evidence of frames or framing. Rather, I derived a set of questions from the concepts associated with each theory and use these

questions to analyze the discourses from other perspectives. These perspectives complement my knowledge of the enterprise, forcing me to reconsider analytically what is going on here and how people are constructing the meaning of climate change.

Table 4. Analytic Framework (Part III)

Analytic Framework (Part III)		
Category	Elements	Questions
Theories	Balance of Threat Theory	Should climate change be treated as a threat to national security? Is this a threat that the national security enterprise should address? Does the risk warrant shifting resources addressing other threats? Does addressing this threat increase the risk posed by other threats? How are other states addressing the issue?
	Public Policy Theory (Three Streams Model)	Does the speaker attempt to link the issue, policies, and politics? Does the speaker remark on the proximity of the threat? Does the speaker comment on agenda-setting or the specification of options? Does the speaker comment on how focusing events shape interest in the issue? Does the speaker comment on windows of opportunity to address the issue?
	Social Identity Theory	Does the speaker categorize herself into a particular group? What social identity seems most salient with regards to the issue? Does the speaker distinguish in-groups from out-groups? Does the speaker remark on a particular group's role in the issue? Does the speaker reckon with the distinction between actor-based and non-actor based threats? With the issue of intentionality? With the US's role in creating the threat?
	Cultural Theory of Risk	Does the speaker evidence alignment with a particular cultural view of life? Does the speaker's view of climate change advance the way of life to which she seems committed?

Regarding frames and framing, part III of the analytic framework is not mutually exclusive from the other two parts. For example, all four theories provide insights on diagnostic framing. Balance of threat theory uses the language of realism to describe traditional threats to states. Many audience members try to apply the same language and attendant logic to frame the condition of climate change. The three streams model's consideration of the problem stream aligns well with diagnostic framing and provides insights on how framing of the issue contributes to an issue's placement on the agenda. Social identity theory offers a view on audiences that helps to look at diagnostic frames in the context of the speaker's social identity as well as the reaction of other audiences to the frame based on their own identity. The cultural theory of risk looks at diagnosis from a way of life and associated worldview perspective. Although neither my experiences nor any one of the theories offers the definitive insight on diagnostic framing, together they provide a richer set of analytic tools to consider the possible suite of frames.

The linkage between the three parts of the analytic framework and the research questions at the heart of this project warrants elaboration. The project seeks to describe what climate change means to different audiences within the national security enterprise, how these meanings are constructed, and to what end. I do not claim that the categories, elements, and questions in the analytic framework align cleanly to specific research questions. Clearly, diagnostic, prognostic, and cognitive frames figure prominently, but not exclusively, in answering the question what does climate change mean to different audiences in the enterprise. Motivational frames and interactional framing certainly provide insights on how meanings are constructed and to what end, but also reveal

variations in climate change meanings. Institutional and procedural factors evidenced in discourses likely contribute to all three questions. Similarly, the four theoretical perspectives are directed at each of the research questions.

Frames and framing also interrelate and must be considered in relation to one another. For example, the prognostic frame contributes to an understanding of what climate change means to a person or audience, but it also adds insights on how the meaning is constructed and the end(s) to which the meaning is constructed. As suggested earlier by Inhofe's remark on the cost of climate change, a prognosis may influence the diagnosis, perhaps tempering the person's views on the extent, proximity, or source of the threat. Moreover, context matters and thus an individual's position in an audience may constrain or promote what is considered an acceptable range of diagnoses and prognoses.

Rather than align portions of the framework to specific research questions, I consider the entire analytic framework to be applicable to all three research questions. However, my insight into the meanings and the ends to which those meanings are constructed necessarily begins with the process that produces those meanings. As discussed earlier, I cannot know with certainty what people think. However, I can observe their construction of meanings through a methodical exploration of their texts.

This approach is analogous to taking a tour of a manufacturing plant that produces a product unknown to you. During your tour, you see parts of a process, gleaning hints on the identity of the product as you follow the tour guide. You see workers welding, painting, and assembling components of the larger end item. The plant is so large and compartmentalized that you only see the process through briefly opened and often

partially obscured windows. As you gather the clues, you suspect that this plant produces some form of wheeled transport, eventually concluding that it produces motorcycles. But not all motorcycles are the same. Finally, that “ah-ha” moment arrives as you see the orange Harley-Davidson Road King emerge from the process, a motorcycle distinct from all others and one with a decidedly American meaning.

Chapter five presents my findings, consisting of a mosaic of frames, framing, other insights, and contextual information that show how meanings are constructed. Consequently, the chapter begins to answer the research questions with a particular emphasis on how the meanings were constructed (see Figure 7). In chapter six, I answer the other research questions, presenting climate change meaning maps that show the meanings embraced by each audience and the purposes served by those meanings, and that further elaborate on how the meanings were constructed.

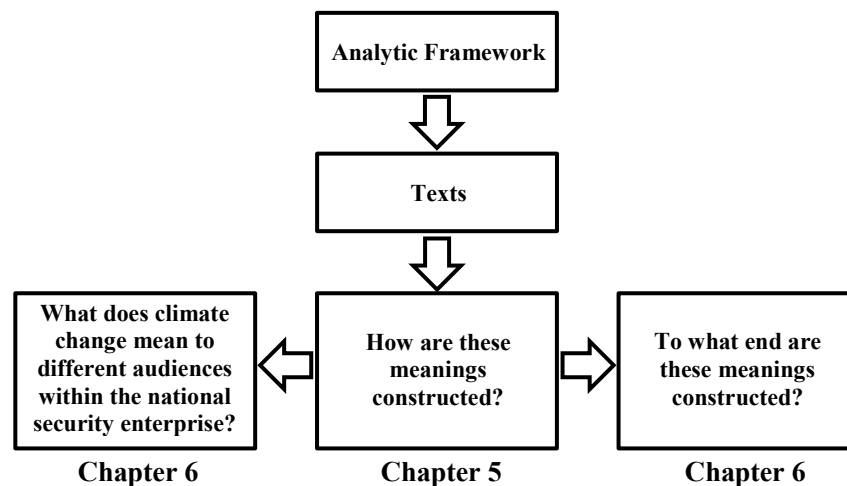


Figure 7. Relationship of the Analytic Framework to the Research Questions

Analytic Process

This section describes the process used to analyze the 213 discourses in the dataset. The analytic phase of this project began in October 2013 and concluded in February 2014. QSR International's *NVivo 10* research program enabled the in depth data analysis of the discourses.⁸¹ *NVivo* is a software package well-suited to qualitative research methods. The program allows for importing data in many formats, and provides numerous tools to search, query, and visualize data. One of the key features of the program is the ability to code text using *NVivo*'s node functionality. Essentially, nodes are meaningful labels that help the analyst discern patterns and anomalies in the data. The labels derive from the project's research questions and underlying hypothesis, theory, or sensitizing concepts. An easily retrievable and coded note-taking function facilitates continuous reflection on the data.

This project constitutes my first use of *NVivo*. Accordingly, I met with George Mason University's research specialists to get an introduction to the software. Afterwards, I consulted often with the specialists for advice on doing qualitative research and to learn how to apply *NVivo*'s features to my project. QSR International's *NVivo* website proved particularly useful. I reviewed all of the relevant online video tutorials and participated in two live, online workshops that permitted me to see how others were applying *NVivo* in their research efforts.

Using *NVivo10*, I imported the dataset in either Adobe PDF or Microsoft Word format from the search engine results for each of the audiences. I then grouped the data

⁸¹ For additional details see http://www.qsrinternational.com/products_nvivo.aspx.

by audience (executive branch, Congress, national security experts) and by sub-audience (e.g., DOS, Committee on Foreign Relations, and *The Washington Quarterly*). I reviewed all of the texts for completeness, finding that many of the Congressional documents contained repetitive material that I subsequently deleted. Then, I ran word queries for “climate change” and “global warming” to gain a general appreciation for the relative density of the references, which I later used to guide the pace of my analytic efforts. I also started with material less dense in “climate change” references in order to get more accustomed to using *NVivo* before moving to lengthier and more complex discourses.

In this project, the nodes corresponded to the categories and their elements within the analytic framework. I established a parent-child relationship between the categories and their respective elements, and to discern patterns within and across texts. For example, the *diagnostic* category is the parent of its elements (*threat, threat to, threat why, threat extent, threat proximity, and threat source*). This feature is useful because a given discourse rarely includes all elements, but the discourses taken as a whole reveal patterns regarding the diagnosis of climate change. Similarly, the nodes facilitate the analysis of linkages between frames. For example, what are the relationships between different diagnoses and prognoses, and how do these compare and contrast across audiences.

After establishing the nodal (coding) structure, I began my analysis with three sub-audiences (*The Washington Quarterly*, CEPW, and DHS). I used these sub-audiences to refine my analytic approach and to build a schedule that would permit a

methodical analysis of all 213 discourses, leaving time for reflection while meeting the time constraints of this project. One of my earliest refinements was the addition of color codes for each category to assist with data visualization.

My unit of analysis was a paragraph of text. In manuals, press releases, and articles, paragraphs were generally structured around a single major idea and/or frame. Thus, codes usually corresponded to entire paragraphs. Sometimes a paragraph would evidence two or more frames, particularly in longer paragraphs that were conveying complex ideas or providing more evidence to bolster a claim. The paragraphs in hearing transcripts and personal statements tended to be shorter and more characteristic of a conversation. Accordingly, a speaker might utter a single line that merited a code, a series of short comments that could be coded together, or a series of comments that moved from frame to frame and thus warranted multiple codes.

My analysis proceeded in four phases. First, I applied part I of the analytic framework to the discourses for each sub-audience, alternating between the three main audiences until completing all 213 discourses. Since I was new to *NVivo*, the alternating approach helped me to guard against disadvantaging all of the discourses in a single audience while I improved my use of *NVivo* and refined my analytic approach. In the second phase, I applied part II of the framework, but opted to complete all sub-audiences within a given audience before proceeding to the next audience. By this point in my analysis, I was comfortable with *NVivo* and preferred to concentrate and reflect on a single audience before moving on to the next one. In the third phase, I used part III of the

framework, looking at the discourses from alternative theoretical perspectives and assessing the value of the theories for providing insights on audiences.

The first three phases of my analysis yielded 536 nodes for the executive, 1,797 for Congress, and 494 for the national security experts across all frames and their elements. For example, under the *options* element of the *prognostic frame* in the executive branch, I coded 402 pieces of text under forty-two nodes, including *risk management, carbon storage, clean or renewable energy, mitigation, or adaptation, and science and technology*. I read each discourse at least twice during each of the three phases. Content-rich discourses, particularly congressional hearings or longer executive branch texts required more attention.

In phase four, I reviewed the texts using the entire analytic framework. I also relied extensively on *NVivo*'s query, analysis, and visualization tools to look at the data and coding from multiple perspectives and in varying formats in order to better inform my findings. I also reduced the number of nodes to 132 for the executive branch, 140 for Congress, and 111 for national security experts by grouping nodes with similar ideas under a more general parent node. For example, under the *threat why* element of the *diagnostic frame* I found wide variability in the earlier phases of my analysis, including references to *sea level rise, rising temperatures, changes in precipitation patterns, food and water issues, strategic driver or stressor, health impacts, and severe weather or natural disasters*. I later grouped these, as appropriate, under nodes labeled *physical effects* or *social effects*. Phase four concluded with my findings for each of the categories and its associated elements for each of the sub-audiences and the larger audiences.

While my process does not guarantee the reliability or validity of the results, it constitutes a deliberate, methodical approach that produced findings and conclusions for which I have a high degree of confidence. I applied my analytic framework in phases and deliberately moved between audiences and sub-audiences so that my later analytic efforts would not be privileged in terms of timing or improvements in my analytic prowess. I read and analyzed all of the texts multiple times. The three parts of the framework also provided checks and balances on each other and on my experiences as a thirty year member of the enterprise. I routinely used *NVivo*'s analytical and visualization tools to look for patterns and anomalies in my coding, and I used *NVivo*'s note taking functionality to track my progress text-by-text. Ultimately, these efforts produced an enormous body of metadata that exhibited clear patterns, giving me confidence in climate change meanings that emerged from the texts.⁸²

Merging Four Chapters: A Summary

Chapter four merged and shaped the material from the first three chapters into the project's research design and methodology. Chapter one revealed my motivation for undertaking this project and provided the research questions, asking what does the climate change threat mean to different audiences within the national security enterprise, how are these meanings constructed, and to what end? Chapter two presented relevant literature that provided context on the enterprise and the potential influences on audience meaning making. It also described securitization theory, equating Obama's statements on the threat of climate change to a securitizing move and the enterprise to the empowering

⁸² The coded metadata file is available on request, requiring *NVivo 10* for viewing or further research.

audiences that accept or decline the securitizing move. Chapter three summarized the balance of threat theory, three streams model, social identity theory, and the cultural theory of risk. These theories served as another set of analytic lenses for discerning climate change meanings and for describing audience meaning making.

This chapter presented my research design and methodology. Grounded in a social constructionist epistemology, the design used securitization theory as an organizing construct to think about the enterprise's reaction to Obama's securitizing moves. The design focused on audience discourses as windows into climate change meaning making by the enterprise. The methodology combined two different frame analysis approaches and four different theories into a three part analytic framework. This framework, and the process that I used to employ it, guided the systematic analysis of the dataset. In order to identify the dataset, I narrowed my focus to three audiences, the executive branch, Congress, and national security experts. Within these audiences, I selected two types of sub-audiences, those that normally focus on national security and those that focus on other matters. Then, I queried all of their publicly available texts, looking for climate change discourses based on based on "climate change" and/or "global warming" references. This sampling approach yielded 213 texts that I subsequently analyzed and coded using the analytic framework.

In chapter five, I present two general categories of findings, following the format of the analytic framework. The first two parts of the analytic framework revealed frames and the elements of those frames. As described above, I conceived of a frame's elements as answers to questions that I could ask of the text. The findings present these answers,

showing the frames evidenced in audience discourses. The third part of the framework used questions derived from the balance of threat, three streams model, social identity theory, and the cultural theory of risk in order to provide additional perspectives for analyzing the texts. Together, the findings in chapter five answer the question how are climate change meanings constructed in the enterprise? By examining how these meanings were constructed, I exposed the actual meanings and the ends to which they were constructed by the different audiences. I provide meaning maps as answers to these research questions in chapter six.

CHAPTER FIVE: FINDINGS

*The debate is settled. Climate change is a fact. And when our children's children look at us in the eye and ask if we did all we could do to leave them a safer, more stable world, with new sources of energy, I want us to be able to say yes, we did.*⁸³

The preceding chapters revealed how I conceived, informed, shaped, bounded, and executed this descriptive project. Ultimately, I am describing climate change meanings evidenced by the executive branch, Congress, and national security experts for the period May 2010 through September 2013. I chose texts as the means to gain access to meaning making by selected sub-audiences, and I used frame analysis and theoretical lenses to look for climate change meanings within those texts.

Chapters five and six present my findings and conclusions, respectively, answering the questions what does the climate change threat mean to different audiences within the national security enterprise, how are these meanings constructed, and to what end? In this chapter, I answer how audiences constructed climate change meanings, showing that audiences employed a wide variety of frames to construct different meanings of climate change and climate action. Chapter six builds on the insights gained from the findings, presenting meaning maps as answers to what climate change means to different audiences and to what end.

⁸³ Obama 2014.

Overview

Obama's remarks at the beginning of this chapter were made at the 2014 State of the Union Address, words that he has repeated at many venues since taking office. Clearly, his tone and choice of words indicate that his previous securitizing moves did not yield the results that he had desired. Although this chapter will not explain why Obama had to repeat himself, the findings and preliminary map of climate change meanings suggest an answer—audiences held different conceptions of climate change and thus his securitization moves were only partially accepted.

I present my findings by audience—the executive branch, Congress, and national security experts, following the framework presented in chapter four, but with some variations that I describe below. These findings begin to answer the research questions with an emphasis in this chapter on how the audiences constructed climate change meanings. The texts yielded robust findings across all frames with the exception of interactional framing for two audiences (see Table 5). As discussed in chapter four, interactional framing is a dynamic process that occurs “between the noses” of people who are co-creating meaning in a social context. Texts can reveal interactions, particularly if a text captures the interaction between two or more parties (e.g., a transcript). An alternative is to find texts linked to specific parties that are related in time, space, and by topic to enable analysis across texts.

Neither the executive branch nor national security expert texts were conducive to either approach. In most texts, only a senior official or an author spoke. Many of the texts contained no interaction and could not be attributed to any speaker. A few

executive branch texts recorded portions of interactions between speakers and other audiences (e.g., Clinton’s conference with Omani civil society), but these texts either lacked context for meaningful analysis or simply did not evidence interactional framing about climate change. Similarly, speakers in some of the texts clearly had an audience in mind when making their remarks, but that audience was not represented in the texts.

Table 5. Coded Text Tallies by Audience and Frame

	Executive Branch (94 texts)	Congress (80 texts)	National Security Experts (39 texts)	Total (213 texts)
Diagnostic Frame	628	825	178	1631
Prognostic Frame	925	498	266	1689
Motivational Frame	370	551	251	1172
Cognitive Frame	256	893	180	1329
Interactional Framing Theories	0	390	0	390
	280	560	274	1114
Total	2459	3717	1149	7325

Two other general findings are not evident from the table. First, I found a sizable overlap between cognitive frames and diagnostic, prognostic, and motivational frames because the latter are basically types of the former, a point I will discuss further in chapter six. Second, a closer examination of the experts’ identities revealed that some were atypical of the experts that appear in the journals on more traditional threat-related topics such as North Korea and terrorism. Some are not experts on national security, but they are experts from other fields whose topics aligned with the journals’ focus on

security. However, this finding is useful and analogous to my selection of sub-audiences in the executive branch and Congress. In other words, national security experts as I defined them for this project are much like DOD and the SFRC, sub-audiences that normally focus on national security rather than climate change. Non-national security experts using the journals as the venue for their ideas are akin to DOI and CEPW, sub-audiences that normally look at the environment, but not national security. Since both sub-audiences of experts are still reaching the same readership, their frames are notable.

These general findings from my analysis led to an adjustment in the original research schema, narrowing the focus on frames by audience (shaded entries in Table 5). Diagnostic, prognostic, and motivational frames were substantial across all audiences, providing enough information to stake a claim to a preliminary map of climate change meanings by audience. Cognitive frames overlapped markedly with the other frames. Yet, they also offered some unique insights. Thus, I included executive branch cognitive frames for the added perspective and to explore the usefulness of the analytic approach. I also limited my theory assessment to the executive branch and Congress because the experts proved to be more of a forum of individuals than a coherent audience.

Before discussing the findings, I will explain the approach used to present them. For each audience, I provide a figure for each of the frames plus the theory category.⁸⁴ The figures (see Figure 8 for an excerpt) show the findings for each element of the frame. I label each finding as an answer to the question listed for the element used in the

⁸⁴ Figures that I do not discuss in the dissertation are found in Appendix I.

analytical framework. The number of texts with coded references to each element and answer is provided in parenthesis.

Executive Branch (94 texts)				Diagnostic Frame (88)				
Threat To	(46)	Security (18)	Organization or Mission (17)	Vulnerable Population (17)	US (10)	Resources (6)	Humans or Planet (4)	States or Regions (2)

Figure 8. Diagnostic Frame Excerpt

Consider the excerpt from the diagnostic frame for the executive branch in Figure 8. The sample for the executive branch consists of ninety-four texts, eighty-eight of which contained coded material related to the diagnostic frame. The element *threat to* asks “who or what does climate change threaten?” Forty-six of the eighty-eight texts provided some form of an answer. Seven findings are shown, including the answer “vulnerable population” that was evidenced in seventeen of ninety-four executive branch texts. In order to facilitate contrasts and comparisons across audiences, I used the same or similar labels, as appropriate, for the same elements across all three audiences.

The Executive Branch

How did the executive branch construct climate change meanings? DHS, DOD, DOI, DOS, and the IC constructed climate change as a threat and climate action as a necessity and sometimes an opportunity, but their meanings exhibited nuances traceable to how they framed climate change. In a sense, Obama’s broad and somewhat vague securitizing moves gave the departments latitude in how they responded. His cabinet secretaries repeated his words, complied with his executive orders, and directed their

departments to take climate change related actions. Nonetheless, while the executive branch exhibited a high degree of consensus on the climate change threat, the departments emphasized different frames and elements within those frames in order to generate meanings consistent with their respective missions and departmental contexts.

Diagnostic Frames

Executive branch texts used terms that overwhelmingly described “climate change” as a threat (see Figure 9). Speaking to the Millennium Challenge Corporation, Clinton made the climate change-threat connection explicit: “This remains one of the most serious threats that all of humanity faces, and we haven’t – none of us has done enough to deal with it yet” (Clinton, November 27, 2012). However, speakers did not always use the term “threat,” and often used synonyms interchangeably when referring to climate change as a threat. For example, Secretary of State Kerry stated on Earth Day,

Dealing responsibly with the clear and present danger of climate change was a focus of my recent trip to China, and it is a challenge I will be engaging to meet everywhere I travel as Secretary of State. If ever there was an issue that demanded greater cooperation, partnership, and committed diplomacy, this is it. (April 13, 2013)

Kerry managed to label climate change as a “danger,” “challenge,” and “issue” in two sentences. Yet, there is no doubt that, like Clinton, he considers climate change to be a threat. Indeed, most of the thirty-eight texts with coded references to the *threat* element used one or more of the following labels, in order of their rate of occurrence: challenge, problem, threat, issue, crisis, and danger.

Executive Branch (94 texts)		Diagnostic Frame (88)						
Threat	(42)	Yes (38)					Depends (5)	
Threat To	(46)	Security (18)	Organization or Mission (17)	Vulnerable Population (17)	US (10)	Resources (6)	Humans or Planet (4)	States or Regions (2)
Threat Why	(59)	Physical Effects (47)			Social Effects (47)			
Threat Extent	(19)	Widespread (10)			Worsening (9)			
Threat Proximity	(20)	Present (16)			Varies (5)		Uncertain (1)	
Threat Source	(29)	Proximate Causes (23)		Human Activities (8)	States (6)	Multi-causal (5)		

Figure 9. Executive Branch: Diagnostic Frame Findings

The “depends” label captures the finding that some speakers see the climate change threat as a function of its interaction with other factors. Using terms such as “external stressor” and “strategic driver,” some texts saw climate change as a threat in specific contexts. For example, a DHS document stated,

Climate change is one such strategic driver. Not an end unto itself, but rather a force that is likely to shape the strategic environment, it must be accounted for in Departmental policy, strategy, plans, business processes, programs, institutional practices, and operations in order to best position the Department for success over the long term, regardless of how the future unfolds. (DHS Climate Change Adaptation Plan, June 2012).

From a homeland security perspective, climate change may affect the strategic environment by contributing to the displacement of populations that subsequently seek refuge in the US, or by worsening natural disasters that threaten US communities.

The *threat to* element addresses the object threatened by climate change.

Security, organization or mission, and vulnerable populations were common objects of

concern. Security-related comments viewed the threat primarily through the lens of national interests. Protecting national interests relies primarily on conditions external to the US and thus DOD, DOS, and the IC made the most frequent references to the national security implications of climate change. Clinton's testimony to Congress is illustrative:

Global climate change indeed has serious implications for US national security interests. The impacts of climate change will worsen problems such as poverty, social tensions, environmental degradation, resource pressures and competition, and weaken political institutions internationally... The more we can reduce such impacts, the more success we will have in reducing climate change-induced internal conflicts, migration, radicalization or other destabilizing developments. (Clinton March 2, 2011)

In short, climate change poses an indirect threat to US security by destabilizing states upon which we rely for trade, resources, and their input to regional or global security.

The departments were concerned about climate change impacts on their organizations and missions. The number of findings is significant but not surprising since the sample period follows issuance of EO 13514, requiring departments to develop plans related to their energy, environmental, and economic performance. However, the responses also revealed insights on how each of the departments viewed the threat of climate change. DOD saw climate change as a factor that will complicate its mission in two ways. First, as a strategic driver, climate change may burden the department with new tasks. For example, Panetta remarked that "rising sea levels, severe droughts, the melting of the polar caps, the more frequent and devastating natural disasters all raise demand for humanitarian assistance and disaster relief" (Panetta April 3, 2012). Mullen offered that climate change-induced missions may extend beyond disaster relief, requiring the deployment of forces to contend with larger security issues:

Whatever the root cause, climate change's potential impacts are sobering and far-reaching. Glaciers are melting at a faster rate, causing water supplies to diminish in Asia. Rising sea levels could lead to a mass migration and displacement similar to what we saw in Pakistan's floods last year. Other shifts could pull thousands of square miles of arable land from Africa. Scarcity of water, food and space could create not only a humanitarian crisis, but conditions that could lead to failed states, instability and potentially radicalization. (Mullen, April 1, 2011)

Second, climate change threatens the military instrument of power:

DOD will need to adjust to the impacts of climate change on its facilities, infrastructure, training and testing activities, and military capabilities. DOD's operational readiness hinges on continued access to land, air, and sea training and test space, all of which are subject to the effects of climate change. (DOD Climate Change Adaptation Roadmap September 18, 2012)

Thus, the loss of naval ports, airfields, and training areas to rising seas and natural disasters degrades DOD's ability to generate, equip, train, and project military forces.

Vulnerable populations included those who live in coastal areas, on islands, in any area prone to natural disasters where weather extremes tend to produce flooding or drought. For example, Jewell observed:

Climate change is a defining challenge of our time. This trip that I am on has taken me from... from Barrow, Alaska—the tip of the coastal plain in the Arctic—to here. I have seen glaciers melting up close. I have watched coastal erosion on the northern coast of Alaska. What happens in Alaska impacts you. What happens around the world impacts you more than anyone else, and that fact is obvious flying into the Marshall Islands. (Jewell September 6, 2013)

Many speakers also mentioned poverty and underdevelopment when describing vulnerable populations, usually in developing countries. In a meeting with Omani civil society, Clinton combined geography and poverty to convey a sense of vulnerability and a lack of capacity to contend with the threat:

And very importantly, for developing countries, particularly poor countries, and especially island nations that are literally at threat of being overwhelmed by ocean

level rise, there was a commitment to a financial package that would help such countries mitigate against that damage. (Clinton, January 12, 2011)

Regarding the remaining *threat to* findings, three are significant. First, threats to the US often stressed infrastructure concerns. In particular, DHS and DOD pointed out the vulnerability of critical infrastructure related to power generation and distribution, water treatment and distribution, communications, and transportation. Many of the texts further noted that aging infrastructure was particularly vulnerable.

Second, natural resource concerns were evidenced by most of the sub-audiences. For example, given that much of its mission is to protect America's natural resources, DOI often underscored its resource concerns:

DOI's CCA Strategy provides a roadmap of key steps needed over the next five years to reduce the current and expected impacts of climate change on our natural resources, which include: changing species distributions and migration patterns, the spread of wildlife diseases and invasive species, the inundation of coastal habitats with rising sea levels, changing productivity of our coastal oceans, and changes in freshwater availability. (DOI Press Release March 26, 2013)

Most of the other references to resources looked at the intersection of climate change, resource availability, and instability or violence. In its first Quadrennial Diplomacy and Development Review (QDDR), DOS declared, "the impact of climate change will likely constrain our own economic well-being and may result in conflicts over resources, migrant and refugee flows, drought and famine, and catastrophic natural disasters (DOS QDDR 2010).

Third, some *threat to* references portrayed climate change as a threat to humans, humanity, or states and regions in general. Among these texts were some of the few references to human security. Clinton used the term most often when speaking about

programs that reduce vulnerability to natural disasters. While defending DOS' budget request, she said,

climate change we know threatens food security, human security, and national security. Our budget helps to build resilience against droughts, floods, and other weather disasters. It promotes clean energy and it preserves tropical forests. It gives leverage to us to persuade China, India, and other nations to do their part as well. (Clinton March 2, 2011)

DOD also used the term in its Climate Change Adaptation (CCA) Roadmap: "Climate change presents a unique opportunity to work collaboratively in multilateral forums, promoting a balanced approach that will improve human and environmental security in the region" (DOD CCA Roadmap 2012).

I divided the findings for the *threat why* element into physical and social effects. Commonly referenced physical effects were severe weather and natural disasters (29), rising sea levels (21), desertification and drought (15), rising temperatures (14), melting ice caps (14), and changes in precipitation patterns (10). The social effect most often cited was the catalytic effect, often expressed as a stressor or threat multiplier (31), that climate change has on other factors in societies already experiencing hardship or instability. Food and water insecurity (22), economic impacts (12), and health and welfare impacts (9) were also noteworthy social effects.

Clearly, these effects are interrelated since climate change produces physical effects that may result in specific social effects. Changing precipitation patterns could cause a long-term drought that drastically reduces agricultural yields. Food insecurity may be a factor in state instability, violence, or large-scale migrations. However, these social effects may be offset through measures taken by communities, states, or the

international community. The speakers who mentioned physical or social effects seemed to understand or have some sort of causal relationship in mind. Panetta said, “rising sea levels, severe droughts, the melting of the polar caps, the more frequent and devastating natural disasters all raise demand for humanitarian assistance and disaster relief (May 3 2012). During a conference in India, Kerry was more explicit in describing causal links:

We have an urgent need to connect the dots here. When the desert is creeping into East Africa, and ever more scarce resources push farmers and herders into deadly conflict, where people are already, in parts of the world, fighting over water, then this is a matter of shared security for all of us. When we face major threats from extreme weather events of the kind that were predicted by climate science, including in my country, we all have to act. When the Himalayan glaciers are receding, threatening the very supply of water to almost a billion people, we all need to do better. (June 23, 2013)

Few texts specifically addressed the extent of the climate change threat. Since all of the speakers recognized the threat, I suspect that they also accepted climate change as a fact, the extent of which required no further elaboration unless it served a rhetorical or argumentative purpose. For example, while speaking at a Caribbean-US Conference, a forum attuned to the threat posed by climate change, Clinton said, “I don’t need to tell the countries here that climate change may be affecting everywhere on earth, but it will have a disproportionate impact on small island nations” (Clinton June 22, 2011). Todd Stern, DOS’s Climate Envoy, was one of few speakers to elaborate on the widespread and variable nature of the threat as part of his explanation of the difficulties of getting countries to agree on a solution:

Climate change, as we know, is a profoundly complex problem. It can only be addressed meaningfully through a fundamental change in the way we produce and consume energy and other resources, and those issues go to the heart of economic

development and growth. Thus, the notion that it's hard to reach agreement among over 190 nations should not be surprising. The risks posed by climate change and the difficulty of containing it pose challenges to every country, but very different challenges, and sometimes very different risks, depending on a country's circumstances. (Stern October 8, 2011)

DHS and DOI seldom referred to the extent of the threat except in the context of their mission or budgets. For example, FEMA noted both the pervasiveness of the threat and its worsening nature:

There are now many observed, well-documented impacts of climate change on natural resources and ecosystems in many regions of the United States and the world. These observed changes in climate conditions are projected to continue during the current century, and to grow in both number and magnitude. (FEMA Climate Change Paper August 2011)

Given its focus on disaster management, FEMA's emphasis on trends is not surprising and is a consistent feature of FEMA texts, particularly related to budget requests.

Similarly, a DOI financial report noted that "the sheer scope of climate change, combined with the difficulty of identifying region-specific impacts and the need to develop response strategies, has continued to pose significant management challenges to DOI" (DOI Financial Report FY 2012).

Most executive branch speakers seemed to accept that climate change is a phenomenon that has already arrived. Generally, they spoke of climate change and options to address it in the present tense and seldom made comments about its proximity. Thus, while the number of temporal references discerned from the texts is relatively few, I suspect that executive branch speakers did not feel obligated to make such comments. Rather, speakers used temporal references when addressing deniers or emphasizing their department's mission or budget. For example, Clinton used her remarks at the Maxwell

School of Citizenship and Public Affairs in Syracuse, New York, to challenge deniers in Congress, commenting, “It’s not been magically disappeared because people don’t want to have a political discussion about it. [Climate change] still is affecting people’s lives, and it’s affecting the lives of Americans here at home as well as countless millions around the world” (Clinton April 23, 2012).

Some speakers referenced present climate change effects while adding qualifiers related to future trends, temporal and spatial variability, and humility with respect to the inherent uncertainties of complex phenomena. DOI reported that “warming and snowpack decline will worsen through the 21st century, foreshadowing a strain on water supplies in a region where runoff from winter snowpack accounts for 60-80 percent of the annual water supply for more than 70 million people” (DOI 2011 Report). More dramatically, DOI referred to its “nationwide network of Climate Science Centers [that] will provide the scientific talent and commitment necessary for understanding how climate change and other landscape stressors will change the face of the United States” (DOI Press Release October 7, 2011). The uncertainty regarding specific climate change projections is clearly evidenced in DOD’s Arctic operations report to Congress:

The extent, impact, and rate of climate change in the Arctic are uncertain, and may not unfold in a linear fashion. This will make it challenging to plan for possible future conditions in the region and to mobilize public or political support for investments in US Arctic capabilities or infrastructure absent a clear and immediate need for them. The general assumption that climate change will occur gradually, allowing plenty of time to adapt, may be overturned by periods of rapid change punctuated by episodes of climatic stability, or by unexpectedly severe impacts from the change. Part of the challenge will be the variable pace of climate change: several relatively ice-free summers may be followed by a number of unusually cold years during which the sea ice remains throughout the year. (DOD Report to Congress on Arctic Operations May 2011)

Nearly a quarter of all executive branch texts cited proximate causes as the source of climate change. References to greenhouse gases and/or carbon dioxide (CO₂) were common and many speakers drew on scientific terminology. For example, Kerry stated that “just last month, the concentration of carbon dioxide in our atmosphere passed a significant and frightening threshold, 400 parts of greenhouse gases per million, a level that has never before been experienced by man in terms of carbon” (Kerry June 23, 2013). Some speakers also cited short-term, slow-acting pollutants such as methane, black carbon, and hydrofluorocarbons (HFCs), especially in discourses that offered less divisive options for mitigating climate change than trying to reduce CO₂ emissions. As part of her effort to promote “clean cook stoves,” Clinton noted that stoves are a major producer of black soot and that “if we can do something about these other pollutants we can deal with up to 40 percent of the greenhouse gas emissions” (Clinton November 27, 2012).

Three other findings from the *threat source* element are noteworthy. First, references to human activities varied, but most emphasized inefficiencies and emissions. Second, remarks about states almost always made the point that all states contribute to the problem, albeit to varying degrees, and thus all must participate in solving the problem. The collective problem theme often arose in the context of the UNFCCC’s challenge to reconcile developed and developing countries’ perspectives. Yet, as Stern observed, “the reality is that almost all the growth in emissions right now is in the developing world, which I don’t say by any way of criticism... it’s just connected to the fact that the developing world is developing” (Stern November 22, 2010). Third, some

sources mentioned casual factors while others sidestepped causality, perhaps taking a pragmatic position because of their concern for effects rather than causes.

Prognostic Frames

The executive branch's prognostic frame was the only frame that produced more references than Congress, 925 to 498. I attribute this difference to the emphasis that the executive branch placed on climate action rather than debating climate change's reality or causation. While I cannot substantiate this claim, I suspect that Obama's shift in strategy from legislative-based approaches to federal action through executive orders promoted much of the discourse. Indeed, seventy-three of the ninety-four executive branch texts addressed options to contend with climate change. Of course, discourse does not equate to action and substantial action requires funding that only Congress can appropriate.

The majority of executive branch texts discussed options for addressing climate change. Moreover, the substantial depth and length of these discussions yielded over 400 coded references, the single most productive element category for the executive branch. Few of these texts referenced only one of the *options* findings (see Figure 10). Rather, as illustrated in the following excerpt, they usually discussed one or more answers to the question what is/are the option(s) to address climate change:

So if we stipulate that climate change presents a serious threat, what should we be doing to address it? Some might say, "negotiate a treaty!" But the primary answer is that we need to take action on the ground. We need consumers and businesses to use energy more efficiently in their cars, homes, offices and factories. We need windmills and solar panels to be installed and next-generation biofuels to be developed. We need natural gas to substitute for coal and coal emissions to be captured and buried. We need to deploy what we have and invent what we don't. (Stern, April 6, 2011)

Executive Branch (94 texts)		Prognostic Frame (80)				
Option	(73)	Adaptation & Management (63)	Science & Technology (43)	Renewable Energy & Efficiency (27)	Mitigation (21)	Reduce Emissions (13)
Option Source	(55)	States (40)	Sub-State Jurisdictions (25)	Private Sector (13)	Civil Society (10)	Government (9)
Option Cost	(11)	Cost-Benefit Considerations (11)			Non-specific, Varies by Option (1)	
Option Risk	(7)	Insufficient, Too Slow (4)		Maladaptation (2)	Free Riders (1)	
Option Implementation	(62)	Treaty, Agreement, Partnerships (35)	Advise, Inform, Educate (27)	New Organizations & Titles (15)	Varies by State & Location (14)	Integrate into Routine (12)
Option Justification	(32)	Has other Benefits (15)	US Must Lead (13)	Cost Avoidance (6)	Feasible Now (5)	Helps other Options (5) Running out of time (4)

Figure 10. Executive Branch: Prognostic Frame Findings

Executive branch texts referred repeatedly to adaptation options. These options consisted of actions to contend with the effects rather than the causes of climate change. Adaptation entails adjustments in natural or human systems to the changes wrought by climate change, changes that permit the exploitation of new opportunities or require efforts to moderate negative effects. The Arctic's reduced ice pack, for example, is opening new sea routes that significantly shorten commercial routes and thus reduce costs. The Arctic also portends to provide abundant resources. Although a few of the texts commented on the positive adaptations that climate change will engender, the vast majority focused on the negative aspects and the need for resilience. Resilience refers to the ability of society, infrastructure, services, and systems to withstand climate change related effects such as extreme weather events and rising seas. DHS embraced the entire range of adaptation options as a set of objectives in its 2012 CCA Plan:

1. Manage climate risks for cross-cutting or other key homeland security issues.
2. Protect and ensure the resilience of critical infrastructure and key resources (CIKR) to potential impacts of climate change.
3. Ensure the Nation's resilience to more frequent or extreme weather events and natural disasters.
4. Contribute to safety, stability, security and environmental protection in the Arctic. (DHS CCA Plan FY 2012)

Other departments also incorporated adaptation as a key pillar of their efforts to address climate change, particularly as it affects their missions. For example, DOD concluded:

Many of the Department's current efforts are focused on assessing potential climate change impacts to, and adaptation strategies for, facilities, built infrastructure, key ecosystems and protected species, and capabilities where military training is conducted or supported, and evaluating potential actions DOD can take to respond to these impacts. (DOD Climate Change Adaptation Roadmap Annex A September 18, 2012)

Clinton also cited the necessity of adaptation, providing perhaps the most vivid albeit small-scale example found in the texts:

We've already moved villages on the Alaskan coast that used to be protected in winter from a thick bed of ice that would freeze the water in front of these villages so that the storms would not hammer the villages and erode the land. And now the ice is neither there nor as thick, and so we're already doing things that mitigate against the effects of climate change. (Clinton April 23, 2012)

References to technology exhibited one or more of three themes. First, technology was cast as an essential component of any plan to address climate change, garnering substantial attention in forty-three texts. The IC even posed the question "will technological breakthroughs be developed in time to boost economic productivity and solve the problems caused by a growing world population, rapid urbanization, and climate change?" (DNI NIC Global Trends 2030). No single technology dominated the discourses, but references to technologies concerning clean (non-fossil fuel) energy, efficiency, fossil fuel improvement, and carbon sequestration were common.

Second, science and technology were often portrayed as an American strength, a vehicle for cooperation with other states, and a pathway to economic growth and security.

At a clean energy event in Australia, Clinton linked all three portrayals:

So, we need to spark a global, clean tech industry. And that will help our economies grow by creating tens of thousands of new jobs, and give us viable alternatives to fossil fuels, and reduce our dependence on foreign sources of energy. I think that the United States and Australia, working together, can be pioneers of this movement. And I am excited that we are joining forces, taking our sophisticated research and energy abilities, and putting them together for this purpose. (Clinton November 7, 2010)

Other speakers highlighted similar efforts with China, India, and the European Union.

The third theme was the importance of climate models and monitoring capabilities to enable better decision making. For example, a DOI document declared:

The Department will use the best available science to increase understanding of climate change impacts, to inform decision making, and to coordinate an effective response to impacts on land, water, wildlife, cultural, heritage, and tribal resources, and other assets. (DOI Climate Adaptation Plan for FY2013)

DOI's platforms for science-based responses to climate change are the regional Climate Science Centers (CSC). According to DOI, the CSCs will provide:

derivative models and tools that link physical forcing factors with biological, hydrological, physical, ecological, and cultural resource response variables. Centers also will develop response models and projections for priority ecosystems, species, habitats, and other natural and cultural resources; this will generally be done at regional levels and then collaboratively developed with LCCs for specific applications. (DOI Plan for Science-Based Response to Climate Change Impacts)

Speakers usually interlaced comments on renewable or clean energy, efficiency, and emission reductions, often in the context of transforming how we use energy. Kerry stated, "Nothing less than a transformation of the way we use and produce energy will be

enough to tackle the urgent threat of climate change (Kerry July 19, 2013). *Clean energy* was the term of choice for the executive branch, capturing all non-fossil fuel sources of energy with the most frequent references to solar, hydro, and wind sources. A DOD official even commented that clean energy is “the only way to break out of the paradigm of foreign energy dependence and its associated instability (Burke February 7, 2013). Many speakers discussed smart grids to convey how clean energy sources could be integrated with and gradually reduce reliance on fossil fuel sources. Efficiency-related comments largely focused on the fuel efficiency of transportation assets, buildings, or power plants. Comments about emissions were normally made in the context of greenhouse gas reductions and several speakers highlighted that the US was well on its way to meeting its pledge to reduce its emissions seventeen percent by 2020.

Many speakers acknowledged that the effects of climate change were inescapable, but that steps could be taken to reduce the magnitude of those effects. Some texts highlighted interventions to reduce the causes of climate change, especially CO₂. Since CO₂ is a long-term, slowly accruing pollutant, however, many speakers conceded that today’s generations would incur costs that would only benefit future generations. Thus, many speakers expanded the notion of mitigation to address a broader range of consequence-reduction options. Some recurring options included improved crop yields through genetically modified plants and soil restoration to hedge against droughts, healthy forest initiatives to act as carbon sinks, and ecosystem restoration to provide natural barriers against extreme weather and rising seas.

In contrast to the *threat source* element where the executive branch seldom mentioned them, countries figured prominently in the *option source* element. I attribute the difference to three factors. First, DOS mostly operates at the state-to-state level and DOS comprised most of the sources that referenced states. Second, DOS leaders were outspoken about climate change during the sample period at least in part because of Obama's executive orders and ongoing, high-profile UNFCCC negotiations. Third, most of the speakers saw states as the only actors with sufficient power and authorities to operate at the scale necessary to contend with the enormity of the climate change threat.

DHS and DOI speakers usually cited sub nation-state jurisdictions as the enablers of climate actions. DHS texts referred to the important role of state, local, tribal, and territory (SLTT) partners. DOI's network of CSCs and LCCs consists of state and local level governments plus a host of local, non-governmental entities. In some cases, speakers noted sub nation-state jurisdictions when they were stressing the collaboration necessary to accommodate the scope of the problem and its varying manifestations at the local level. In other cases, speakers used comments about sub nation-state jurisdictions to illustrate that climate action is possible even without an international treaty or Congressional action, with California often serving as the case in point:

California is a very big state in its own right and must be probably 15 percent or so of the US in terms of population. And it is also – it has also in many ways, and with respect to many environmental issues historically, been a leader that sometimes yanks the rest of the country along with it. So I think it's very important what California's doing. (Stern November 22, 2010)

Executive branch speakers sometimes referred to the private sector, civil society, and government as part of a golden triangle for addressing climate change. The private

sector was prominent in discourses about innovation and market-based approaches to climate action. Civil society references included communities, service and religious organizations, special interest groups, foundations, charities, voluntary associations, public policy institutions, and academia. Government references varied by sub-audience with the IC, DOD, and DOS mostly citing national governments while DOI and DHS stressed coordination across federal, state, and local level governments.

Few executive branch texts touched on *option costs*. Speakers were either vague about the costs or spoke in terms of cost-benefit considerations. Kerry stated, “The costs of inaction get more and more expensive the longer we wait” (Kerry July 19, 2013). A DOI document concluded that “adapting infrastructure to changing climate conditions can be costly,” but “every dollar spent on disaster preparedness saves \$7 in disaster response” (DOI Economic Report FY 2012). Moreover, “decision makers seek to avoid committing public funds to outcomes that result in over-adaptation (overspending) or under-adaptation (and increased exposure to disaster risk)” (DOI Economic Report FY 2012). A DOD speaker framed cost-benefit considerations similarly:

We want to basically pace the threat. We don't want to get into a tail chase over climate change, but at the same time, ... we do not want to spend ahead of need, spending for things that may not be required for years or decades later.” (Tittley June 21, 2010)

Timeliness, sufficiency, and the prospects of free riders dominated the few references made to *option risk*. I attribute the infrequency to the tendency of most speakers to focus on the risks of bringing an option to fruition in the first place, a subject to which I will return when I discuss motivational frames. One interesting finding was the recognition that climate change actions can have negative consequences. A DOI

policy specifically directed the department to “avoid *maladaptive* actions, that is, actions intended to avoid or reduce vulnerability to climate change that negatively impact or increase the vulnerability of other systems, sectors, or social groups (Climate Change Policy December 20, 2012). DHS had similar concerns with regards to increased US Coast Guard (USCG) activity in Arctic waters, remarking that the USCG’s tribal liaison office reviewed “programs and operations for potential impact on federally recognized Alaska native tribes” (DHS Environmental Justice Report FY 2012).

The findings for the *option implementation* element were robust for all sub-audiences. DOS referenced treaties while all departments mentioned agreements and partnerships. Treaties were discussed in the context of comprehensive climate action such as the Kyoto Treaty and its potential successor, but most of these texts were skeptical about the prospects for a follow on treaty. In contrast, agreements and partnerships were often portrayed as favorable alternatives, using terms such as multilateral agreements, mini-lateral agreements, ecological partnerships, coalitions, bilateral agreements, cooperative arrangements, and voluntary coalitions.

Options to address climate change are often complex, long-term efforts for which numerous decisions will be required. Accordingly, many of the texts addressed the importance of advising and informing decision makers, and raising public awareness about climate change and the measures to deal with it. DHS and DOI often mentioned data-driven decisions, collaboration, and information sharing, especially in the context of partnerships that cross institutional or jurisdictional boundaries.

All of the departments mentioned new organizations and/or job titles charged with addressing climate change. DOI created the most formal and wide reaching structure, establishing the Energy and Climate Change Council led by the secretary and the regional CSCs and LCCs. The Navy created Task Force Climate Change, which has also participated in bilateral meetings with other militaries interested in climate change-related security issues. The CIA opened its Center for Climate Change and National Security in 2009, but closed it in November 2012, supposedly transferring its responsibilities to other offices.⁸⁵ DOS appointed a Special Envoy for Climate Change and all of the departments have either created new positions to manage their respective CCA roadmaps or assigned the responsibility to senior department leaders.

Two of the lower density findings for the *option implementation* element are notable. First, many speakers commented on how options are necessarily tailored to specific settings and thus implementation will vary by regions, states, and sub-state jurisdictions. In the context of the difficulties to secure a binding international agreement, a DOS spokesman called attention to the advantage of state-level implementation:

Legally binding international obligations to cut emissions are not necessary. Don't get me wrong, we are not opposed to such obligations if they genuinely apply to all the major players. But they are not really necessary; it is the national plans of countries, written into law and regulations, that count and that bind. That is the level at which any enforcement worth its salt takes place. (Stern April 6, 2011)

⁸⁵ Some journalists claim that congressional Republicans considered the center a distraction from the CIA's focus on terrorism and an unnecessary expense. See, for example, Broder (2012).

Second, DHS, DOD, and DOI announced steps to integrate climate change adaptation into their respective department business practices, thereby making climate change planning part of the routine rather than a short-lived anomaly. According to Secretary Napolitano, “the challenges posed by climate change must be infused into our strategies, plans, business processes, programs, and practices, as well as reflected in our engagement with partners across the Homeland Security Enterprise (DHS CCA Plan FY 2012). One of the goals of DOD’s CCA Roadmap was “to integrate climate change considerations into existing processes” (DOD CCA Roadmap 2012). DOI undertook the most ambitious effort to integrate climate change into its functions and organizations:

The Department will integrate climate change adaptation strategies into its policies, planning, programs, and operations, including, but not limited to, park, refuge, and public land management; habitat restoration; conservation of species and ecosystems; services and support for tribes and Alaska Natives; protection and restoration of cultural, archeological and tribal resources; water management; scientific research and data collection; land acquisition; management of employees and volunteers; visitor services; construction; use authorizations; and facilities maintenance. (DOI Climate Change Policy December 20, 2012)

Regarding the *justification* element, speakers typically used a mix of justifications to promote climate change options as evidenced in Clinton’s remarks at a meeting of the Climate and Clean Air Coalition:

Now, every one of the actions has already been applied somewhere, and so we know they work. Every one (sic) is based on existing technology, and fully half of them are considered low-cost interventions. So when you put all these factors together, they add up to an important opportunity that we cannot miss. (Clinton February 16, 2012)

Some texts showcased the many other benefits associated with climate action, including energy security, economic growth, improved health, and job creation. Kerry even

boasted that “putting the world on a path to a clean energy future will create millions of new jobs right here in America and around the world” (Kerry July 19, 2013).

DOS speakers frequently invoked the necessity of US leadership, a theme that has considerable resonance in the enterprise. For example, after Obama announced the Climate Action Plan, Kerry remarked,

The President’s historic announcement today will send ripples internationally about the United States’ commitment to meeting the climate change challenge. Leading the world as the “indispensable nation” demands that we must be the indispensable stewards of the planet. Decisive action at home empowers us to make more progress internationally on a shared challenge. (Kerry June 25, 2013)

Cost avoidance references distinguished between the costs of acting now versus the costs of reacting later. Underscoring the importance of reducing the military’s reliance on fossil fuels, a DOD text put this distinction in the starkest of terms:

The nation loses both blood and treasure in its consumption of fuel and other resources, Mullen said. The department uses about 300,000 barrels of oil each day, and fossil fuels are the No. 1 import into Afghanistan, he said. The delivery of fuel and other petroleum products there provides an inviting target for insurgents who attack supply convoys, injuring and killing service members, he noted. (Daniel October, 13, 2010)

Among the remaining *option justification* findings, “helps other options” warrants elaboration. Several speakers conceded that more ambitious options to address climate change such as carbon pricing and a binding international treaty were unachievable in the near-term. However, interim or smaller-scale measures could set conditions for more ambitious efforts later by demonstrating the efficacy of climate change actions and by building confidence in collaboration and collective action. DOS-led efforts to target black soot and other short-term pollutants are illustrative:

By focusing on these pollutants—how to reduce them and, where possible, use them for energy—we can have local and regional effects that people can see and feel. They can see those effects and become convinced that this commitment is one we all must all undertake. There will be better health, cleaner air, more productive crops, and more energy— in addition to less warming. The UN...has determined that reducing these pollutants can slow global warming by up to a half degree Celsius by 2050. To put that into context, the world’s goal is to limit the rise in global temperature to two degrees. So a half a degree, or 25 percent, is significant. Now, this project holds a lot of promise, especially in the context of our larger battle against climate change. Now we know, of course, that this effort is not the answer to the climate crisis. There is no way to effectively address climate change without reducing carbon dioxide, the most dangerous, prevalent, and persistent greenhouse gas. It stays in the atmosphere for hundreds of years. So this coalition is intended to complement—not supplant—the other actions we are, and must be, taking. (Clinton February 16, 2012)

Motivational Frames

Most executive branch texts emphasized *supporters* rather than opponents of climate change action (see Figure 11). Generally, supporters consisted of other executive branch players, actors with whom one of the departments was working (states, sub nation-state jurisdictions, civil society, and the private sector), or the scientists supporting specific climate actions. Speakers used positive language to describe supporters and their behaviors, chiefly when participating in high-profile events with representatives from other countries or when recognizing the role of their own departments. For example, Clinton stated at a Climate and Clean Air Coalition event that “when it comes to the climate crisis, Sweden is a global leader, both in finding solutions and encouraging other countries to put them to use” (Clinton June 3, 2012).

Comments regarding opponents were often muted, non-specific, and usually embedded in broader discussions about favorable climate change activities. DOS

speakers remarked on the difficulties of obtaining international and multilateral support for climate initiatives. While executive branch speakers publicly praised specific supporters, they normally used broad labels such as the “developing world” rather than naming specific opponents to climate options. One noteworthy exception was China, which DOS speakers would alternately hail for its climate efforts and at other times label as an obstructionist to meaningful actions. All of the departments commented on Congress’ inattention to climate change, but usually tempered their remarks by noting that Congress has to reconcile many competing interests or that congressional inaction does not preclude other meaningful efforts.

Executive Branch (94 texts)		Motivational Frame (63)			
Supporters (45)	Executive & Military Supports (24)	Coalition of the Willing (20)	Scientists Support (15)	Developing States Oppose (7)	Congress Opposes (6)
Helpers (19)	States (18)			Government (2)	Civil Society (1)
Rationale to Act (28)	To Act (28)				
Chance to Implement (27)	Favorable (16)	Unfavorable (12)	Challenges (12)		
Chance to Counter Threat (7)	Somewhat (7)				
Detractors (16)	Persuade (9)	Compromise (4)	Challenge (3)	Pressure (2)	Work Around (1)

Figure 11. Executive Branch: Motivational Frame Findings

Within the texts that cited *helpers*, DOS made the most comments regarding states and how they must help and change their behaviors. DOD mentioned states in the

context of Arctic collaboration, humanitarian assistance, and disaster relief. However, I was struck by the relatively few references to helpers, an outcome that may be attributable to the overlap between the *supporters* and *helpers* elements, particularly with regards to state references. Speakers often used “state” as a ubiquitous term for the state and its people, institutions, and territory. Arguably, one could answer the questions “who agrees or disagrees with the option(s) to address climate change?” and “who must help or change actions/behaviors?” with the same state reference. Clearly, the US consists of people and organizations that agree and disagree, and the US must help and change its behaviors to make significant progress on climate change.

The references to government were noteworthy for showing how the secretaries made an effort to position their organizations relative to climate change and to rally their respective departments to help with the climate issue. Clinton lauded US diplomats, noting that “they’re leading the fight against global challenges like nuclear proliferation and climate change” (Clinton March 2, 2011). While Clinton’s testimony to Congress was likely trying to contrast DOS action with the Congress’ inaction, Jewell clearly sought to rally her department in a video message:

Hi everybody. It's great to be out here on a nice, warm, sunny day. Just like it was yesterday, when the president announced a very bold and exciting action plan that we all need to embrace to make a difference when it comes to climate change. We are in a great position to act. The President has laid out a bold plan. I want you to join me in being part of the solution. Not only in what we can do at work, but what we can do in our daily lives, so that we can take action ourselves to mitigate climate change, and to leave a planet that's going to be better for our children, and our grandchildren, than it even is today. (Jewell June 26, 2013)

All findings for the *rationale to act* element favored action. The major themes were: we are running out of time/must act now (12), we owe it to future generations (10),

the science is compelling (9), we have a moral obligation/people demand action (6), action is in our interest (5), and we can make a difference (5). Like the option *justification element* in the prognostic frame, rationales to act were often used in combinations. For example, Kerry stated, “I am passionate about this, not based on ideology, but based on facts and based on science. It’s not just people all over the world crying out for action — it’s the very science that is screaming at us (Kerry June 19, 2013). Three sources qualified their rationale to act by tying budget considerations to uncertainty about the rate and extent of climate change or by noting that the same uncertainty may lead to poor choices of options.

About one-third of the texts that referred to the *chance to implement* climate actions evidenced an unfavorable outlook. The most common themes were the lack of a binding treaty, the impasse between developed and developing states, funding shortfalls, and political obstacles. Another third of the texts held a favorable outlook. DOS speakers made most of the positive comments, but always qualified their remarks by stressing that some progress had been made albeit through long, slow, and difficult diplomatic efforts. According to Clinton, “diplomacy and development are not always glamorous. It’s like what Max Weber said about politics; it’s the long, slow drilling of hard boards” (Clinton November 29, 2012). Of course, the absence of congressional action on climate change also forced DOS speakers to contend with credibility issues when engaged in diplomacy. The texts show that DOS speakers tried to downplay the significance of congressional inaction while highlighting the progress made domestically in spite of political obstacles, as exemplified by Clinton:

Now, the Obama Administration has done a number of things by executive order, particularly increasing mileage for vehicles, going after the pollution from plants – particularly utilities – and other steps that I think the Administration doesn't get enough credit for, and which I always say to my international interlocutors, Look, yeah, you're right. We didn't pass some great big climate deal in the Congress, but we've been slowly cleaning up our own house, and we're making progress on that. (Clinton April 23, 2012)

Other DOS speakers even referred to the impasse in the US government when pressing other states to adopt more ambitious plans to reduce GHG emissions, suggesting that political differences, whether domestic or international, need not forestall action.

Texts that emphasized the difficulty of implementing climate actions referred to conflicting stakeholder interests, the difficulties of collective action, and/or climate change as one of many priorities. Comments on conflicting interests surfaced in texts mentioning Congress, special interest groups, tribal communities, regional stakeholders, and states in the international community, among many others. For example, DOI revealed that competing interests were a challenge for the LCCs as they worked with a wide range of bureaus, stakeholders, and tribal, state, and local governments to develop and implement climate change action plans. A DOS speaker succinctly captured the essence of the collective action problem:

The [schedules] approach was designed to allow countries to see what others were undertaking to do and to serve as a prod, goading countries to do more than they would have in isolation. This is important because climate change presents a classic problem of the global commons; no single country will want to take action if its competitors don't. (Stern April 6, 2011)

In its budget justification report to Congress, the so-called Greenbook, DOI stated that climate change adaptation is but one of its many priority missions, the totality of which threaten to “diminish the level of service provided to existing and established

Departmental programs” absent sufficient funding, an admission that was intended to safeguard the budget but likely invited more scrutiny (DOI FY2014 Greenbook).

Few executive branch speakers spoke about the *chance to counter* the climate threat. I attribute this finding to three causes. First, the executive branch was struggling at home and abroad to generate support for even minor climate actions. One speaker attempted to put a positive face on pledges made at the Cancun climate conference talks, pledges that, even if fully honored, would not achieve the conference’s goals of limiting warming to 2 or 1.5 degrees Celsius above pre-industrial levels.⁸⁶

The world came together and agreed on a major step forward in tackling this problem. The targets and actions affirmed in Cancun cover all major economies representing more than 80 percent of global greenhouse gases. Pledges made in Cancun will yield significant reductions in emissions and address the impacts of the climate change we cannot avoid. (Pershing December 2, 2011)

Second, the scale of climate action paled in comparison to the magnitude of the threat, undermining confidence and encouraging defeatism. Consider the tepid statement made by Clinton:

Now, we have every hope that we will see results soon, both on the ground and in the atmosphere. One of the benefits of focusing on pollutants that are short-lived is, if we can reduce them significantly, we will have a noticeable effect on our climate in relatively short order. (Clinton February 16, 2012)

Third, substantial actions on climate change would benefit future generations, but progress toward that end is imprecise and meaningful measurements such as CO2 parts per million or fractions of degrees of temperature are abstract to most people and do not

⁸⁶ For a concise summary of the target numbers and conference outcomes see Chen et al. 2011, http://www.climateactiontracker.org/briefing_paper_cancun.pdf.

motivate much support. Kerry made one of the few detailed comments about present and future progress:

In 2011, our emissions were down nearly 7 percent over 2005 levels, and our energy-related carbon dioxide emissions were down 8.8 percent from 2005 levels. We are making good progress toward meeting our international pledge to reduce emissions in the range of 17 percent by 2020. The President's plan keeps us moving in the right direction. (Kerry June 25, 2013)

Of note, Kerry did not highlight specific climate actions associated with the favorable trends that he cited, perhaps because much of the trend could be attributed to the US recession and associated declines in energy consumption and manufacturing.

The final element is what to do about *detractors*, those who do not support climate change action or a specific option. Persuasion was the preferred approach and speakers generally employed economic arguments, casting climate action as a promoter of economic prosperity and job creation and/or pointing out that climate action will not jeopardize economies. For example, Kerry remarked, "The good news is that if we do this right, it's not going to hurt our economies; it actually grows them. It won't deny our children opportunity; it will actually create new ones" (Kerry June 23, 2013).

Other speakers preferred to compromise or use less confrontational approaches including avoidance. Even the few that chose to challenge detractors did so in general terms rather than identify specific people. Of course, anyone aware of the climate change politics in the US would certainly have understood Stern's remark that "public officials who need to know better have also spurned the evidence in greater and greater numbers, and this needs to be challenged" (Stern April 6, 2011). Notably, only DOS speakers

challenged detractors, perhaps a reflection of their need to show that detractors are in the minority and should not be viewed by the international community as representative of the US position on climate change. An alternative or added explanation may be that only secretaries with the high-profile stature of Clinton and Kerry, or those who work on climate change at their behest such as the US Climate Envoys, could risk challenging detractors.

Cognitive Frames

As structures for processing information, cognitive *issue* frames are unique to each individual. However, the texts revealed patterns suggestive of shared cognitive frames (see Figure 12). DOS and DOD were the only sub-audiences to use “fight,” “battle,” or “combat,” or similar wording. DOS and DOD speakers also routinely conceived of climate change as a threat although, as discussed earlier, speakers often shifted fluidly between synonyms. However, the use of these martial terms is notable. Although a speaker could conceive of an issue as a “fight,” DOS and DOD speakers usually reserved the use of marital terms for specific threats. Even when speakers employed non-martial synonyms in the same selections of text, they clearly conceived of climate change as a different type of issue. Of course, the use of martial references may have been purely for emphasis, a plausible explanation given the common use of martial terms in everyday American language. However, it is still significant that only DOS and DOD regularly invoked martial terms, and is suggestive of the differential application of the realist paradigm within the executive branch.

Executive Branch (94 texts)		Cognitive Frame (61)					
Issue (34)	Fight, Battle, Combat (11)	Real Issue (9)	Superordinate Issue (9)	Defies Borders (4)	Energy Issue (4)	Environmental Issue (3)	
	A Priority (1)	A Big Ticket Item (1)	A Defining Challenge (1)	About Economics and Development (1)	Nature as Threat (1)	Non-Traditional Threat (1)	
Identity & Relationship (37)	US Must Lead, US Interest (15)		Refer to Experts (15)		Shared Interests (13)		
	Firewall Between States (7)	Congress Ineffective (6)	Others Doing Better (4)	Department is Doing its Part (3)			
Process (40)	Rational Actor (40)						

Figure 12. Executive Branch: Cognitive Frame Findings

DOS speakers often invoked variations on “climate change is real” as a way to disparage naysayers and to remind everyone that there are costs to ignoring reality. For example, when replying to a question about the inequities created by climate change, Clinton stated,

It’s an excellent question and it’s one that we think about a lot, there’s no doubt that – newsflash – global warming is real – (laughter) – and that it’s having an impact around the world, particularly in places where mitigation and remediation are very expensive and hard to do, but it’s also going to have an impact everywhere. So the longer we postpone the inevitable, the higher the price, the greater the cost to all of us. (Clinton November 27, 2012)

Casting climate change as a superordinate goal and an issue that defies borders stressed that it is a problem that no one group can solve, a frame often employed by diplomats seeking international agreements. Both Clinton and Kerry spoke of climate change as a “shared global challenge,” one that “no single country will be able to address...on its own” (Clinton November 7, 2010). Typically, DOS speakers who drew on this cognitive issue frame described climate change as a collective or shared problem, or described the

issue in such a way as to make it worthy of extraordinary actions. Interestingly, Kerry mentioned climate change often in the context of Asia and China. Granted, China must participate in any significant climate action in order to effectively address the problem. However, climate diplomacy with China also offered an alternative issue conducive to cooperation even in the midst of contentious territorial issues between China and its neighbors.

Of the lower density findings, two are noteworthy for surfacing in more than a single text. First, some speakers conceived of climate change as an energy issue. Kerry frequently referred to climate change as an energy policy problem. DHS used the same theme in its strategic sustainability plan, declaring that it is committed “to creating a clean energy economy” (DHS Strategic Sustainability Performance Plans 2010, 7 and 2011, 6). Second, some speakers highlighted that climate change is most often thought of as an environmental issue, but should be considered for its broader implications. For example, FEMA’s Strategic Foresight Initiative (2011) stated that “traditionally, climate change has been considered an environmental issue.” However, emergency response managers realize that they must lead adaptation efforts because the issues created by climate change intersect with every facet of FEMA’s mission set. Interestingly, I found FEMA’s and similarly worded comments ironic because rarely did any speaker in my dataset dwell on climate change as an environmental issue.

The most common cognitive *identity and relationship* frames were those that situated the US or climate change experts in the climate change issue, or highlighted that climate change is an issue of common interest. The US was framed as the indispensable

global player. Therefore, it must not only accept the challenge, but also lead the international effort to address climate change because “leading the way is also the right role for the United States” (Kerry June 19, 2013) and “there is no alternative to American leadership” (Clinton November 29, 2012). The texts clearly demonstrated that the executive branch overwhelmingly embraced the image of America as a force for good with global responsibilities. Stern’s remarks on American identity are strongly reminiscent of the comments I encountered often in my career in the enterprise:

Whatever your views on climate change, the United States needs to – and always does – stand ready to help countries victimized by such events. It is who we are, and it is in our own interest to do these things. It is part of why people around the world look with favor on America. (Stern May 25, 2011)

The science or expert identity frame was used often by speakers from all of the departments to convey the reality of climate change, the effects that it is having or will have, or the value of specific options to address climate change. Sometimes the frame was further qualified with an emphasis on the number of scientists involved, the consensus among them, the weight of scientific research, and/or the extensiveness of the peer review process that ensures the best possible science. Occasionally, scientists were identified as part of our own National Academy of Sciences, perhaps suggesting that other Americans should trust their findings in the event that they are skeptical of the IPCC. Scientists were also referred to as our best and brightest, and their work as decidedly not ideological, but based on facts, sound-science, and cutting-edge research.

Scientists were often cast as politically neutral parties who enabled the departments to increase their understanding of climate change impacts, inform their

decision makers, and coordinate appropriate responses. Of course, the wielding of referrals to scientists was anything but neutral, playing a strong role in justifying the speaker's claims. However, if scientists were perceived to be politically motivated or politically constrained, then their value in claims-making would decline. Recognizing the risks of politicized science on the eve of unveiling its CSC/LCC plan, DOI made the strongest statement about scientific integrity found in the dataset:

The Secretary set a new policy to ensure the integrity of the science throughout Interior's research, reports, decision-making and policy development. The new policy clearly affirms that Interior employees, political and career, should never suppress scientific or technological findings or conclusions. Further, it ensures scientists will not be coerced to alter or censure scientific findings, and employees will be protected if they uncover and report scientific misconduct by career or political staff. (DOI 2010 Report)

Referring to climate change as a common interest was often a preamble to a statement regarding the need for collaboration in addressing the problem. Clinton and Kerry frequently framed climate change in this manner, setting the stage to implore other states to work with the US and other willing partners and/or to do more on their own to curb GHG emissions. For example, speaking in Tokyo, Kerry remarked, "this is something we have to do together, because climate change grows more and more serious and threatening and challenging by the day, and it is one of the most obvious shared challenges on the face of this planet" (Kerry April 15, 2013).

Other notable frames included references to the firewall between developed and developing states, often made by DOS speakers who acknowledged that a comprehensive climate change treaty was unlikely. Similarly, many of the same speakers noted that the blame cannot be placed entirely on reluctant international partners given Congress'

record on addressing climate change. Indeed, some executive branch speakers sought to shame Congress by noting that other states, including China and members of the European Union, are doing much better than the US and are also capitalizing on the economic and security benefits of climate action. Some departments, however, staked a claim to their role in addressing climate change. For example, DOI noted that the US Geologic Survey (USGS) is bringing the best possible science to bear on the climate change issue, including “ground breaking work in biological carbon sequestration to better inform our carbon reduction efforts” (DOI Press Release June 26, 2013).

One cognitive *process* frame was identified that guided the behavioral script of most executive branch speakers. The “rational actor” frame situates speakers as part of the body that is responsible for the security of the nation. This frame is grounded in the realist paradigm that dominates the enterprise, especially the executive branch. Speakers who embrace the paradigm follow a script with the language and a strategic logic that others in the executive branch understand. This process frame accepts that certain departments and agencies identify threats. Threats to US interests merit the attention of the president who sets priorities as the head of state and commander in chief of the armed forces. The executive branch complies with his orders and, when it comes to national security, the rest of the enterprise is expected to rally behind the president. This body knows what it is doing, and others should defer to it. After all, the realist paradigm and its strategic logic have successfully safeguarded US national interests since the Second World War.

How did this “rational actor” process frame emerge in the texts? Speakers referred to intelligence and military professionals, and other experts who have concluded that climate change is a threat to US interests and degrades US instruments of power. The physical and social effects were recounted repeatedly and in detail. The departments responded to the head of state and commander in chief, interpreting their role in accordance with well understood departmental roles and missions. Department secretaries focused on options to address the problem because that was the rational thing to do. The texts also showed that these speakers were often dismayed that others would question their assessment of the threat or the rationality for addressing it. Some became noticeably irritated, others indignant. A few turned to humor, but all returned to the script, a script with which anyone in the executive branch and most people within the enterprise can relate.

Theoretical Insights

The four theories presented in chapter three and distilled into part III of the analytic framework shown in chapter four, served two primary purposes. First, they sensitized me to alternative meanings as I analyzed discourses for the various frames. The breadth and depth of findings in the preceding sections are owed in part to the unique perspectives provided by each theory. Second, as I analyzed the texts, I considered whether the theories offered insights on the climate change frames used by the executive branch and the sub-audiences selected for this study. In this section, I focus on the second purpose, presenting my findings as references from the texts that align with key elements from each of the theories (see Figure 13).

The balance of threat theory, and the body of realist theories for which I used it as a proxy, was overwhelmingly evidenced in the texts. Although it would be an exaggeration to say that the executive branch functions uniformly under the guiding hand of realism, the realist paradigm clearly shaped how the speakers conceived of the climate change threat and the options to address it. Yet, climate change also fit uncomfortably into the realist conception of threat, engendering a wide range of frames that sometimes reinforced the national security-climate change nexus and at other times downplayed it.

Executive Branch (94 texts)		Theories (56)			
Balance of Threat (49)	Assess Strategic Environment (28)	State Focused (14)	Refer to Interests (11)	Impact on Power (10)	
	Realist Language (10)	Impacts on Security Policy (5)	US Primacy (5)	Zero-Sum Concerns (2)	
Three Streams Model (14)	Politics (7)	Policy (4)	Problem (3)	Participants (2)	
Social Identity Theory (18)	Salience (12)		Comparison (11)		
Cultural Theory of Risk (8)	Way of Life or Worldview (8)				

Figure 13. Executive Branch: Theory Findings

The realist paradigm begins with an assessment of the strategic environment, a step that twenty-eight sources gave clear indication that they had taken. This is also the step where different speakers parsed climate change differently with most DOD, DOS, and IC speakers conceiving of climate change as a threat to the US only to the degree that it interacted with other factors to spawn more traditional threats from abroad. These assessments gave rise to climate change labels such as “an accelerant to instability” and a

“threat multiplier.” Rarely did speakers consider climate change a threat on par with any of the more traditional, actor-based threats. DHS speakers also applied the realist paradigm, but only in the context of the USCG and the Arctic or border control efforts and climate refugees. Otherwise, DHS and DOI looked at the implications of climate change through locally experienced physical and social consequences.

Most executive branch speakers referred to the state as the threatened object or the object to be secured. DHS and DOI speakers showed more nuance, sometimes stressing the vulnerability of sub nation-state actors. Generally, speakers framed options to address climate change in terms of state leadership, authorities, and capabilities. Also, DOS and DOD enjoy a broad network of state-level, bilateral and multilateral organizations and partnerships with which they are accustomed and comfortable working. DOD leaders even noted that they had added climate change to their routine security dialogues with other nations and were leveraging existing multilateral bodies such as the Arctic Council to serve as forums for preventing conflict.

In the realist paradigm, the state is threatened to the extent that its national interests are threatened and these interests are dominated by concerns about security, economic prosperity, the stability of the international system, and the preservation of American values. Many speakers stated that addressing climate change was in the US interest, but few suggested that climate change posed a direct threat to the US much less an existential threat. DOI texts made the fewest references to US interests, but they still highlighted economic interests threatened by the effects of climate change on natural resource dependent activities.

Even though few speakers explicitly labeled climate change a threat, several were concerned about the effects of climate change on the instruments of power used to address traditional threats. Indeed, DOD generally framed climate change as either a threat multiplier that complicates its mission or as a threat to its power projection capabilities. The US military instrument of power is the ultimate arbiter in contending with traditional threats and balancing against potential threats. Power projection—the ability to bring military power to bear anywhere on the globe quickly—is highly dependent on transportation assets and facilities, overseas bases, and a well-trained and equipped military. Thus, when DOD speakers call climate change a threat, the referent object is more often than not, itself, but when non-DOD speakers cite DOD’s concern about climate change, they tend to emphasize the threat multiplier frame.

In addition to the terms typically associated with the realist paradigm such as national interests and instruments of power, the often used martial language of the military instrument may indicate an effort to securitize climate change and thus is worth highlighting. As noted earlier, these terms may have been used for emphasis, especially since they were used interchangeably and fluidly with other labels such as issue, challenge, and problem, terms that are seldom used to describe traditional threats, including terrorism and belligerent states.

Three additional findings are worth noting. First, the realist paradigm accepts as a core assumption that the US is and must remain the first among equals, the indispensable global leader. Speakers often invoked this idea when noting that the world is watching what we do and expects the US to lead, and that other states will take advantage of the

opening if we fail to lead. Second, climate change factored into actual changes in security policy. As mentioned above, DOD took steps to add climate change to its routine and its frequent security dialogues. DOS speakers often added that climate change efforts are, in effect, conflict prevention efforts:

We help nations adapt to the effects of climate change, efforts meant to ensure that these shifts do not disrupt vital trade and economies. These goals represent a wise investment for the American taxpayers. By supporting diplomacy and development, the Nation is able to respond to problems before they escalate into crises that require a more significant, and usually much more expensive, response. It costs far less to deploy a diplomat or development expert than a military division. And by using a preventive approach to global issues, we are able to stave off potential threats before they become major risks to our national security. (Clinton March 2, 2011)

Third, the realist paradigm views interests as a zero-sum game where the balance of power shifts between states even as the diffusion of power elevates non-state actors into more prominent roles that challenge state authorities. Some speakers cast climate change as an issue that can increase relative US power, or relegate the nation to the sidelines:

Of course, these are tough fiscal times. But as the President said last week, it makes no sense to sacrifice the investments that will allow us to compete in the multi-trillion clean energy market. This is high stakes stuff and it's not ideological. No one should want the US on the sidelines as our competitors race for global economic leadership. The transformation of the energy base of the global economy is the great game of at least the next several decades. We need to be in it with both feet. (Stern April 6, 2011)

Elements of the other theories were present in the texts, but considerably more sparse than for the balance of threat theory. The *streams* of the three streams model emerged primarily in the context of references to other audiences rather than as a function purely of the executive branch. Consequently, executive branch speakers pointed to the politics at play in Congress that both denied the problem of climate change and precluded

comprehensive policy action. Of course, the texts generally presented only the executive branch's side of the story whereas Kingdon's model clearly envisioned a broader look at policy making, including the prominent role of Congress. Indeed, the findings for Congress were substantial and will be discussed later in the chapter.

Social identities were evidenced in the texts, but the number of elements identified was lower than I had anticipated. I attribute this finding to my failure to appreciate the relative homogeneity of the executive branch, especially when viewed mostly through the texts of presidentially appointed officials. The elements that were identified involved identity salience and identity comparisons across audience boundaries. As noted previously, scientists, entrepreneurs, and the military were often cited as uniquely qualified and credible experts by executive branch speakers trying to defend climate change as a problem or security issue and to promote the efficacy of an option. The retort that even the military and IC sees climate change as a threat was, in a manner, invoking an oppositional identity with resonance inside an enterprise guided by the realist paradigm. After all, if the military calls climate change a threat then how can one challenge a credible identity whose job is to identify and contend with threats.

The American or US identity was used by speakers in two ways. Most often, executive branch speakers wielded the US identity as a call to action, playing to notions of American exceptionalism, global responsibilities, and expectations of American leadership. Thus, the US was cast as the indispensable leader, the country that helps others because that is who we are, and the nation that takes its responsibilities seriously. In contrast, some speakers contrasted the American identity with other state identities to

show that we are not living up to the norms and behaviors expected of America or that conceding our leadership role would create a vacuum that others would willingly fill. In this sense, Sweden and Indonesia were labeled global leaders and other states were lauded for bold steps on climate action. China was branded for its efforts to build an ecological civilization, leaving the US behind in the emerging trillion dollar clean energy market. Of course, not everyone accepted the claim about China, noting that it embraces whichever identity, developed or developing nation status, best serves its interests.

The cultural theory of risk produced the fewest results. Although executive branch speakers discussed the risks of climate change and the actions to address it, there was little indication that a preferred way of life shaped any of the speaker's discourse. However, the discourses as a whole offer one finding. As discussed in chapter two, the enterprise is dominated by hierarchists and individualists, and these two groups tend to discount environmental concerns unless they threaten their preferred ways of life. In the executive branch, the system is a hierarchy that individualists tolerate to the extent that it preserves their liberties and creates a fair environment for competition. Hierarchists rarely favor bold, costly solutions, preferring to trust in traditional patterns of behavior and thus they discount problems unless they see a clear solution. Since climate change discourses have gained a foothold in the executive branch, perhaps hierarchists see a threat to their system or egalitarian/communitarian voices have influenced the discourse.

Several speakers commented on the adverse effects that climate change has on national interests and instruments of power, bedrock concepts of the realist paradigm and arguably part of the way of life embraced by the enterprise. Also, the prognostic frame

was the most common employed by executive branch speakers. Perhaps climate change threatens the relative power of the US and the system that has successfully sustained that power since the Second World War. Thus, the emphasis on promoting a solution is an effort to ensure that the executive branch sees a clear solution, a prerequisite for acknowledging the threat. Another explanation that draws on the cultural theory of risk is that Obama's more liberal inclinations have attracted communitarians and egalitarians to the center of power and their voices have managed to shape the discourse.

Congress

How did Congress construct climate change meanings? Unlike the executive branch, Congress did not exhibit a consensus on meanings and thus its members engaged in a struggle over frames and the interpretation of those frames. Sometimes members openly rejected the frames presented by their colleagues, an approach most often used by those on opposite sides of the so-called debate over the reality of anthropogenic climate change. In these cases, members used divergent diagnostic frames to either emphasize or downplay the threat and/or the threatened object. In general, members who used diagnostic frames also used prognostic frames. However, some members dispensed with diagnostic framing, constructing their meaning of climate change using prognostic frames that conceived of climate actions as favorable or unfavorable.

Diagnostic Frames

The majority of the senators represented in the texts recognized the phenomenon of climate change, and out of this group most referred explicitly to it as a threat (22), an

issue or problem (10), or a challenge (7) (see Figure 14). Many speakers had misgivings about climate options, but few of them discussed whether or not climate change is a threat. A smaller group referred to climate change as a hoax or the product of an alarmist movement, or said that the science did not support the threat label. Three other senators were non-committal in their assessment, saying that the science was unsettled or that climate change was indistinguishable from weather patterns or climate cycles. Without exception, Democrats and Independents, regardless of committee membership, were the only members who called climate change a threat or affixed a similar label. Conversely, Republicans were the only ones who did not embrace the threat label or who made vague comments about the threat.

Congress (80 texts)		Diagnostic Frame (72)				
Threat	(37)	Yes (31)			No (9)	Vague Reference (3)
Threat To	(46)	Humans (24)	Nature (24)	Vulnerable Population (16)	Security (16)	Organization, Mission (10) US (9)
Threat Why	(57)	Physical Effects (48)		Social Effects (42)		
Threat Extent	(24)	Worsening (22)			Widespread (6)	
Threat Proximity	(33)	Present (29)			Future (10)	
Threat Source	(44)	Human Activities (34)		Proximate Causes (18)	Nation-States (4)	

Figure 14. Congress: Diagnostic Frame Findings

Senators seldom mentioned only one threatened object. *Humans* and *nature* were common, all-encompassing replies often qualified with concerns about health, life, future generations, the planet, natural systems, forests, and reefs. The vulnerable populations most mentioned were coastal areas, islands, poor countries, and US communities in low lying areas or whose economies were threatened by climate change. Senator Sheldon Whitehouse (D-RI), perhaps the most vocal climate change action advocate in the Senate, highlighted an economic threat:

Coastal economies, such as in my home state of Rhode Island, are threatened in other ways by sea-level rise and extreme storms. The Rhode Island Economic Development Council notes that tourism in Rhode Island is at the absolute center of our summer economy. People from all across the nation come to Rhode Island in the summer to enjoy our beautiful beaches, our sparkling bay, sail, and participate in all the beachside activities. Damage to that economy would be very significant. (*CRDE* January 1, 2013)

Comments about the threat to national security were made by speakers from all of the committees, and they often embellished their remarks with concerns about national interests, the economy, or the geopolitical ramifications of climate change. Many of the speakers underscored the credibility of their comments by referring to DOD or the CIA or individuals with national security credentials, including prominent Republicans such as former Senator John Warner, former chairman of the Senate Armed Services Committee, and George Shultz, former Secretary of State under President Reagan (*CRDE* March 20, 2013). Several Democrats referred to DOD's Quadrennial Defense Review published in February 2010 that described climate change as a threat multiplier and an accelerant of instability. These speakers were deliberately citing security organizations and

oppositional identities as they spoke to their colleagues and witnesses, suggesting to them that party affiliation need not be an impediment to embracing the threat.

Several speakers mentioned the threat to the military instrument of power. Rising seas and severe storms were portrayed as threats to coastal naval facilities and low-lying airfields. Climate-related disasters were noted for the increased demands they place on the National Guard, which is often mobilized in response as occurred “in response to Katrina, [when] the National Guard mobilized 58,000 National Guard members to the relief effort at the same time that 79,000 Guard members were deployed fighting the war on terrorism” (CRDE November 28, 2012). One senator cited a GAO report, which concluded that climate change places a large portfolio of federal assets at risk across the US. Other senators remarked that climate change also threatens to undermine past development gains made by the US Agency for International Development (USAID) as well as future development goals in vulnerable societies around the globe.

The texts made numerous references to the physical and social effects of climate change. The most frequently cited physical effects were extreme weather and disasters (32), rising sea levels (27), drought (22), rising temperatures (19), changes in ocean chemistry (19), and ice and snow melt (18). Senators selected effects most supportive of their claims or to support a political purpose such as challenging a colleague or speaking indirectly to their constituents. Whitehouse focused on a single effect to underscore its often undervalued importance in the context of specific economic impacts:

The increasing acidification of ocean water driven by the rising carbon dioxide in the atmosphere lowers the ocean's saturation levels of calcium carbonate. That sounds boring. Who the heck cares about the ocean saturation levels of calcium carbonate? Calcium carbonate is the fundamental building block of the shells of

aquatic species such as oysters, crabs, and lobsters. Fisheries we actually do care a lot about, even if we may not care about calcium carbonate. It is the basic building block of the plankton that comprises the very base of the food web. Ocean acidification caused 70 to 80 percent losses of oyster larvae at an ocean hatchery in Oregon from 2006 to 2008. Wild oyster stocks in Washington State also failed under the stress of that more acidic water. This is an industry worth about \$73 million annually along our Pacific coast, and it is faced with the threats from climate change. (CRDE January 1, 2013)

In contrast, while appealing to his Senate colleagues to take the threat of climate change seriously, Senator Patrick Leahy (D-VT) listed many physical and social effects:

As anyone who works the land will tell you, the world's climate is changing fast-spring is coming earlier, polar ice and glaciers are melting, and storms are more violent. Scientists say these changes are potentially catastrophic, and that we will experience even more frequent severe weather events, shrinking water supplies, more intense heat waves and droughts, the spread of disease, and more and more threats to food production. (CRDE March 20, 2013)

Economic impacts (22), food and water security (20), societal instability (11), damages and costs (8), and geopolitical consequences (7) were the most common social effects found in the texts. Unsurprisingly, most of these effects were framed in a domestic context and usually in relation to the speaker's state. For example, concerned about drought, Senator Dick Durbin (D-IL) observed, "If the level keeps decreasing, the [Mississippi] River may become too shallow for barge traffic to pass between St. Louis, Missouri and Cairo, Illinois" (CRDE December 6, 2012). He continued to note that the drought was also harming farmers and ranchers in his and neighboring states, costing the US government over \$12 billion in aid. Senator Al Franken (D-MN) echoed Durbin's comments during a hearing held by CENR:

The impacts of the 2012 drought were felt throughout the country and, in fact, more than 70 percent of counties in our country were considered disaster areas...Shipping on the Mississippi River was also seriously impacted. In fact, water levels dropped to the point that it seriously interfered with our ability to

transport agricultural goods to market. The waters got so low that shippers had to send barges down to Mississippi half full with soy beans, for example, which makes our beans less competitive with Brazilian beans. In Minnesota, we export about a third of our soy bean crop. And so this is a serious issue for us. (CENR April 25, 2013)

Senator Brian Schatz (D-HI) combined causality, several effects, and his home state in his remarks to the Senate:

Ocean acidification has real economic consequences for communities that depend on the ocean for food, for jobs, and for tourism, such as my home State of Hawaii. Further acidification and warming will hurt our local fishing and tourism industries, industries that make up the backbone of our economy. All the fish and the seafood we depend upon may become scarcer and likely more expensive. (CRDE July 24, 2013)

While Whitehouse has made similar observations about his home state of Rhode Island, he usually spoke more broadly about climate change effects, an approach consistent with his high-profile advocacy for climate change action:

Let's talk about climate change in the context of money. Markets and businesses across this country have developed to fit the prevailing environmental conditions in their different regions of the United States. These markets and these businesses are going to face real challenges when our climate changes those prevailing conditions. Whether it is higher sea levels, stronger storms, warmer winters or dryer summers, no State and no economy will be unaffected by climate change. (CRDE January 1, 2013)

Senators sometimes referred to the damages and costs incurred by climate change, often in a bid to promote climate change action as a form of cost avoidance. Many of these discussions were held in the context of committee hearings regarding forest fires, water shortages, agricultural issues, disaster response and preparation, and budget requests from departments and agencies tasked to manage natural resources. For example, Durbin raised the specter of ever increasing disaster costs:

Nationwide, the financial consequences of weather-related disasters and climate change hit a historic new high last year. US disasters caused over \$55 billion in damages. Federal, State, and local governments are paying out more every year in damages and lost productivity. So the question is, as a government, what are we going to do about this? Is this the new normal? (CRDE December 6, 2012)

Senator Barbara Boxer (D-CA), Chair of CEPW, also highlighted costs while noting that the source of the information is non-partisan:

According to the GAO, extreme weather events have cost the Nation tens of billions of dollars already, just over the past decade. As these extreme weather events increase, so will the cost to American taxpayers. This is more from the Government Accountability Office. This is not from the EPA. This is not from NOAA. This is not from Barbara Boxer. This is not from Bernie Sanders. This is not from Sheldon Whitehouse. This is not from the Environment Committee. This is from the GAO. (CRDE March 11, 2013)

National security discussions provided senators with the opportunity to discuss social effects in an international context. Although not the exclusive domain of SFRC, the implications of climate change on national security were raised by many democratic committee members. For example, Senator Ed Markey (D-MA) linked food and water security to a discussion regarding DOD's rebalance to Asia plan:

The impacts of climate change are already affecting China's water and food security. For example, the storage capacity of Himalayan glaciers is declining. These glaciers feed Asia's 10 largest rivers which supply 47 percent of the world's population with freshwater. (SFRC July 24, 2013)

Kerry, then serving as committee chair, routinely discussed the security implications of climate change. He also asked witnesses about the possible causal relationship between climate change and events in Darfur, a theme that surfaced in other audiences as well.

Security-related discussions revealed concerns about the social and geopolitical implications of climate change. Senators and expert witnesses discussed security issues related to changing sea conditions in the Arctic such as policing of new sea routes,

managing resource extraction, and settling territorial claims by bordering states. DHS, DOD, DOI, the US Navy, and the US Coast Guard all testified on the challenges and costs incurred, including new missions and shortfalls in resources and infrastructure.

Discussions of the national security-climate change nexus were not the exclusive domain of SFRC. With twenty committees and one hundred members spread across them, members carried ideas from one committee to another. Moreover, climate change advocates stood up three groups to advocate for climate action: the Bicameral Task Force on Climate Change, the Climate Change Clearinghouse, and as of January 2014, the Climate Action Task Force. These groups promote climate action and also provide venues for sharing ideas. Thus, Whitehouse often mentioned national security while discussing climate change during CEPW meetings whose chair is an SFRC member. As chair, Boxer often used her position to comment on the security issues attendant to climate change. Interestingly, Whitehouse, Boxer, Bernie Sanders (I-VT) and other outspoken climate change action advocates in the Senate often cited security concerns and referred to the military and intelligence organizations that share their concerns, suggesting an alignment between environmentalists and security hawks. For example, during a Senate-wide discussion, Sanders stated,

We have [DOD] saying: Climate change is an accelerant of instability. What that means is that when there is drought, when countries around the world are unable to grow the food they need, when there is flooding and people are driven off the land, and when people migrate from one area to another, this creates international instability, which is of concern to [DOD]...The CIA understands that "climate change could have significant geopolitical impacts around the world, contributing to poverty, environmental degradation, and the further weakening of fragile governments," as well as "food and water scarcity." That is from our own CIA. (CRDE December 13, 2013)

Whitehouse also reminded colleagues about the national security implications of climate change during a discussion on the National Defense Authorization Act for FY 2013:

Climate events such as droughts and heat waves, floods and storms exacerbate political and military tensions in areas around the world with fragile governments and instability. This can result in violent conflict and in refugee problems. (CRDE November 28, 2012)

Senators advocating for climate action often described the *threat extent* of climate change as worsening and/or widespread. Comments about the worsening of the problem typically were associated with criticisms about Congress' reluctance to do anything about the threat. A "worsening" threat puts the onus on timely actions and thus casts opponents of climate action as contributors to the problem. Whitehouse invoked the image of worsening with regards to ocean acidity:

As my colleagues can see, the curve is not only moving upward but is steepening. Where is it headed? By the end of this century, it is projected we will have a 160-percent rise in ocean acidity. As we can see, not only are the oceans becoming more acidic, but they are becoming more acidic at a very rapid pace. The rate of change in ocean acidity is already thought to be faster than at any time in the past 50 million years. (CRDE December 12, 2012)

Senator Christopher Coons (D-DE) cast the problem in terms of food production:

According to the draft National Climate Assessment released in February, our farmers are expected to adapt relatively well to the changing climate over the next 25 years. However, later, as temperatures increase and precipitation extremes become more intense, crop yields and production of livestock and poultry are expected to decline. More extreme weather events, including droughts and heavy downpours, will further reduce yields, damage soil, stress irrigation water supplies, and increase production costs. (CRDE April 22, 2013)

Although the effects of climate change vary by location, a "widespread" threat reminds the listener that no one remains unscathed, even if you presently are not imperiled. For

example, Senator Richard Blumenthal (D-CT) reminded his colleagues that climate change is an issue that touches all constituencies:

I wish to join with my two very good friends and colleagues who have highlighted an issue that concerns the whole country, not just Hawaii, Rhode Island—and no two States are farther apart geographically—but we share this very dire and dangerous problem, often characterized as climate change. I think it is climate disruption. It is global destruction. (CRDE July 24, 2013)

Together, “worsening and widespread” descriptions of the threat sought to inspire congressional members to take action.

Similarly, senators tried to situate the worsening and/or widespread effects of climate change in a temporal frame. Most often, the threat was described as already here and widespread and/or worsening. Senator Jeff Bingaman (D-NM), the Chair of CENR, commented on both the proximity and extent of the threat:

Climate change is not just an issue that will affect future generations. The impacts are being felt today in different ways all around the country and around the world. Here in New Mexico we’re dealing with increased temperatures, drought and more intense fires, but citizens in places like Louisiana and Florida are dealing with the impacts of rising sea levels. It’s clear that communities across the country are paying very real costs for climate change right now. (CENR August 17, 2012)

Advocates used these descriptions to push for timely climate action, portray recalcitrant colleagues as endangering citizens, and/or undermine the arguments of skeptics who claim that nothing is amiss. References to climate change’s future effects reminded the listener that conditions will worsen absent action today and thus implored colleagues to change that outcome.

Regarding *threat source*, senators in favor of climate action blamed human activities for causing climate change, and carbon emissions garnered the most frequent

comments (27) followed by more generic comments about human causation (19).

Typically, remarks about anthropogenic causes were made to challenge skeptics, suggest that actions can make a difference, and show where to focus those actions. While facing skeptics, many senators bolstered their comments with references to scientists and other experts. A Whitehouse remark is illustrative of a common refrain found in the texts:

“The overwhelming majority of scientific research indicates that these observed changes in the Earth's atmosphere are the direct result of human activity; namely, the emission of carbon dioxide from the burning of fossil fuels” (*CRDE* December 9, 2012). Senator

Kirstin Gillibrand (D-NY) added information useful for policy making:

Now, what are we supposed to do about this? Clearly, scientists tell us there is too much carbon pollution in the air, and I will show you where it is coming from. The electricity sector gives us 34 percent of the carbon; the transportation sector, 27 percent of the carbon comes from there; the industrial sector, 20 percent; the agriculture sector, 7 percent; residential and commercial building, 11 percent. (*CRDE* March 4, 2013)

Senators often mentioned GHGs as the proximate cause of climate change.

References to GHGs helped to add credibility and to reinforce their comments about human activities by describing the problem, causes, and effects with scientific precision.

Senators also commented on GHGs when evaluating options to address climate change as seen in the opening remarks of Senator Ron Wyden (D-OR), Chairman of CENR:

Today's oversight hearing is on clean energy finance. And it is particularly timely because scientists at National Oceanic and Atmospheric Administration recently sent a sobering message, when they announced that carbon dioxide has now passed 400 parts per million in the atmosphere. The last time that carbon dioxide were at 400 parts per million was a few million years ago. Scientists estimate that the Earth has to stabilize at just 450 parts per million to avoid the worst effects of climate change. So it is quite clear that it is going to take significant changes—significant changes—to stay under this goal. (CENR July 18, 2013)

Prognostic Frames

The *option* element was found in three-quarters of the texts, a number indicative of Congress' legislative role and its multitude of interests (see Figure 15). Renewable energy and increased efficiency were the most popular options, usually cited in the context of mitigating future climate change effects. Renewable energy such as wind and solar power was often termed “clean energy” in order to contrast it with energy produced by “dirty” fossil fuels. Moreover, clean energy was described as the future, a necessary transformation of the energy sector that would also benefit the economy and showcase American ingenuity. Whitehouse, among many other senators, framed climate change as both an incentive and an opportunity to make the shift to clean energy:

In addition to the threat of environmental harm, connected to the problem of carbon pollution is a huge opportunity and that is the opportunity of clean energy. Clean energy will drive the decades to come. Clean energy jobs can and should be powering our economic recovery. (*CRDE* December 13, 2011)

Sanders delivered a similar message on the benefits of increased efficiency:

We know how to move to energy efficiency, mass transportation, and automobiles that get 50, 60, 100 miles per gallon. We know how to weatherize our homes so we can cut significantly the use of fuel. What we also know is that in the middle of this recession, if we move in that direction-energy efficiency and sustainable energy-we can create over a period of years millions of good-paying jobs. (*CDRE* February 15, 2012)

Senators frequently mentioned adaptation, resilience, and consequence management options for two reasons. First, most climate action advocates realized that adverse climate change effects were inevitable based on the damage already done to the atmosphere. Thus, these types of options are prudent and can be tailored to specific contexts. For example, while commenting on an adaptation policy, Coons said,

It is based on accepting the reality our climate is changing and that it will have real effects on our planet and our communities. The truth is, even if we stopped all greenhouse gas emissions today, if we shut down our current power plants, stopped driving our current automobiles, stopped drilling, using gas-powered equipment on our farms or trains or ships, the amount of greenhouse gases already in the atmosphere would still take decades to dissipate. (CRDE April 22, 2013)

Coons subsequently advocated for setting aside and replenishing large swaths of coastal land to serve as barriers to rising seas and more extreme weather, and creating berm and dune systems to protect critical infrastructure.

Congress (80 texts)		Prognostic Frame (75)				
Option	(60)	Renewable Energy & Efficiency (28)	Adaptation & Management (25)	Reduce Carbon Footprint (19)	Reduce GHG Emissions (17)	Science & Technology (17)
Option Source	(25)	Government (13)	Private Sector (8)	States (6)	Sub-State Jurisdictions (4)	NGOs (3) Individuals (2)
Option Cost	(10)	Cost-Benefit Considerations (9)				Budget Line (1)
Option Risk	(16)	Economic/Security Risks (9)		Free Riders (8)		Insufficient, Too Slow (1)
Option Implementation	(38)	Legislation (29)	Treaty, Agreement, Partnerships (8)	Integrate into Routine (4)	Government Policy and Investment (2)	Through Sub-National Structures (1)
Option Justification	(40)	Has other Benefits (19)	Saves Lives (18)	Cost Avoidance (15)		US Must Lead (11)

Figure 15. Congress: Prognostic Frame Findings

Second, many of these types of options are multi-purpose and thus they tend to encounter less resistance from skeptics or colleagues who are concerned about costs.

Leahy, who has often voiced concerns about the vulnerabilities of the world's large urban areas, offered that urban planning is essentially a form of adaptation and resilience:

Yet as cities grow we also have an opportunity to prevent chaos. Growing cities are going to be constructing new buildings-let's make sure they are energy efficient. They are going to be creating new transport systems-let's focus on low-carbon strategies that move people, not just cars. They are going to need to feed hundreds of millions of hungry people-let's make sure urban centers are connected to the rural economy in a sustainable way. And as they build new infrastructure, let's make sure that it is designed to support livable communities and built in ways that are more resilient to extreme weather and sea level rise. (CRDE March 20, 2013)

Whitehouse took a similar approach, but tied his comments to the issue of natural disasters, a topic that drew more Republican interest after Hurricanes Katrina and Sandy:

We should not replace and rebuild what was damaged just as it was. We need to replace and rebuild smarter. Sandy is a preview of what is to come. Infrastructure that failed or flooded should be replaced to higher standards; at-risk roads, wastewater treatment plants, and other utilities need to be relocated to safer places. (CRDE December 9, 2012)

However, some climate skeptics have continued to question the motives behind spending that could be described as multi-purpose as evidenced in a question posed by Senator John Barrasso (R-WY) to an official from the Bureau of Reclamation:

You talk about in your testimony the Bureau of Reclamation proactively maintaining and improving its existing infrastructure for system reliability, say, safety, sustained water conservation in an era of constrained budgets and changing climate. Can you tell me a little bit about how much money is being spent on maintenance backlog versus spending money on climate change adaptation? (CENR July 25, 2013)

Options to reduce the carbon footprint or to reduce GHG emissions are related, but the latter set of options includes efforts to address non-CO2 sources of climate change such as black soot, HFCs, CFCs, and methane. Generally, these options elicited the most debate in Congress because of the attendant costs and resistance from fossil fuel special

interests threatened by the options. The most common carbon footprint options were carbon pricing, cap and trade, and carbon regulation.

Advocates portrayed carbon pricing as a market-based solution that should appeal to colleagues who insist on allowing supply and demand dynamics to choose the winners and the losers in the energy sector. The same advocates argued that fossil fuel costs have been suppressed because they fail to include the social costs of carbon, a cost born by society to the benefit of the fossil fuel industry:

When it comes to carbon pollution, economists can estimate the true cost of dirty energy. It is often called the "social cost of carbon." The social cost of carbon includes the financial consequences of a change in climate, such as property loss, increased health care costs, and loss of productivity that come with heat waves, drought, heavy rains, sea-level rise, habitat shifts, ocean warming, and acidification. (*CRDE* March 7, 2013)

Yet, just four days after Whitehouse made the preceding comment on the Senate floor, Boxer told the same audience that "Senator Sanders and I have a bill—a very important bill—to put a price on the pollution that is causing the climate to be disrupted and to change. Let me say that we do not have a slew of sponsors" (*CRDE* March 11, 2013).

Options to reduce the carbon footprint were mentioned more often in texts from the early part of the sample period and mostly prior to the 2010 midterm elections. The comprehensive cap and trade bill was pulled by Senate Majority Leader Henry Reid (D-NV) prior to the recess in August 2010 due to a lack of support. Carbon regulation was mentioned more in texts from the latter end of the sample period because of the Obama's shift in strategy from a legislative approach to a regulatory approach to climate action in 2013. Regulation falls under the executive branch, but the regulation option requires that carbon is deemed a pollutant and federal agencies are adequately funded to regulate

carbon sources. Many senators contested the definition and/or challenged federal budgets related to climate change.

While the popularity of carbon footprint and emissions options varied over the sample period, science and technology options remained consistently attractive. The most commonly cited uses of science and technology were related to clean energy, carbon capture/sequestration, geo-engineering, GHG accountability, and prediction and modeling. Senators mentioned clean energy technology most often and usually in the context of US global leadership in this emerging sector or as a way to promote economic growth and jobs. Tying clean energy technology to alleged American strengths and advantages was a common theme as illustrated in Leahy's remarks:

I agree with the President that climate change represents one of the greatest challenges of our time, but it is also a challenge uniquely suited to our strengths as a country. Our scientists, researchers, universities and entrepreneurs stand ready to design and build new, less polluting energy sources. Vermont's and our country's farmers and forestland owners stand ready to grow renewable fuels. American businesses will innovate and develop new energy technologies that will reduce pollution and grow our economy with jobs that cannot be shipped overseas. Our workforce stands ready to modernize our power plants and retrofit our buildings to meet 21st century efficiency standards. (CRDE June 25, 2013)

Since predictions and modeling are intended to guide decision making on options and their implementation, they often served as a locus for debate as noted by Whitehouse:

There is sometimes quarrel and debate about complex modeling of climate and atmospheric projections, but evidence of ocean acidification is simple to measure and understand. Indeed, even the small noisy chorus of climate change deniers and corporate polluters is noticeably quiet on the issue of ocean acidification because they simply cannot explain away the facts. (CRDE December 12, 2012)

Coons expressed a view held by many senators. In short, adaptation, resilience, and consequence management options are often implemented at local levels, but rely on accurate information to make decisions:

Frankly, there is only so much the Federal Government can do as far as adapting to climate change. It still plays a very important role, which States and the private sector alone cannot. The Federal Government can ensure States have accurate data on climate trends over the long term on which to base its assessments and calculations; invest in tidal gauges that the National Oceanic and Atmospheric Administration, or NOAA, maintains off all of our coasts, which are critical to monitoring sea level rise; and support the satellites overhead which track changing weather patterns. (CRDE April 22, 2013)

Senators were not outspoken on *option sources*. I attribute this finding, in part, to how I coded the texts. Since most of the texts were laden with polarized arguments about the role that Congress should play, I did not code those references to Congress as *option sources*. If I had taken the opposite approach, “Congress” would have been the dominant reply. However, other replies are noteworthy. Climate action advocates who saw regulation as a way to work around the congressional impasse often mentioned the government in the sense of the executive branch’s departments and separate agencies.

Senators cited the private sector when emphasizing market-based solutions, attempting to attract bipartisan support, and making the case that with incentives the private sector and not government would solve the problem. Wyden emphasized the role of the private sector when commenting on the goal of avoiding the worst effects of climate change by stabilizing the atmosphere at below 450 ppm: “Now among the most useful things the government can do to reach that goal is to empower the immense amounts of private capital available to invest more in clean energy, and let the private

sector go to work” (CENR July 18, 2013). Coons even suggested that the private sector recognizes the problem and is taking action without waiting for Congress to act:

The private sector has a vital role to play, and they are not waiting around for action in this Chamber by the Federal Government. We are already seeing a lot of our companies taking steps on their own to be more sustainable. I see this all the time at home when I visit companies in Delaware, such as Phillips, Kraft, DuPont, Perdue, and Mountaire. This Chamber may still be debating climate change, whether it is real, and what if anything we should do. These companies in communities in our State are reducing their water use, reducing power consumption, slimming their footprint, and finding ways to be energy efficient. They are doing this not only because it is good for the planet, but because it is good for the bottom line. They have learned in measurable ways that reducing their operating costs is good for business and good for the planet. (CRDE April 22, 2013)

Senators seldom mentioned other countries as option sources. SFRC texts revealed a few discussions regarding partnerships with other nations. Some climate action supporters contrasted US actions with those of other countries to show that the US was failing to lead. A few climate action opponents highlighted the limited contributions being made by China and India, thereby disadvantaging the US economically. A few speakers added NGOs to their mix of preferred sources while a couple mentioned that individuals are ready to help and that their lifestyle decisions must be part of the solution.

The *option cost* element emerged as either a genuine concern for cost-benefit considerations or as a way for opponents to frame climate action as costly and even too much of a burden for the economy and consumers to bear. Cost avoidance was a common theme in cost-benefit discourses, especially by senators in favor of climate action, as exemplified in a written question submitted by Senator Maria Cantwell (D-WA) to a witness testifying about the costs of rising sea levels:

As we think about our economic and energy future, we need to consider the real costs of inaction. A recent study has estimated that the impacts of climate change will cost my home state of Washington 10 billion dollars per year by 2020. This is an enormous burden that will be arriving very soon. (CENR April 19, 2012)

Some senators asked prudent questions about the efficiency of climate related programs that did not hinge on the climate action debate. However, such questioning also served to show that climate programs were held to the same standards as other programs, a deliberate effort to counter allegations of wasteful spending often levied by opponents. For example, Secretary Ken Salazar, a proponent of climate action, received 139 questions regarding DOI's budget request for FY 2012. Many of the questions regarded cost-benefit evaluations and efficiency such as "How will the department ensure that its activities at the CSCs, LCCs, and through the Cooperative Watershed Management program will complement each other and any other ongoing efforts within the department and not be duplicative of each other?" (CENR March 2, 2011).

Senators opposed to climate action often used their associated costs to undermine support for the options. For example, Senator Bob Corker (R-TN) sought to cast doubt about the value of a program, particularly in the current fiscal environment:

Senator Lugar in his opening comments referred to the Climate Change Adaptation Fund of \$407 million. It is kind of curious with all the other issues that we are pursuing right now. What exactly are we planning to do with that \$407 million as it relates to climate adaptation and what effect do we think it is going to have with our aid programs? (SFRC March 6, 2012)

One of the most vocal opponents of climate action was Senator James Inhofe (R-OK) who framed his opposition in terms of costs as evidenced in his remarks about the proposed cap and trade bill in May 2010:

Let's keep reminding all the people whom you meet with prior to the elections of November, and particularly during the upcoming August recess, that a cap-and-trade system would end up being the largest tax increase in the history of America and it would happen every year and it would not accomplish anything. (CRDE May 17, 2010)

After the bill's defeat, Inhofe continued to speak against cap and trade legislation.⁸⁷

Economic risks and free riders were the most common *option risks*. Climate action advocates seldom spoke about these risks, but their opponents often discussed them in order to frame action as detrimental to the US while providing competitors with an advantage. Economic risks were described in terms of burdens imposed on taxpayers or consumers, jobs lost as regulated industries lose market shares, and revenues lost from failure to exploit domestic resources. The EPA was a frequent target of risk related commentary. During their questioning of Gina McCarthy, Obama's nominee to administer the EPA, several senators pressed her on the potential risks of regulations.

Inhofe emphasized the risk to energy independence:

Americans want energy independence and we have the opportunity to have that, and I've said this so many times, that we now know that we have the resources to be totally independent but we've got to develop those resources. Some of those are fossil fuels. The president's campaign against the fossil fuels has been a government-wide effort, but the regulations coming out of your agency have had the most damaging effects. (CEPW April 11, 2013)

Senator Deb Fischer (R-NE) focused on consumer burdens:

Also of concern to us is the increasing cost of compliance with environmental regulations for Nebraska's public power utilities, which you and I spoke about, because that does increase the monthly electricity bills for all Nebraskans and that is a burden. (CEPW April 11, 2013)

Senator Roger Wicker (R-MS) talked about economic competitiveness and jobs:

⁸⁷ The Waxman-Markey Bill (cap and trade) passed the House of Representatives, but the Senate Majority Leader Henry Reid (D-NV) pulled the bill from Senate consideration when he conceded that it lacked enough support to pass.

Excessive rules from EPA affecting coal-fired power plants pose a serious threat to America's economic competitiveness. Because Mississippi has diverse fuels and power generation technology options including coal, our state can offer electric rates below national average and attract more job-creating investment. (CEPW April 11, 2013)

Many senators voiced opposition to climate action options because free riders would take advantage of US climate actions to advance their relative economic power at the expense of the US and its citizens. China and India figured prominently in most of the comments, described as major GHG contributors who benefit from unilateral US climate change actions. Fischer's remarks are typical of the free rider arguments found in the texts, combining domestic and international factors to show the burden on Americans:

It's going to be a robust discussion because as we see movement to unilaterally force reductions in US greenhouse gas emissions. The American people who are being forced to pay more for fuel and electricity as a result, they deserve to have an accounting of these actions. Without reductions from China and India, the world's biggest greenhouse gas emitters, we must question whether the environmental benefits are even discernible, and whether they are worth harming our economy at a time when three quarters of Americans are living paycheck to paycheck. (CEPW July 18, 2013)

Legislation was the preferred vehicle for *option implementation*. Advocates favored comprehensive efforts such as that attempted for cap and trade, clean energy standards, carbon pricing, energy policy, and financial incentives for clean energy and new technology. Energy policy was cited as the option of choice for addressing climate change. Kerry called energy policy "the solution to the problem of climate change" (CRDE August 1, 2012). Franken provided specificity on what energy policy entails:

That means supporting financing for clean energy and energy efficiency projects. It means tax credits for clean energy manufacturing, providing incentives for retrofitting residential and public and commercial buildings. It means supporting basic research and keeping alive initiatives that support clean energy technology innovation. These need to be our priorities as we make energy policy and budget

decisions. We can pay for these investments by cutting expensive, outdated subsidies for oil companies that are making record profits. There is a lot more to be done if we are going to win this global clean energy race, but it is not going to be easy. It means unifying as a country and starting to do things differently than we have been doing them. (CRDE December 14, 2011)

However, comprehensive legislation has not occurred, and bipartisanship has proven elusive, a point that senators commented on frequently in the texts. Schatz observed that energy efficiency may prove the exception:

Congress may not enact comprehensive climate legislation this year, but it can still take action to make a difference... Perhaps the greatest opportunity for compromise is in energy efficiency, the commonsense idea that we ought to save money and reduce pollution at the same time by simply consuming less energy to perform the same tasks. Senators Shaheen and Portman have taken this up and are writing excellent legislation to improve and enhance energy efficiency across the Nation. (CRDE July 24, 2013)

A few other findings regarding the *option implementation* element are worth highlighting. SFRC members, primarily Kerry, made most of the references to climate-related treaties, agreements, and partnerships. Other advocates such as Udall and Coons seldom used the SFRC as a platform to comment on climate change, perhaps deferring to Kerry who exhibited a keen interest in the topic. Other findings included low density, but specific comments on implementation. Some senators mentioned regulation vice legislation, perhaps a sign of frustration given the challenges of passing comprehensive legislation. Others offered that implementation should be done through sub-national jurisdictions tailored to specific local contexts, and a few suggested that climate change planning needs to become routine practice.

Ostensibly, the *option justification* underlying climate actions was to address climate change. While this was certainly the case, senators often tried to persuade their

colleagues that climate action incurred other benefits as well, encouraging them to accept an option for its broader merits. Senators mentioned security benefits (6) and economic benefits (16). Security benefits included a reduction in US reliance on foreign oil, particularly from unstable parts of world, and a reduction in the vulnerability of places where instability would threaten US interests.

Economic benefits included economic growth, job creation, and competing in an emerging global energy market. Even Whitehouse, arguably the most outspoken supporter for climate action in the Senate, emphasized jobs and economic value:

The Department of Energy reports that the clean energy sector alone directly employs nearly 1.6 million people in the United States. So nearly 1.6 million families are depending on the paychecks they get from the clean energy sector. Within that, it is growing. The United States has created over 100,000 solar-focused jobs-100,000 solar-focused jobs-and at least 75,000 jobs related to wind energy installation in 2010. (CRDE December 13, 2011)

Speaking about clean energy investments, Franken also underscored job creation and competing in the global energy market:

These investments encourage the growth of domestic clean energy-a domestic clean energy economy which would create jobs-and has created jobs-grow our manufacturing base, and keep us competitive in global energy markets. That is so important because Germany, China, Denmark, and countries all over the world are winning this race. (CRDE December 14, 2011)

Of course, senators also justified climate actions by noting the costs of inaction.

Many referred to the lives that would be saved and generations that would be spared from the consequences of climate change. Sanders' remarks are typical of these justifications:

I think when history looks back at this particular moment, our kids and our grandchildren, our great-grandchildren are going to ask us where were we. Why were we not moving aggressively to prevent the problems that exist today that we know only are going to get worse in the future? (CENR April 25, 2013)

Some senators justified action as a form of cost avoidance. Boxer observed that “there is growing recognition that the cost of inaction could be greater and—given the government’s precarious fiscal position—increasingly difficult to manage given expected budget pressures” (*CRDE* March 11, 2013). Franken narrowed his comments, focusing on the linkage between forest fires and climate change:

When we have discussions about important issues such as cost of wildfire response, we are talking about the cost of responding to climate change. If forestry specialists at the US Forest Service tell us these fires are getting worse due to climate change, we should be listening to them. (*CRDE* December 14, 2011)

Cantwell framed a carbon pricing option in terms of cost avoidance:

By 2025 taxpayers will be forced to spend more than \$270 billion a year for disaster relief if we don’t tackle climate change. While we’re having this conversation about natural gas, I don’t know if you can make a further comment on. Don’t we, if we’re going to see cost in the future, have to do something better, putting a true market price on carbon? (*CENR* February 12, 2013)

Some speakers demanded US leadership on climate action because the US is a global leader, leading is what the US does, US leadership is what others expect, and doing the right thing is who we are. Leadership justifications appealed to a widely embraced sense of American identity in the enterprise, the notion that the US is truly an indispensable nation. Kerry offered succinctly, “We all know the difference that the United States can make. Our efforts vaccinate children, combat climate change, engage at-risk youth, and promote core US national security interests” (*SFRC* February 28, 2012). Blumenthal’s comments were more critical: “We cannot tell others what to do when we don’t follow the example that we should be setting. It should be and it must be leadership by example” (*CRDE* July 24, 2013).

Motivational Frames

As public officials, senators are keenly aware of their audiences, and they know that their constituents, colleagues, special interest groups, and any number of other audiences within or outside of the enterprise may be scrutinizing their remarks and statements. Accordingly, senators often used motivational frames to signal their position on climate change and actions to address climate change. These frames were intended to rally or pressure colleagues into action or sustained inaction, or to shape the behavior of other groups by signaling the senator's position and rationale for that position.

Senators often commented on the *supporters* of climate action, seeking to delineate supporters from opponents while offering their explanation for why the divide exists. Comments mentioning supporters were somewhat more common than those mentioning opponents, and those opposed to action were less likely to reference specific groups (see Figure 16). Opponents referred to Americans or businesses in general, and labeled them as opposed to actions that harm the economy and jobs rather than as groups that oppose climate action more broadly.

Many senators remarked on how national security experts (14), my state (10), scientists (8), the private sector (8) and/or Americans (6) were imploring them to address climate change. References to national security were intended to boost the credibility of a senator's remarks, generate a sense of urgency for action, and position opponents as out of step with those invested with the protection of the US. For example, Whitehouse said,

[DOD] and our intelligence community have accepted the science of climate change and the fact that we need to prepare for it. We customarily rely on the professional judgments of the sober and thoughtful leaders of these great national

security organizations. Their assessments are based on sound and comprehensive science and analysis. I respect the solemn mission our national security institutions have to protect the United States and its interests, and I trust their judgment. (CRDE November 28, 2012)

Sometimes senators invoked a reference to security experts in an effort to deny opponents the opportunity to assail their remarks. For example, Franken said, “You don’t have to take it from me. You can take it from [DOD or the NIC], both of which have said that climate change is a major threat to our national security” (CENR November 15, 2011).

Congress (80 texts)		Motivational Frame (73)				
Supporters (38)	Reference Supporters (30)		Reference Opponents (21)			
Helpers (32)	Government/Congress (19)	States (14)	Private Sector (8)			
Rationale to Act (62)	To Act (51)		Not to Act (24)			
Chance to Implement (33)	Challenges (20)	Unfavorable (17)	Favorable (4)			
Chance to Counter Threat (14)	Pessimistic (13)		Optimistic (4)			
Detractors (22)	Challenge (11)	Persuade (8)	Compromise (3)	Work Around (1)	Pressure (1)	

Figure 16. Congress: Motivational Frame Findings

Mentioning the deeds of their own states helped to underscore the value of climate action while positioning senators favorably with their own constituencies. For

example, Boxer highlighted the accomplishments of a state with the largest economy in the US and often a trendsetter in environmental efforts:⁸⁸

I am going to talk about California in my remaining time. We have seen great progress there. We have added 79,000 jobs in the clean energy sector in the past 7 years, and that clean energy sector remains one of the most promising industries in our State, and people are happy. We are going to put a million solar rooftops on in California. I know Senator Sanders has been calling for this for years. California is doing it with Governor Brown leading the way with the legislature. Do you know what that means? It means that people are going to work in California. (CRDE December 13, 2011)

Whitehouse anchored his comments in his own state while pointing out that many states were taking action:

Rhode Island, I am proud to say, is one of many States that have formed a climate change commission. The commission is coordinating with Federal officials to identify specific State and local challenges that are presented by our changing climate. Twenty other States have similar climate action plans developed or underway. (CRDE February 27, 2013)

Even senators skeptical of climate change and opposed to most climate actions highlighted their state's climate-related actions albeit without attaching the climate label to it. For example, Barrasso gladly acknowledged that "when it comes to carbon sequestration issues, the State of Wyoming is a national leader" (CENR May 12, 2011).

Climate action advocates referred to support from high-profile Republicans (3) and the private sector (8) to undermine opponent portrayals of advocates as elitists and environmentalists out of touch with America, and to show opponents that party affiliation should not be obstacles to climate action. Advocates also tried to show that the number

⁸⁸ According to the US Department of Commerce, California has the highest Gross State Product (GSP) of all 50 states. See http://www.bea.gov/newsreleases/regional/gdp_state/gsp_newsrelease.htm.

of climate action supporters was large and growing. Admonishing Congress, Whitehouse talked about the actions needed to overcome the politics that had led to inaction:

[Gather] the armies. There is astonishingly wide support for action on climate. Obviously environmental groups support this, as well as the green energy and investment industry, our national security officials, property casualty insurers and reinsurers, young people, ... faith groups, many utilities, celebrities, hunting, fishing, outdoor, conservation groups, retailers, such as Apple, Coca-Cola and Nike, labor groups, mayors, local officials, and the public. The public is with us, and the polls show that. (CRDE May 16, 2013)

Climate action advocates often framed opponents by party affiliation (13) and their relationships with special interest groups (11). Boxer put it bluntly:

It is not to say we don't work with Republicans; we do on public works matters. We work very well with Senator Inhofe and his team of Republicans on public works, but when it comes to the environment, there is nobody home over there. As a matter of fact, they do harm. (CRDE December 13, 2011)

Advocates further tried to link opponents, especially Republicans, to special interest groups. Typically, the speaker would comment on the denial culture rooted in Congress and the role that special interests, especially associated with the fossil fuel industry, play in maintaining that denial culture and misleading Americans. Whitehouse contrasted Congress' inaction at the hands of special interests to the will of the American people:

A recent poll conducted by Yale University and George Mason University found that a large majority of Americans, 77 percent, say climate change should be a priority for President Obama and for all of us here in Congress. Yet, for the last 2 years, opponents and skeptics, polluters and lobbyists, special interests and their paid-for front organizations have blocked Congress from acting to reduce carbon pollution and reduce the threat of climate change. (CRDE November 28, 2012)

Of course, opponents sometimes invoked similar arguments, asserting that many Americans, including Democrats, did not favor action. These statements linked climate action options to adverse effects on the economy or job availability, and sometimes

suggested that the science remained unsettled or the predictions uncertain. Inhofe has been the most outspoken opponent of climate change action, particularly in his willingness to challenge the science. Like most opponents, however, Barrasso preferred an economic argument, adding the twist that poverty also causes health issues:

Regulations and proposed rules on greenhouse gases, coal ash, mercury emissions, and industrial boilers have led to the closing of dozens of power plants in the US, costing our country thousands of jobs. Folks who now have no job, no money, no prospect for a job in their communities, and they are experiencing serious health risks as a result of that. Studies show that children from unemployed parents suffer significant negative health effects. The National Center for Health Statistics said children in poor families, people out of work, are four times as likely to be in fair or poor health as children in families who are not poor. This is a serious health epidemic and it seems to go unnoticed by the EPA. (CEPW April 11, 2013)

Interestingly, the majority of sources that referenced *supporters*, thirty-three of thirty-eight were made by climate action advocates who were all Democrats. I attribute this finding to two causes. First, supporters had failed to achieve any major climate legislation and thus were trying to motivate supporters in and out of Congress to be more assertive while challenging the arguments upon which opponents had staked their claims. In short, opponents were winning and did not need to be outspoken. When they were outspoken, they used economic themes with resonance across parties and across America. Second, the data sample corresponded to a period that exhibited a high degree of acrimonious partisanship and, if not for a handful of senators who kept the climate change issue on the agenda, it would have received even less attention from opponents.

Regarding the *helpers* element, climate action advocates identified Congress as both the biggest impediment and the best positioned to help advance comprehensive climate action through legislation. Senators in favor of action emphasized funding,

incentives, and subsidies as the key enablers that would encourage the maturation of the fledgling clean energy industry and related technologies needed to address climate change. Many senators added that a clean energy standard and carbon pricing would create a fair marketplace for the clean energy industry to compete with the fossil fuel industry. The texts evidenced some confluence of interests between advocates and opponents of action. Advocates preferred comprehensive legislation for climate change and energy policy. Opponents did not want legislation that would encumber the private sector, but were even more concerned about the potential for regulation by the executive branch, particularly by the EPA as it wields the Clean Air Act to regulate GHGs. Accordingly, some senators viewed GHG legislation that embraced market-based approaches as preferable to a regulatory regime.

The texts showed that market-based solutions enjoyed a high degree of bipartisan support, offering the potential for common ground on climate action. Indeed, the private sector was often cited as a key helper that would promote clean energy technologies and spur economic growth and job creation. During the nomination hearing for McCarthy to head the EPA, a session in which the merits of regulation were debated, Senator Tom Carper (D-DE) recounted a discussion that portrayed the private sector as a willing partner under the right conditions, conditions that could be established by Congress:

There was one guy from one of the southern CEOs—one of the southern utilities—maybe Alabama; I don't know, Jeff. But he—he said there was—we'd been talking for, like, an hour or so on clean air emissions, clean air standards, and here's what he finally said to us: He said, "Look, tell us what the rules are going to be, give us a reasonable amount of time, and give us some flexibility, and get out of the way." That's really what he said. He said, "We need predictability and we need certainty." And we need to do—we need it especially with respect to this position. We need somebody who will help us develop what the rules are

going to be, give us some flexibility, a reasonable amount of time to comply, and then let's get out of the way. (CEPW April 11, 2013)

Senators mentioned other countries in the context of climate change for one of three reasons. First, climate action advocates observed that other countries, most notably China and members of the European Union, were addressing climate change, thereby taking the lead morally on an important issue and economically with respect to clean energy technology. This frame permitted advocates to shame opponents for ceding US leadership and market advantage to others.

Second, advocates, especially those on the SFRC, conceded that climate change is a collective action problem that requires an international response. Such a response demands a prominent role by the US and places a premium on partnerships and coalitions of the willing in the absence of a binding treaty to reduce GHGs. Kerry even portrayed climate change as a superordinate goal worthy of the US and China:

While our companies will inevitably compete in many areas, there are challenges, such as climate change, where our two nations should be collaborating against a shared threat, and where, together, we have the ability to offer leadership to the world. (SFRC June 23, 2010)

This frame also played to the need for US leadership, but embedded climate change in a broader context, offering it as a vehicle for cooperation with a country that senators variously view as a threat, challenger, or competitor.

Third, opponents of climate action often noted that China and other countries were willing to allow the burden for climate action to fall on the US and other developed countries. Thus, opponents used free rider concerns to challenge unilateral US climate

action. This frame helped to reinforce the argument that climate action would burden the US economy, advantage foreign competitors, and do little to address climate change.

The texts were laden with references to the *rationale to act*. Supporters used economic (31), scientific (28), moral (25), and security (10) arguments to rationalize climate action. Economic arguments offered that the US must compete fully in the emerging global clean energy market, and that failure to do so would disadvantage US businesses, hurt the economy, and ultimately prove ruinous as climate change degrades US economic performance. Supporters used economic arguments to undermine their opponents who frequently framed the choice as one between climate action and economic well-being. Whitehouse regularly used economic rationale to promote climate options:

That refusal to act will have an impact on the American economy. A Brookings report has found that well-designed climate legislation would increase investment, increase employment, and significantly increase America's gross domestic product, but here in Congress we are more likely to hear that any climate change legislation would hurt the economy and kill jobs. The opposite is true. We are missing opportunities to grow a clean economy that is manufacturing and export intensive and that creates the kinds of jobs that support a strong American middle class. We are failing to protect against carbon pollution that will harm our States' economies all across the country. (CRDE January 1, 2013)

Some senators focused on economic losses vice gains, arguing that climate action is a form of cost avoidance. For example, Gillibrand stated that “the economic costs of all these changes are enormous—not only for those directly affected but for the nation's taxpayers, who are stuck with the bills for disaster relief, national flood insurance and drought-related crop losses” (CRDE March 4, 2013).

Senators often emphasized the overwhelming scientific consensus on climate change and usually listed numerous prestigious science organizations and individuals to

reinforce their point. Scientific arguments were intended to force opponents to either challenge the science or explain why they were disregarding the science. Kerry, like most of his Senate colleagues, used general references to science:

Now, obviously, we all know the future has a hard way of humbling people who try to predict it too precisely, but I have to say, when the science is screaming pretty consistently over a period of 20 years-and not just screaming at us to say it is coming back correctly but that it is coming back with faster results in greater amounts than the scientists predicted-as a matter of human precaution that ought to be an alarm bell and people ought to take note. (CRDE August 1, 2012)

Others, most notably Whitehouse, used more sophisticated arguments, often tying scientific to economic rationales:

In my home State of Rhode Island, average coastal water temperature has risen by 4 degrees over the past two decades, affecting our historic fish stocks and hurting local fishermen. It is not just in Rhode Island where the seas are changing. To use another example, rising ocean temperatures and acidity threaten corals, which, as well as being a cornerstone of ocean biodiversity-but never mind, this is supposed to be a speech about the money-the coral reefs are a mainstay of Florida's water and boating industry. People go there to snorkel, scuba dive, and see the corals. If the corals are not there, it is going to affect those industries. (CRDE January 1, 2013)

Senators wielding moral arguments focused on their responsibility to save lives and provide for future generations and/or the US obligation to act and lead the world in addressing the threat. Moral arguments sought to frame opponents as irresponsible, shortsighted, or willfully contributing to the problem. Whitehouse even accused colleagues of “sleepwalking,” using the term often to highlight their failure to act: “We can and we must leave a healthy environment and clean energy sources to our children and grandchildren. The missing piece is Congress. Congress is sleepwalking through history. It is time to wake up” (CRDE January 24, 2013).

Security arguments were the least common among supporters of climate action, but were intended to show that opponents were discounting the conclusions of national security organizations. A few senators noted that DOD is the single largest consumer of fossil fuels in the US and that reliance on those fuels puts US service members at risk in the performance of their duties. Indeed, Admiral Mullen argued similarly when advocating for programs to reduce the military's fuel dependencies. Although few senators used the argument because it spoke less to climate change action than to reducing troop risks, it played to a powerful, widely held conviction by members of Congress that they have a patriotic duty to support our troops. Sanders was one of few senators to use the argument:

For the military, investing in energy efficiency and sustainable energy, is not just about reducing greenhouse gas emissions. So this is a very important point to make, it's about military strategy as well, it's about protecting our soldiers in the field. According to the army environmental policy institute, one out of every 24 fuel resupply convoys in Afghanistan resulted in a casualty, one out of every 24. In Iraq, estimates show that one of every eight soldiers killed was protecting a fuel convoy, moving fuel in hostile regions results in casualties. These fuel convoys are, by definition, targets for our enemies, and that is why the marines have developed innovative solar paneled operating bases that can store energy with battery technology. (CEPW March 27, 2012)

Other senators who used arguments related to security tended to focus on the enterprise's conclusions regarding climate change as a threat multiplier or as a threat to the US military instrument of power itself. Whitehouse emphasized the latter:

Deniers should look to the assessments of our defense and intelligence agencies. Diego Garcia, a small island south of India, is the home to a logistics hub for US and British forces in the Middle East and to Air Force Satellite Control Network equipment. The average elevation of Diego Garcia is approximately 4 feet. This installation is threatened by inundation from slow, steady, sea level rise, set aside storms. Norfolk naval air station and naval base on the southern end of the Chesapeake Bay is the Navy's largest supply center and home to the US Atlantic

fleet. Eglin Air Force Base on Florida's gulf coast is the largest Air Force base in the world. Both bases are threatened by rising seas. (CRDE January 24, 2013)

Opponents of climate change used economic (17), scientific (8), legal (5), and security (3) reasons not to act. Common economic arguments related to the weakness of the economy, the burden of regulations, the risk of job loss, costly options in a period of constrained budgets, and the unfair and unnecessary economic advantages that climate action would cede to foreign competitors. As noted previously, opponents of climate action preferred economic explanations over others because their constituents could relate more directly to economic concerns. Arguments that portrayed US action as futile or harmful were particularly common as illustrated in Barrasso's comment during Kerry's nomination hearing:

I know climate change has been a big issue that you've been concerned about, focused on. It seems over the next 25 years, the global energy needs are gonna (sic) increase about 50 percent, that emissions are going to go up significantly, primarily because of China and India. And we could do significant harm to the US economy, I think, by putting additional rules and regulations with very little impact on the global climate. (SFRC January 24, 2013)

Some opponents tried to draw attention to the motives behind items budgeted for climate actions. For example, while questioning witnesses from USAID about their FY 2013 budget priorities, Senator Richard Lugar (R-IN) stated,

I have had misgivings about USAID's new Global Climate Change Initiative, which under this budget would receive \$470 million. I have raised questions about the rationale behind the program and about a number of specific projects proposed under this initiative, especially in the subcategory of adaptation. My concern is that USAID is being asked to devote resources to a politically determined objective, rather than to maximizing development impact. In other words, if there were not a Climate Change Initiative basket to fill, would all of these projects be worthy purely on their development merits? (SFRC March 6, 2012)

Although opponents also used science to reason against climate action, they interpreted the science much differently than supporters. Few speakers, Inhofe notably among them, actually challenged climate change science. Rather, most opponents suggested that the science was unsettled, that predictions were likely to be wrong, and that the precise effects were unknown. Opponents rarely relied on science rationale alone. For example, Barrasso cast doubt on the value of predictions when questioning Rebecca Wodder, nominee for Assistant Secretary for Fish and Wildlife and Parks:

You have made a number of statements supporting taking action to address climate change in your career at American Rivers. If confirmed, do you believe your agency, in conjunction with other agencies, can predict with certainty what the weather, and the subsequent impact on the landscape, will be like in Wyoming in 5 years, 10 years, or 50 years from now? Can you predict, with certainty, how the Greater Yellowstone grizzly bear population will respond to environmental changes 5, or 10, or 50 years from now? (CENR July 28, 2011)

Only the senators who opposed climate action cited legal reasons, and their primary concern was litigation. Opponents feared that formal US acknowledgement of climate change and ratification of legally binding treaties or other frameworks would expose the US to lawsuits at the hands of non-US legal jurisdictions.⁸⁹ Senator Jim DeMint (R-SC) used this line of reasoning while commenting on the European Union's efforts to reduce aircraft emissions:

Europe is already going to charge us taxes for our commercial planes to land there because of emissions. And it is clear from this that the United States is going to be subject to complaints and suits from all over the world dealing with climate change, issues like cap and trade. There will be suits for us to pay for pollution credits where we sail our ships and where we fly our military aircraft. And the arbitration or the dispute resolution part of this is out of our control. (SFRC June 28, 2012)

⁸⁹ The Senate has resisted ratifying treaties that may undermine US sovereignty.

Opponents of climate action rarely employed security reasoning, particularly given the military and IC's acceptance of climate change and its implications for national security. However, opponents did offer two security based reasons. First, the boom in domestic fossil fuel production and the availability of bitumen oil from Canada raised the possibility of US energy independence or at least a secure source of energy. Thus, efforts to curtail these new sources of energy were framed as a preference for continuing to rely on oil from unstable regions, an approach used by Barrasso while questioning a witness about alternative energy sources:

I think given the national security liabilities of climate change, I think we seriously need to consider that as well when turning to more and more greenhouse gas intensive forms of fuel... Yes or no? If Canada can provide oil from oil sands that's higher in greenhouse gas emissions, Saudi Arabia can provide oil that's lower in greenhouse gas emissions. Does your organization, the NRDC, believe that oil from Saudi Arabia is then better for the United States than oil from Canada? (CENR June 7, 2011)

Inhofe linked energy independence to security: "People talk about our reliance upon the Middle East and people who could become our enemies for oil and gas. All we have to do is produce our own, get the political obstacles out of the way, so we can be totally independent" (CRDE January 22, 2013). Second, a few senators opposed DOD's clean energy programs on the grounds that they are costly and degrade national security. For example, Inhofe challenged the US Navy's green energy program, offering that the difference between traditional and green fuel prices could be used "to buy 19 more F35s, you could buy 46 more SM3 block 1B interceptors at \$0.2 billion a piece, and I could have a long list that I'm going to ask to be made part of the record" (CEPW March 12,

2012).⁹⁰ Although Inhofe was one of few senators to make the argument, it had a chilling effect on similar efforts, particularly in view of sequestration cuts to DOD's budget.

Regarding the *chance to implement* climate action, senators realized that they had to overcome substantial resistance inside of Congress, a task complicated by the complex web of issues in which those actions were ensnared. As previously discussed, real and perceived economic issues were the primary obstacles. Accordingly, supporters commented most frequently on the economic benefits of climate action. However, in spite of their persistence, the logic of their arguments, and their impassioned pleas to colleagues, the majority of senators were overwhelmingly pessimistic regarding the prospects of significant climate action by Congress. Of note, their pessimistic outlook did not result solely from the obstacles created by opponents in and out of Congress. Rather, senators cited the lack of consistent, organized, and high-profile public support for climate action. For example, Whitehouse showed some of his frustration as he implored advocates to organize and collectively demand climate action:

The problem: Most of this support is latent and unorganized. None of these groups feel they can carry this battle on their own; yet if they choose to unite, create an allied command, assemble these various divisions and join in on a strategy that deploys them all effectively into action, that latent strength becomes potent strength, and that is a game changer. When the polluting industry is looking down the barrel of a regulatory gun, when their political allies are fearful of a strongly backed political operation-backed also by the American people-when mobilized and motivated forces from a wide swath of the economy and multiple sectors are all active, the political landscape then shifts dramatically and a price on carbon is achievable. I propose to the American people, to those who believe it is time to wake up and take action, to fend off devastating changes to our oceans and our climate: Let us be not faint of heart. Let us have the strength

⁹⁰ The F35 Lightning II is also known as the Joint Strike Fighter, a multi-role fighter aircraft that costs over \$150 million each. The Standard Missile-3 (SM3) Interceptor is a US Navy missile used to intercept short-to-intermediate-range ballistic missiles as part of the Aegis Ballistic Missile Defense System.

of our convictions and get to work and get this done. We can do it. The tools to do it already lie all around us. This can all take place quite rapidly. Let's get it done. (CRDE May 16, 2013)

A handful of senators expressed some optimism, but only in regards to less controversial actions such as energy efficiency, which could be framed as a smart business practice and a step to address climate change. Occasionally, small scale climate actions related to renewable energy also garnered some bipartisan support, but again the texts showed that these bipartisan efforts were conducive to dual framing. Witness Wyden's comment that includes two frames—clean energy and competitive pricing:

There is a proposal to build a facility near Boardman, Oregon that would use compressed air to store energy from wind farms, allowing for even greater use of renewables, while offering electricity for sale below the current average electricity rates. There is bipartisan legislation now before the Senate with respect to promoting energy storage. (CENR July 18, 2013)

Senators rarely discussed the *chance to counter the threat* of climate change. Among optimists, general statements such as “I am convinced we can win this race” and “climate change is a problem that can be solved” were the norm (CRDE December 14, 2011; December 24, 2013). Opponents of climate action made most of the pessimistic comments, noting that action is costly, risky, and unlikely to have any effect on climate change. Climate action supporters were usually more muted in their pessimism. Advocates seemed to avoid conveying any sense of futility, perhaps worried that colleagues and the public alike may resign themselves to the inevitability of a changed climate and thus become less supportive of climate actions. Cantwell was one of the few supporters to say that action will not preclude the need to adapt to rising sea levels:

Obviously, we need to do more. I mean, you're talking about effects that are going to take place regardless of whether we do anything about climate change or

greenhouse gas emissions through climate change legislation. These are things that are going to happen. (CENR April 19, 2011)

Advocates were generally more guarded than Cantwell in their remarks on the chances to counter the threat, avoiding suggestions that climate change is inevitable while leveraging the gravity of the situation to promote action. Sometimes these efforts stressed that the benefits of action will accrue over time, benefiting future generations. More often, however, senators remarked that present, small-scale efforts do not measure up to the large scale of the threat, thereby framing opponents to comprehensive action as impediments to a solution. Whitehouse used the latter approach: “Until we address what is causing our oceans to change so drastically, until we protect our planet from carbon pollution unprecedented in human history, we are doing little more than putting Band-Aids on a gaping and growing wound” (*CRDE* May 16, 2013).

Detractors were more problematic for climate action advocates because Congress was generally disinclined to support climate action as evidenced by its repeated failure to pass any significant legislation. The problem was aggravated by the economy, extreme partisanship, and the prospect of US energy independence, conditions that gave opponents an advantage. Consequently, comments in the texts about what to do about detractors were usually made by senators in favor of climate action.

Although advocates often recounted the economic, security, and environmental benefits of climate action, the texts revealed an affinity for appealing to the idea that America must lead. Speaking about climate discussions with China and India, Markey picked up on the leadership theme:

I think it's very difficult to preach temperance from a bar school. So, you know, your father can't have a beer in his hand when he's saying, drinking is bad for you, you know, or a cigarette or a cigar in his mouth while he's always saying, smoking is bad for you. So I think that if we're going to be preaching, then we have to act. And that's why I'm so glad that the President has made it clear that he wants the EPA to take action on our own coal-fired plants. (SFRC July 24, 2013)

Blumenthal added later that the Obama's program would "put us in a position of leadership around the globe and enable us to regain the position of trust and leadership that we have exercised on so many other issues" (CRDE July 24, 2013). Of course, highlighting the president's role also served to frame Obama as leading in contrast to Congress' lack of leadership, a challenge to opponents of climate action.

Senators often challenged colleagues opposed to climate action by describing them as out of touch with the scientific consensus and/or as beholden to special interests. Many senators contrasted the scientific consensus regarding climate change with the culture of denial that they argued had taken hold in Congress. Kerry framed climate science deniers as the "flat-Earth caucus—a bunch of people, some in the US Congress itself, who still argue against all of the science, all of the evidence, that somehow we don't know enough about climate change or that the evidence isn't sufficient or that it is a hoax" (CRDE August 1, 2012). Sanders offered that committee hearings were better described as "Alice in Wonderland hearings [where] within this little room, we are clearly living in two separate planets, two separate worlds" (CEPW July 18, 2013). Whitehouse chastised Congress for both faults, drawing again on his sleepwalking metaphor:

The public has every reason to want to grab us and give us a good shake. We are sleepwalking through this era, lulled as we sleepwalk by the narcotics of corporate money, corporate money out of the polluters and their allies. We are

lulled by the narcotics of manufactured doubt planted in a campaign of disinformation by those same polluters and allies. But history is calling us loudly and clearly. History is shouting in our ears. We are oblivious, sleepwalking along. (CRDE December 12, 2012)

Interactional Framing

Interactional *issue* framing concerns how parties negotiate the meaning of climate change through social interaction. Congressional texts showed interactional framing in three contexts. First, transcripts often included comments from two or more senators as well as one or more witnesses. Typically, the committee chairs introduced witnesses who then made statements and then committee members questioned the witnesses, often engaging in banter with one another as the chair attempted to hold members to their allotted time. Usually, witnesses and nominees provided responses to written questions from participating members, which were also part of the record. Second, *CRDE* texts included colloquies by two or more members, engaging in a mutually reinforcing discourse about climate change to the Senate at large. Third, there were a sufficient number of congressional texts to provide insights on member-to-member discussions about climate change across committees and over time. For example, longstanding committee members would often refer to their relationship, debates, and where they stood on specific legislation. During CEPW hearings, Boxer and Inhofe often engaged in short talks that referenced previous discussions on the subject. Together, these contexts provided insights on how senators negotiated the meaning of climate change, how their relationships were defined relative to climate change, and how they communicated to one another in an effort to alter each other's behavioral scripts.

Two overarching interactional *issue* framing themes emerged from the texts (see Figure 17). First, senators contested the meaning of climate change, with widely disparate views on causation, proximity and extent, and options to address the problem. Some senators viewed climate change as a major issue, deserving of immediate and comprehensive action. Of note, only about one-quarter of the Senate commented on climate change or climate actions in the texts and most of those favored comprehensive climate action. At the other end of the spectrum, senators discounted anthropogenic causation and opposed any action with the sole purpose of addressing climate change. Those who denied the phenomenon of climate change or opposed climate change actions were noticeably silent on the subject and seemed to defer to high profile spokespersons such as Inhofe.⁹¹ Along the spectrum, senators who were more reserved in their commentary embraced a variety of climate change meanings with each senator blending ideas on causation, effects, and actions to suit their unique circumstances.

Whitehouse, Kerry, Franken, Boxer, and Sanders were among the most outspoken climate action advocates, constantly reminding their colleagues about the pressing need to address climate change. Inhofe exemplified the opposing position, but was occasionally joined by Barrasso, Wicker, Corker, and Fisher, among a few others. As these senators interacted within the various contexts described at the beginning of this section, they were essentially negotiating the scientific framing of climate change with one side accepting the scientific consensus and the other denying, challenging, or

⁹¹ According to *Think Progress*, the 113th Congress split along party lines with all Democrats supporting climate action and 56 percent of Republicans denying climate change, its anthropogenic causes, and/or the value of climate action. In the senate, 30 of 42 Republicans were identified as “climate change deniers” (see <http://thinkprogress.org/climate-denier-caucus/> and <http://www.sierraclub.org/sierra/201311/grapple-climate-change-denial-congress.aspx>).

reinterpreting the consensus. However, these negotiations were less about convincing opposing sides than in swaying those with less rigid views and, most importantly, establishing one of the two views as the dominant discourse that makes those who adopt the oppositional discourse appear as the deviants.

Congress (80 texts)		Interactional Framing (62)	
Issue (24)	CC as Major Issue vs. CC as Non or Minor Issue (16)	CC Inaction as Threat vs. CC Action as Threat (15)	
Identity & Relationship (34)	Believers vs. Deniers (23)	Party vs. Party, Member vs. Member (18)	
Process (50)	Representing Americans/American Interests (50)		

Figure 17. Congress: Interactional Framing Findings

Thirty minute long remarks each by Kerry and Inhofe illustrate these points (*CRDE* August 1, 2012). Kerry opened his remarks on the Senate floor by highlighting the acrimonious and partisan nature of politics in Congress, its inability to address major issues affecting the country, including climate change, and the success of those who have sought to cast doubt on climate science. Climate change, he offered, are “two words that...have actually become somewhat words of almost skepticism in many quarters of America, of a kind of shrug, where people say: I don’t know what I can do about it. It is not something I ought to worry about. Somebody else will take care of it, or maybe it is not real.” Kerry credited this highly prevalent, if not dominant discourse to a deliberate

campaign to mislead Americans by taking “every opportunity to cast a pall on facts with some kind of cockamamie theory.”

Referring to the “flat earth caucus,” Kerry stated, “We have Members of the Senate who argue it is a hoax. But that is all they do. They make the argument it is a hoax, but they don’t present—and they can’t—any real, hard, scientific, peer-review evidence to the effect that it is in fact a hoax.” Yet, in spite of their lack of evidence, they succeed in sowing doubt through networks of well-funded special interest groups that “create their facts out of whole cloth” and pay off scientists to “produce a whole bunch of hurly-burly” in support of conclusions that support the facts preferred by those groups. Invoking the example of Galileo who was put on trial for his findings, Kerry noted that too many of his colleagues refuse to accept scientific facts because of “some sort of raw belief and/or political interests...or religious interests.” He then drew attention to those colleagues with the courage to stand up to the special interests in order to address climate change. In his remaining remarks, he argued that the costs of denial are far reaching, including lost economic opportunities and he provided further examples of the science underpinning climate change. He concluded by returning to the character of the climate change discourse in America:

Nothing screams at us more than the need to have an energy policy for our country that begins to address the realities of climate change, and nothing screams at us more than to tell the truth to the American people about climate change, to stop having it be an unusable word in American politics and not to allow it to become a source of attack and ridicule with non-facts and a bunch of cockamamie theories that have no foundation in science or in the kind of analysis that does this institution justice. (*CRDE* August 1, 2012)

Clearly, Kerry was concerned that the framing of climate change as a hoax, a questionable issue, and/or a hopeless issue had successfully displaced or at least muted a rational framing based on science. Thus, he emphasized the scientific consensus, challenged the falsehoods and motivations of the other side, and stressed how inaction was endangering Americans and denying the US the economic benefits of climate action. His remarks were intended for Congress as well as the public in general. Regarding Congress, he reinforced the efforts of colleagues who were actively framing climate change as a major issue that demanded immediate, comprehensive action. He served notice to colleagues and special interests on the other side of the framing effort, telling them that they will be challenged. He also signaled to those colleagues who were less vocal on the subject that they need to be heard. As a high profile member of Congress, his remarks were further intended to draw public attention to the issue, showing people that what they perceive to be the dominant view of climate change in Congress is actually a minority view that is precluding necessary action.

Inhofe later had the opportunity to react to Kerry's comments, providing insights on his efforts to frame the climate change issue. Inhofe began by acknowledging Kerry as "a very good friend of mine" and someone with "a completely different philosophy from mine and a different background and a different state" who was "being somewhat critical of my position on global warming." Then, he claimed that he "appreciated the fact that we had a chance to resurrect that issue because, to my knowledge, nobody has uttered the term 'global warming' since 2009. It has been completely refuted in most areas" (*CRDE* August 1, 2012). In a few opening comments, Inhofe had attempted to

position Kerry and other climate supporters as returning to an argument that they had lost before and were even relying on personal attack because they are desperate.

Inhofe sought to defend himself and other skeptics from Kerry's indirect attack, but, more importantly to reinforce the theme that the science is unsettled and that there are many others who agree. Inhofe began by labeling "those people who believe the world is coming to an end because of global warming and that it is all due to manmade anthropogenic gases" as alarmists. Then, he offered that anyone who has looked at the science closely recognizes the alarmist position as "the greatest hoax ever perpetrated on the American people" (CRDE August 1, 2012). Inhofe claimed that because of their belief in the hoax, "a lot of people are trying to do things to this country that are detrimental (CRDE August 1, 2012)." He then defended his book *The Greatest Hoax*, observing that Kerry's reference to his kind as "flat-earthers" was a topic in the book. Inhofe recounted:

I learned a long time ago that if they do not have logic on their side, they do not have the science on their side, they respond with name calling. I have been called a lot of names. Let me just name a few. This comes right out of the book and some of the things that were said this morning. The "noisiest climate skeptic," "the Senate's resident denier bunny," "traitor," "dumb," "crazy man," "science abuser," "Holocaust denier," "villain of the month," "hate filled," "war mongering," "Neanderthal," "Genghis Khan." It goes on and on. I will submit this for the Record. But quite often we hear these things, it is only because there is not logic or science on their side. So they do name calling, which is fine. To me, that gets attention, and it needs to have the attention. (CRDE August 1, 2012)

Inhofe spent the remainder of his time presenting evidence to support the position of skeptics and to challenge Kerry's assertions on the scientific consensus. Inhofe

mentioned dozens of scientists, studies, websites, think tanks, and universities that take a skeptical view of climate change. Interestingly, he also mentioned that

One of the universities, George Mason University, surveyed 430 weathercasters and found that only 19 percent of the weathercasters felt catastrophic global warming is taking place and is a result of human activity. That is quite a change from what it used to be. That means 81 percent of those weathercasters that we all see every night are saying that is not true. (*CRDE* August 1, 2012)

He also offered that his own website references “about 1,000 scientists who have come around and said no, this assertion that we are having catastrophic global warming due to anthropogenic, manmade gases is not correct” (*CRDE* August 1, 2012).

Inhofe also attacked the consensus. He stated that Mann’s “hockey stick thing...has been totally discredited” (*CRDE* August 1, 2012). He observed that NOAA found “no scientific consensus or connection between global warming and tornado activity” and cited documents that claimed sea ice was increasing in Antarctica (*CRDE* August 1, 2012). Perhaps Inhofe’s most telling statements regard the IPCC, which he conceded he has been “very critical of because that is the science on which all of these things are based that we are dealing with today” (*CRDE* August 1, 2012). Referring to a CEPW hearing during which a “witness for the other side” spoke, Inhofe claimed that he had been contacted subsequently by another IPCC scientist who provided written, point-by-point refutations of the witness’ testimony, including “The politicization of climate science is so complete that the lead author of the IPCC’s Working Group II on climate impacts feels comfortable presenting testimony to the US Congress that fundamentally misrepresents what the IPCC has concluded” (*CRDE* August 1, 2012). Inhofe challenged the IPCC’s motives and their conclusions, noting that climate change action advocates

had been “cooking the science and what they were saying was not real” and that “you can fool the American people part of the time and you can talk about all the hysteria and all the things that are taking place, but the people of America have caught on” (*CRDE* August 1, 2012). Inhofe concluded by offering that even believers know that they have lost the American people and

As much money as they have spent and the efforts they have made, and moveon.org and George Soros and Michael Moore and the United Nations and the Gore people and the elitists out in California in Hollywood, they have lost this battle. Now they are trying to resurrect it. (*CRDE* August 1, 2012)

Clearly, Inhofe was framing the issue of climate change differently than Kerry and while Kerry and other climate action advocates may rightfully denigrate the basis for Inhofe’s claims, Inhofe effectively targeted several audiences within and outside of Congress. As an outspoken skeptic and a ranking Republican, Inhofe provided a service to many of his colleagues, giving them a detailed and lengthy, even if flawed, list of reasons for doubting climate change. He framed the issue as unsettled and politically motivated, and warned his colleagues and the public alike that the other side was losing and getting desperate to make its case. Finally, by offering a forceful rebuttal to Kerry, he signaled his willingness to fight back and that he would lead that effort for colleagues who join or defer to him.

The interactional issue framing involving Kerry and Inhofe was not about the meaning of climate change to the two speakers. They obviously held opposing views to which they felt strong committed. Rather, their indirect interaction over the course of a Senate session represented the interaction of two larger camps through their spokesmen who, in turn, were reassuring their respective camps, challenging the other’s camp, and

trying to sway unaligned colleagues. Clearly, party affiliation matters. However, both tried to sow seeds of doubt to encourage bipartisanship or, as a minimum, to reduce the number of those willing to openly oppose their position.

The second interactional framing issue theme to emerge from the texts was the portrayal of climate inaction as the threat versus action as the threat. In general, advocates accepted the science, demanded action to address the threat, and touted the multiple benefits of climate action. Opponents were either skeptical of the science or did not dwell on it, and they certainly did not demand any climate actions that might exact an economic cost. Nonetheless, common interests in the economy, jobs, energy security, and US global leadership created space for a more diverse range of senators. Yet, as seen in the prognostic and motivational frames discussed above, the framing of economic benefits or costs was contested.

Returning to the Kerry-Inhofe example, Kerry framed climate action as an economic necessity, a requirement to compete in a six trillion dollar market with about six billion users—a technology market that the US can and must lead. He offered that

We didn't even have an Internet in the United States until about 1995 or 1996 when that began to be commercialized. Yet in that short span of time we created more wealth in America than we had ever created at any time in America's history. We created 23 million new jobs because we led in that new industry. (CRDE August 1, 2012)

Yet, he added, “here we are today staring at the potential of this extraordinary industry—the energy market—and we are just sitting on our hands while other countries take it and run with it and grow their economies” (CRDE August 1, 2012). With these and related comments, Kerry was again speaking to multiple audiences. He was encouraging

supporters to press harder while attempting to paint skeptics as harming the economy, not defending it. He was also playing to those common interests that were likely to have resonance with a broader cross-section of the Senate, including those Republicans who may or may not concede the science, but were certainly interested in economic benefits for their constituents.

Unsurprisingly, Inhofe challenged Kerry's framing of climate action as economically beneficial. In fairness, economic claims merit close scrutiny and Kerry's framing was big on vision and short on details. However, Inhofe certainly realized that not all of his Republican colleagues shared his extreme skepticism and thus they might find the allure of economic benefits worthy of exploration. Accordingly, he chose the emotive topic of a rising and increasingly assertive China as the foil for challenging Kerry's economic framing:

You know China is the great beneficiary of anything we do here to put caps on carbon because they are the ones that are doing it. So they say China is making great strides in reducing their carbon emissions. Well, look at this. The green line there is China. This is in emissions—billions of tons of emissions. It starts down at 2, a little over 2, which was in 1990, and it was fairly low until 2002. Look at what has happened. It has doubled in tons of emissions. China has actually doubled in that period of time, from 2002 to 2012—a 10-year period. At the same time, we have actually reduced our emissions—both the United States and the European Union. To suggest that China is sitting back there waiting for us to provide the leadership for them to destroy their economy is pretty outrageous. (*CRDE* August 1, 2012)

After raising the prospect that climate action helps China at the expense of the US, Inhofe subsequently challenged the technological feasibility of Kerry's clean energy transition and declared that Obama is waging war on the fossil fuel industry:

Well, I am just saying there is this whole idea we have to rely on some kind of green energy that has not even been developed yet in terms of technology and ration what we have in this country. I mean, this Obama administration has had a war on fossil fuels since before he was elected President of the United States. He wants to kill fossil fuels. We all know that. And I am not going to quote all the people in his administration who say we are going to have to raise the price at the pumps to be comparable to Central Europe before people will be weaned off of fossil fuel because I think people know that now. (CRDE August 1, 2012)

Thus, in his short rebuttal of Kerry's economic claims, Inhofe had offered his colleagues an alternative frame for climate action that provided patriotic, security, and economic rationalizations for rejecting climate action regardless of one's views on the science.

Indeed, one of the challenges for climate action advocates was that even those who believed in the science had to contend with the peculiarities of their states. For example, Manchin (D-WV) conceded the science behind climate change, but condemned the EPA's regulatory regime that was harming the economic well-being of his coal-mining constituents (CENR 12 May 2011). In this particular case, Manchin had more in common with Barrasso (R-WY) who expressed similar concerns during EPA Administrator McCarthy's nomination hearing before the CEPW, delivering an impassioned statement critical of the EPA's regulatory efforts vis-à-vis the coal industry. He stated, "I'm not sure whether the nominee before us today is personally aware of so many folks who have actually lost their jobs because of the EPA and a role that I believe it is taking now which is failing our country—people in places like Wyoming, Montana, Kentucky, Ohio, and West Virginia" (CEPW April 11, 2013).

Much like their framing of climate change science, Kerry and Inhofe's interactional issue framing of climate action versus inaction was less about the speakers than about their targeted audiences. After all, based on their fundamental views on

climate change, they were not seeking a synthesis of meanings between them. Rather, they were trying to reinforce their respective camps and appeal to those with lesser convictions or unique constituency concerns. Kerry wanted Democrats who accepted the science to take bolder actions. He also wanted to entice Republicans who, regardless of their views on the science, were attracted by the prospects of economic gains for their constituents. Inhofe offered the same senators economic and security rationales for not taking action or, at least, to pursue less costly actions. The success of Inhofe's message might have been evidenced in the Senate's preference for climate actions based on efficiency, adaptation, and consequence management over more ambitious efforts to curb carbon emissions.

The texts revealed two prominent patterns of interactional *identity and relationship* framing. First, the most outspoken speakers on the subject of climate change attached labels to one another and their respective camps. These labels stereotyped members of the two camps and reminded senators not visibly aligned with one camp or the other that there is a public relations price associated with membership.

Those who accepted the science of climate change and advocated for climate actions were often labeled *believers*, but might be referred to alternately as conspirators, liberals, extremists, alarmists, elitists, zealots, and activists. Clearly, each term carries a slightly different connotation and paints a slightly different picture. However, the overall purpose of the terms was to cast doubt on the veracity of climate change science and to call into question the motives of those favoring action. Usually, speakers followed these labels with references to the harms that follow from climate action. For example, Inhofe

grouped moveon.org, George Soros, Michael Moore, the UN, Al Gore, and people from Hollywood, stating that they have lost the battle to win over Americans but would still “love nothing more than to pass this \$300 billion tax increase.”⁹² He then referred to his “friend” Sanders as “a real sincere activist on the other side” (CRDE August 1, 2012).

Climate science disbelievers and/or those opposed to climate action were most often called *deniers* and somewhat less often, skeptics, terms occasionally replaced or augmented by opponents, flat-earthers, the fringe, sleepwalkers, polluter allies, and colleagues on the other side. The overall message was that deniers are a minority, out of touch with reality and the scientific consensus, and beholden to special interests. The special interest theme was particularly evident in the text. Essentially, climate action advocates offered that nothing else could explain the deniers’ blatant disregard for the facts. Witness the following excerpt from a colloquy by Whitehouse and Franken on the Senate floor as they discussed “climategate.”⁹³ Franken has just described how the tobacco industry attempted to deceive consumers through fraudulent scientific findings and a massive disinformation campaign.

WHITEHOUSE. And it is not enough that they have a stable of paid-for scientists to create doubt, to create phony science that raises the level of doubt; they also go out of their way to attack legitimate scientists. You would not think this would carry much weight in a proper debate, but amplified by the corporate money behind it, and designed, as the Senator said, with the purpose not to win the argument but to create doubt so that the public moves on, it is actually worse. One example of this attack on lifetime scientists has been the phony so-called Climategate scandal, which was an effort to derail international climate science and climate negotiations.

⁹² Inhofe was referring to cap-and-trade legislation that was never brought to a vote in the senate.

⁹³ “Climategate” was a reference to emails taken from the Climatic Research Unit at the University of East Anglia and then offered as evidence of data manipulation by climate scientists. An investigation found no evidence of fraud or scientific misconduct.

FRANKEN. Climategate. Sometimes the Senator and I refer to it as "Climategate-gate."

WHITEHOUSE. Yes, Climategate-gate. In fact, the real scandal here wasn't what the scientists did; the real scandal was the phony attack on the scientists.

FRANKEN. I thank my colleague for bringing this up. Let's talk about that. This is the leak of thousands of e-mails from scientists at the University of East Anglia Climate Research Unit back in 2009. It was done right before the Copenhagen conference, right?

WHITEHOUSE. I believe that is correct.

FRANKEN. OK. The conservative media-remember, this doubt is amplified in the conservative echo chamber, talk radio, et cetera. You know what it is, the Wall Street Journal editorial page, Fox News, et cetera. Conservative media pounced, taking quotes out of context to sensational lies like this "scandal." Most of the attacks were directed at an e-mail by Phil Jones, a climate scientist working with the East Anglia Climate Research Unit, in which in this e-mail he referred to using "Mike's Nature trick of adding in the real temps to each series for the last 20 years to hide the decline." That sounds very bad, "trick" and "hide the decline." That went viral in the conservative media-evidence that the scientific consensus on climate change was a giant hoax. We had a Member of this body who said the science behind this consensus "is the same science that, through climategate, has been totally rebuffed and no longer legitimated."

WHITEHOUSE. And it provoked considerable review afterward because of the alarmist claims that were made in this phony attack on the climate science. A number of pretty respectable organizations took a look at this. One was the university itself, and the university itself reached the conclusion on the specific allegations made against the behavior of CRU scientists, "We find that their rigor and honesty as scientists are not in doubt. In addition, we do not find that their behavior has prejudiced the balance of advice given the policymakers. In particular, we did not find any evidence of behavior that might undermine the conclusions of the IPCC assessment." That was the university review. Not enough? The National Science Foundation also--

FRANKEN. The university could be biased.

WHITEHOUSE. That is why we go on to the National Science Foundation, which found no direct evidence of research misconduct and therefore said, "We are closing this investigation with no further action." (CRDE December 14, 2011)

As evidenced throughout this chapter, Whitehouse and Franken were among the most outspoken proponents of climate action and they frequently used the *denier* label and its variations when talking about opponents. The colloquy built on the *denier* label, embellishing it with a story about deception and the conspirators who influence some members of Congress. The colloquy also sought to undermine the credibility of Inhofe's frequent claim that climate science is flawed and politically motivated.

The second pattern of interactional identity and relationship framing was the selective use of political party labels by senators addressing climate change and climate actions. In general, Democrats referred to Republicans or the Republican Party when they were drawing attention to Congress' failure to pass any significant climate legislation. Typically, these references described opponents of action as Republicans, deniers, and indebted to special interest groups, a clear effort to tarnish the Republican brand. For example Boxer tied together Republicans, special interests, and children's health when discussing a vote on tax credits for clean energy producers:

I have to ask rhetorically: What is wrong with the Republican Party that they don't understand that when you extend these kinds of tax credits, you move away from the dictators who control the oil supply and who would turn on us in a minute, and instead you create jobs here at home, the air is less polluted, the kids have less asthma? There are very few things that we could come to the floor and say are such a win-win-win. (CRDE December 13, 2011)

As discussed earlier, the Republican Party did not hold ubiquitous views on climate science and climate action. Thus, Democrats seemed reluctant to overstate their

case in the event that they might inadvertently rally Republicans who would otherwise take a more nuanced view of climate action. Whitehouse alternated between approaches. In the following excerpt, he criticized the Republican Party while also noting that the party had not always been this way and thus could change:

But the polluting special interests appear to rule here. The party of Theodore Roosevelt, the great conservationist; the party of President Nixon, who founded the EPA; the party of John Chafee of Rhode Island, who was instrumental in the passage of the Clean Water Act and the Clean Air Act; and the party of Russell Train who, as I mentioned earlier, died this week at the age of 92 after a distinguished career in environmental protection in the Republican Party-that party has now become the servant and handmaiden-perhaps "paid consort" would be a better way to say it given the money involved-of polluting special interests. (CRDE September 20, 2012)

Franken was also critical of the Republican Party, but often infused his comments with humor. For example, during a CENR hearing on sea level rise, he remarked, "I noticed that there are very few colleagues from the other side of the aisle here in this hearing. But ironically there's an elephant in the room. Climate change is the elephant" (CENR April 19, 2011). At other times, he spoke to the common ground between parties:

Wind blows all over this Nation. It blows in red States and in blue States alike. It is an abundant, cheap, clean energy resource that is proving to be a boon to our economy. We cannot stop developing it now. I urge my colleagues to extend the renewable energy production tax credit immediately, at the same time we extend the payroll tax cut and unemployment benefits. (CRDE February 15, 2012)

Republican speakers seldom referenced Democrats or the Democratic Party when talking about climate change. I attribute this finding largely to the general consensus on climate change by Democrats, a consensus that few Republicans found value in assailing. On the other hand, Republicans often pointed out how Democrats joined them in

opposing climate actions. For example, Inhofe interpreted the Waxman-Markey bill's passage in the House of Representatives in a manner to discredit similar legislation, the Kerry-Lieberman bill:

Here we go again. Look closely at the Kerry-Lieberman bill. I am sure you have seen it before. It is the Waxman-Markey bill. You remember that. It passed in the middle of the night in the House of Representatives. We all remember that, passing by 219 to 212. Every kind of deal in the world was made and nobody knew it except the vote finally took place and they eked it out. Democrats, 44 of them, voted no because they knew the cost of the bill. (CRDE May 17, 2010)

Earlier, I described the alignment of interests between Barrasso and Manchin regarding the regulation of the coal industry as an example of bipartisan interests. The alignment of Democrats and Republicans in opposition to some climate legislation is unsurprising given the unique constituencies of each senator. However, it is noteworthy that Republicans deliberately point out the Democrats who joined them to oppose climate action. In a sense, this is the equivalent of Whitehouse offering that the Republican Party used to be known for its protection of the environment. In both cases, the speakers have suggested that group boundaries are permeable and/or can be redefined.

Interactional *process* framing emerged in the texts within the context of how senators viewed their role and the role of the Senate in the broader American legislative and governing process. In general, senators held to the notion that politics is inherently a struggle between competing interests, one that is enshrined and even encouraged by the separation of powers and the related system of checks and balances provided by the Constitution. The Senate has an organizational structure, rules, and norms of behavior, and these features govern the interactions between senators and shape their interpretation

of the ongoing communication process. Fundamentally, the Senate is supposed to represent Americans and American interests. However, the texts revealed that senators held disparate views on whether the process was actually serving American interests with regards to climate change.

Climate action proponents and opponents looked at the same process and came away with vastly different conclusions. Opponents had successfully blocked comprehensive and costly climate legislation, thereby protecting consumers, businesses, and the economy. Democrats had joined Republicans to oppose the legislation, a clear indication of bipartisanship in support of common interests. Moreover, there was no push back from constituencies or climate action-based losses at the polls, clear signs to climate action opponents that they were representing the will of the American people.

In the texts, climate action opponents from both parties exhibited defensiveness at any suggestion that they were shirking their responsibilities or should cede any power to the executive branch. For example, witness the following interaction at a CENR hearing between Manchin and Steven Chalk, the Deputy Assistant Secretary for Renewable Energy from the Department of Energy:

MANCHIN: So you're saying the Department of Defense they've already run B-52 bombers on coal to liquids and they were very pleased with it. But the provisions we have in the law here don't allow us to develop it.

CHALK: It doesn't allow the Federal Government to buy that fuel because it's going backward in terms of greenhouse gas emissions.

MANCHIN: It's best for them to buy foreign oil?

CHALK: Our strategy is to develop biofuels and biofuels can yield great jet fuel and great diesel fuel and we're doing that through 2 pathways. One is cellulosic

and one is through algae work that we talked about. Both of these pathways are what we call drop-in fuels which are totally compatible with today's jet engine.

MANCHIN: I just think—do you find it appalling that we don't have an energy policy in 2011 in the United States of American?

CHALK: I believe we do. We have a blueprint for the energy—

MANCHIN: Who's this? The bureaucracy or the lawmakers? I mean, do you find us to be an impediment to you all moving forward with what you want to do?

CHALK: We also have an agenda in our blueprint for how we're going to relieve our dependence--

MANCHIN: Don't you think the elected representatives should be leading that and representing the people that they do serve? (CENR June 7, 2011)

Chalk had unwittingly encountered Manchin's interpretation of the legislative process and his duties as an elected official, an encounter that provoked a defensive reaction that revealed how Manchin viewed his role as a senator in relation to climate related actions. For Manchin, the process worked and outsiders need not meddle.

Inhofe and other climate action opponents ignored accusations that they were beholden to special interests and thus not meeting their responsibilities. Rather, they cited surveys, polls, and their successful prevention of legislation as evidence of how well the process is working. Most importantly, they reminded everyone that elections are the ultimate judge. Inhofe put the prices of cap-and-trade legislations in stark terms for his colleagues: "The November elections are looming, and there are a lot of people coming up for reelection who don't want to go back to the electorate and say: Look at me; aren't you proud; I voted for the largest tax increase in American history" (CRDE May 17, 2010). From Inhofe's perspective, the Senate was doing its job well.

Proponents of climate action looked at the same process and saw failure. They had presented the evidence of climate change and offered rational options for addressing the threat. They cited economic and security rationales for action and even noted that American prestige and leadership were on the line. They acknowledged their colleagues' concerns about costs and possible impacts on the economy, but offered reasonable arguments about the multiple benefits of climate action. They provided a broad menu of climate options that could appeal to most any senator's particular circumstances. They cited experts, scientists, Republicans, and business and military leaders who support climate action. Yet, in spite of what they saw as an overwhelming case for action and their understanding of Congress' role in representing Americans and their interests, nothing substantial had been achieved.

Some climate action advocates lamented what they saw as the failure of their institution to do the right thing. Durbin said, "I find it incredible how little we talk about this. When I think about our responsibility in the Senate and Congress, we are almost afraid to bring it up because it is controversial, because some on the right are in complete denial that anything is going on here" (*CRDE* December 6, 2012). Boxer's vision of the role of Congress was suggestive of an institution not living up to its responsibilities:

We are the stewards of this environment. We are the ones who are supposed to protect it. Yet in this Senate, it is shrugged off as if it is a nothing burger. There are young people who are here whose future is at stake. They want to enjoy the same opportunities my generation enjoyed. We owe it to them to do better. (*CRDE* March 11, 2013)

Whitehouse had a similar reply, but his version of events called into question his colleagues' integrity: "Anyway, the real point is we are not just in this Chamber to

represent the polluters. We are supposed to be here to represent all Americans and Americans benefit from environmental regulation big time” (*CRDE* October 13, 2011). Evocative of Manchin’s views on Congress’ role, Wyden said, “only the Congress has the tools to address the global nature of this issue and pursue a solution that actually reduces domestic emissions while keeping our economy competitive” (*CENR* April 9, 2013).

Ironically, the success of one group and concomitant failure of the other have yielded a result that neither group desired—climate action via executive branch decree and regulation. To opponents of climate action, the executive branch was attempting to counteract the will of the people and to usurp the authority and responsibilities of Congress. To proponents, Obama’s efforts were welcomed, but they also highlighted their own failure to muster support for a legislative solution. Proponents also realized that Obama’s reach is ultimately constrained by the power of the purse.

Theoretical Insights

All four of the theories provided helpful insights on the congressional texts, insights that informed the previous discussion on findings. Moreover, most of the congressional texts evidenced elements suggestive of how the theories might provide further insights on the behavior of Congress toward climate change (see Figure 18). In fact, the findings were robust and largely unsurprising with one minor exception. I expected more findings for the cultural theory of risk, particularly since it was first applied to the issue of pollution and that updates to the theory have often looked at environmental issues. However, I do not question the value of the theory for adding

insights on the congressional audience. Rather, the study’s focus on texts and its limited exploration of individual speakers provided insufficient context to ascribe behaviors to a specific worldview or way of life, a subject I will discuss in the conclusion to this project.

Congress (80 texts)		Theories (72)				
Balance of Threat (39)	Realist Paradigm (39)					
Three Streams Model (53)	Participants (34)	Problem (31)	Politics (20)	Policy (11)	Window or Coupling (4)	
Social Identity Theory (49)	Comparison (30)		Categorization (26)		Salience (17)	
Cultural Theory of Risk (18)	Way of Life or Worldview (18)					

Figure 18. Congress: Theory Findings

The balance of threat theory and its underlying realist paradigm was evidenced primarily in texts that focused on state actions, the relationships between states, and climate change effects on US instruments of power or national interests. Unlike the executive branch where speakers seemed to draw fluidly on realist language when discussing national security, congressional speakers did not seem similarly constrained. The SFRC was a noteworthy, but unsurprising exception because its foreign policy jurisdiction supports discourses that overlap considerably with IC, DOS, DOD, and DHS discourses. Senators who accepted the scientific consensus on climate change viewed the US as somewhat of a pariah in the international system, a state that has long claimed the mantle of global leadership, but has failed to lead the fight against a global problem.

Like many of the speakers in the executive branch, some senators observed that US standing in the world was degraded by its failure to acknowledge and lead a global response to a global threat.

Because they embraced the scientific consensus, climate action supporters recognized a broad range of physical and social effects. They argued that many of these effects alone or in combination with other factors threatened US national security and they substantiated their claims with frequent references to US military and intelligence leaders and organizations. For example, Whitehouse, the most outspoken climate change advocate in the Senate, often made remarks such as “we should believe our national security institutions when they warn us of the security and strategic implications of climate change” (*CRDE* November 28, 2012). This alignment was characterized as one between environmentalists and security hawks. Yet, like these hawks, climate action supporters conceived of the threat and the threatened object in many different ways. Thus, climate change threatened US national security because it might act as a threat multiplier or contributor to instability in a region or state upon which US national interests partially rely, and threats in the realist paradigm are by definition threats to national interests.

The realist paradigm also considers opportunities to advance US national interests, a theme found in many of the congressional texts. The transition to a clean energy economy was cast as a way to lessen or eliminate dependence on foreign oil. Optimistically, some advocates conjectured that reduced reliance on foreign oil would also diminish our security commitments abroad. Many senators said that the US was

missing an opportunity to lead in the multi-trillion dollar global clean energy market, ceding the lead to China and others rather than seizing on the chance to grow the US economy and create jobs. Using words reminiscent of the US-Soviet arms race, Whitehouse stated, “We are in a race right now. We are in a race for dominance and for preeminence in the clean energy economy that is emerging. All around the world, other countries see it. They are competing in that race. They are putting everything they have into winning that race” (*CRDE* December 13, 2011).

The texts also showed concern for how climate change threatens US instruments of economic and military power. Economic power derives from a thriving economy, translating into wealth and influence to shape conditions on the global stage. Climate action advocates were concerned that US food and water security, power generation, renewable resources, and agricultural productivity would be degraded by climate change as would the markets that the US relies on for global trade. Many senators accepted and often repeated DOD’s concerns that climate change will affect the strategic operational context, requiring the military to address new issues and to undertake more humanitarian assistance/disaster relief missions. Other senators observed that rising sea levels and worsening storms would affect military bases, thereby degrading military readiness and power projection capabilities.

Climate action opponents viewed the same elements much differently. Since unilateral climate action by the US would be subject to the free rider problem, some senators adopted a zero-sum mindset, concluding that our actions would benefit and perhaps embolden our competitors. Of course, the same senators looked at solutions to

the free rider problem such as binding treaties an unacceptable affront to US sovereignty. Interestingly, senators opposed to climate action largely discounted the counsel and explanations of military and intelligence leaders. Instead, they criticized military budgets that allocated funds for clean energy, arguing that the money should be spent on military hardware suitable for traditional military missions. They also opposed efforts to curtail exploitation of US fossil fuels or developing trade in fossil fuels with friendlier states, particularly Canada. In short, they saw energy security vis-à-vis readily available fossil fuels as the way to promote US interests, increase US security, and bolster the economic instrument of power.

Kingdon developed the three streams model to look at public policy making, and Congress' role had factored prominently in the development of his model. Thus, I had anticipated that the model would prove helpful for analyzing congressional texts and providing insights on audience behavior. Indeed, the findings were robust for the key elements of the model.

Participants in the climate policy process included a diverse array of formal and informal players. Proponents and opponents alike cited Obama's leadership on the issue with the former applauding his leadership while lamenting the necessity for the executive branch to play such a prominent role in the absence of legislation. Boxer stated, "God bless the Obama Administration for moving us forward in every way they can—unfortunately, without us at this point" (*CRDE* March 11, 2013). Referring to Obama's climate action plan, Whitehouse stated, "His plan is a bold one, and it is going to challenge the status quo" (*CRDE* June 27, 2013).

Opponents conceded that Obama was leading on climate change, but framed it differently, noting that his liberal agenda was going to hurt the US. Reacting to Obama's inaugural speech and his comments on climate change, Inhofe remarked, "President Obama made a beautiful speech. I think everyone agrees that he is a very persuasive speaker. Although I didn't agree with anything he said, it was said beautifully" (*CRDE* January 22, 2013). These statements exemplify the challenge facing a securitizing actor such as Obama or anyone attempting to place a problem on a decision agenda—the process is inherently political and subject to a multitude of competing interests.

Many of the texts revealed concerns about special interest influence on the formal participants and the policy making process. Generally, climate action advocates sought to demonstrate that their opponents were beholden to special interests, "lulled by the narcotic of corporate money from polluters and from their allies" (Whitehouse *CRDE* January 1, 2013). Although less frequently, Inhofe and other climate action opponents also targeted special interest groups who were supposedly helping Obama to promote an agenda that would hurt Americans. Interestingly, Inhofe also mentioned the tea party as a group adamantly opposed to the cap-and-trade proposal, noting that its protest during the recess of 2009 was, in part, to oppose "the largest tax increase in the history of the country" (*CRDE* May 17, 2010). Inhofe's mention of the tea party was certainly intended to send the message to colleagues that there is a price for supporting climate action.

All three policy streams were evidenced in the texts. The climate change problem stream in Congress is a struggle over whether and how high to place climate change on the agenda. Central to this struggle is the ontological question of what is climate change.

As seen in the diagnostic frame, the answers varied greatly with regards to the nature of the threat and the threatened object. Although two camps emerged, largely along party lines, there was a silent group in the middle and no consensus or common ground among senators. However, a shared diagnosis was not necessarily a precondition for making progress in the policy stream. After all, many of the options discussed in the sections on prognostic and motivational frames provided benefits to constituents regardless of a particular senator's views on climate change. Yet, the politics stream was clearly unsupportive of climate legislation, primarily because senators contested the economic costs, risks, and benefits of specific climate actions. Thus, the Waxman-Markey bill was pulled from consideration because of the lack of votes in the Senate and other similarly ambitious climate actions have likewise failed to garner sufficient support to move beyond their committees. Efficiency, adaptation, and consequence management related actions fared somewhat better, but were still subjected to a highly contentious policy stream and thus few supporters could claim victories.

Several of the texts provided comments indicative of policy windows and coupling. As mentioned earlier, Inhofe pointed out that elections tend to calm senators' enthusiasm for climate actions that are or can be framed as tax increases. Many supporters of climate action admitted that the three streams had not aligned for climate action. Whitehouse specifically commented on a path forward to bring the politics stream into line with the scientific consensus on the problem and the well understood set of policies necessary to address the problem:

At present, however, political conditions in Congress do not allow us to price carbon. It is necessary. Political conditions do not allow us to do it, so we must

change those political conditions. Changing the political conditions will require three actions: No. 1, there has to be a regulatory threat to the polluters. No. 2, there must be a political threat to the deniers here in the Senate and in Congress. No. 3, those of us who wish to limit carbon pollution must gather the armies that are on our side. (CRDE May 16, 2013)

Congress brims with social identities, cross-cutting identities, and hierarchical dual identities. The American identity loomed large in the texts as an oft-referenced superordinate identity, only occasionally challenged by the notion of a larger global identity threatened by climate change. Congress and to a lesser degree the Senate also earned considerable attention in the texts, identities that are supposed to look after Americans and America's interests. While most senators referred to their American and congressional identities, they employed those identities differently. Proponents of climate action singled out the US as a prominent leader in addressing a global problem such as climate change, a role that only the US can fulfill and from which the US will uniquely benefit. In contrast, opponents saw climate change action as a way to degrade US power at a time when rising powers are already challenging US global leadership. To proponents, Congress was doing its job only when it took action to address climate change. Opponents saw inaction as a sign of the wisdom of Congress as a deliberative body representing the will of the American people.

Senators referred to many other social identities. Party affiliation was most readily apparent in the texts and speakers portrayed it as the most salient identity for determining where a colleague stands regarding climate change. However, there were other categories, varying in salience according to topic and speaker. Senators actively sought opportunities to mention their states, connecting their actions in the Senate to the

needs of their constituents while proudly showcasing their states' achievements. Barrasso talked about Wyoming's leading role in carbon sequestration technology, allowing him to claim support for a technology of economic value without highlighting its role in addressing climate change. Franken boasted that "Minnesota is a national leader in clean energy" and Whitehouse declared that "Rhode Island is preparing for climate change" (*CRDE* December 14, 2011, *CRDE* July 24, 2013). Of course, state references also supported arguments against climate action. Referring to the cap-and-trade proposal, Inhofe said "That would cost my people in Oklahoma... a little over \$3,100 a year" and thus "I will make myself clear: I stand with the consumers, and by that I mean farmers, families, truckers, businesses large and small in rural Oklahoma, who drive long distances. They don't need this tax increase now or ever" (*CRDE* May 17, 2010).

As seen in the preceding comment by Inhofe, senators also referred to identities whose characteristic activities helped to make a point. Referring to himself as a farmer and a member of the Agricultural Committee for 36 years, Lugar spoke about "the problems of volatile energy costs, water scarcity, climate change, and more resilient pests [that] threaten to severely limit food production in many vulnerable regions" (*SFRC* November 28, 2012). He added that American farmers could help to offset this threat, benefiting the economy and his state. While farmers were often mentioned in the context of acknowledging climate change or promoting climate action, Barrasso, Wickers, and Manchin, among others, would mention coal miners when opposing climate action.

Beside party affiliation, three other identity comparisons were common in the texts. First, believer-versus-denier comparisons were made mostly by climate action supporters, all of whom were Democrats or Independents. This dynamic was discussed at length in the section on interactional framing above. Second, climate action advocates often contrasted their opponents against the scientific and/or military and intelligence communities, emphasizing how those who focus on scientific facts and national security see climate change as real and deserving of attention. Clearly, the comparison was intended to undermine opponents while bolstering proponents' rationale to act, a subject discussed in the section on motivational frames. Third, comparisons between the US and other countries were made by those on both sides of the issue, alternatively framing the US as falling behind on clean energy or unwisely ceding an economic advantage to competitors.

The preceding findings are noteworthy and hint at the potential value of social identity theory for examining congressional behavior related to climate change. Clearly, social identities are contributing to senators' views on climate change and climate change actions. However, the texts did not provide adequate context to disentangle the relative contributions of any particular identity or the role of other factors unrelated to identity. Also, the texts did not reveal evidence of senators attempting to reconcile themselves to the non-traditional, non-agent-based nature of the climate threat. However, I did find some evidence of speakers trying to come to terms with the notion that the US and Americans are, in some way, the cause of the threat. Some senators portrayed the US as a contributor to the problem, intimating that the US must take responsibility for its

actions and inactions. Other senators argued that such an admission would subject the US to liability and damage claims, a common theme among senators who see binding international treaties as a constraint and even an imposition on US sovereignty.

With regards to the cultural theory of risk, senators provided glimpses of their preferred ways of life and worldviews, but the pattern was inconclusive. As discussed earlier, Democrats broadly accepted the science underpinning climate change and many argued in favor of action, ranging from less costly efficiency and adaptation measures to comprehensive legislation to reduce GHG emissions. Republicans either denied or downplayed the science or were silent on the topic, and most of them argued against climate actions unless they were beneficial in ways that could be justified without reference to climate change. This pattern suggests a simple dichotomy in worldviews and preferred ways of life, and party affiliation does play a role as emphasized by Boxer:

We are going to see a couple of different budgets emerge—one from the Democrats in the Senate and one from the Republicans in the House—and they will have different visions for America. One budget, the Democratic budget, is going to get to a deficit reduction, but it will invest in our people. It will say to the very wealthiest: You have to do your share so our kids can go to Head Start, get their education, job training, and clean up the environment. The other budget is going to be hurtful. It is going to be painful because the other budget—the Republican budget—is going to protect and defend one group of people in this country, which are the wealthy few. Therefore, we will not have the resources to do what we have to do, and we are going to see cutbacks in the areas that we need in order to make sure we plan for this extreme weather and make sure we can avert this climate disruption by investing in clean energy. (CRDE March 11, 2013)

Boxer's statement was certainly indicative of a clash of perspectives on risk and what to do about those risks. Had she employed the language of the cultural theory of risk's group-grid typology, she might have stated that individualists joined by some hierarchists

(Republicans) working within a hierarchical government structure (Congress) were pushing a budget that favored the rights of the individual over the welfare of the collective. In contrast, a group of hierarchical communitarians joined by a few egalitarian individualists (Democrats) were promoting a budget for the collective good. While this simplistic characterization of Republicans and Democrats has merit and is worthy of further study, the texts also revealed numerous exceptions as exemplified by Manchin's reaction to EPA regulations on coal, contextual factors matter and thus party affiliation is merely a potential marker of an individual's risk preferences. Nonetheless, the utility of the cultural theory of risk in explaining audience behavior need not be constrained by references to party affiliation.

Senators often commented on tradeoffs regarding threats, risks, and dangers and how to contend with those selected for attention. In some cases, a diagnosis, which is ostensibly based on facts and a rational assessment, is subsequently eclipsed by the prognosis, which proved too costly or otherwise burdensome, leading to a reinterpretation of the diagnosis. Inhofe's remark "I used to believe in climate change until I saw how much it cost" was a succinct expression of this logic (Inhofe 2012). Numerous texts evidenced a similar logic. For example, Inhofe reprised his economic concerns: "The president makes it clear that he doesn't want anyone talking about the cost of taking action to stop global warming. And we know exactly why, whether it's legislation or regulation of any action to reduce greenhouse gas. This is going to cost the economy at least \$300 to \$400 billion a year" (CEPW July 18, 2013). As discussed in the section on motivational frames, senators opposed to climate action often cited risks to the economy

as rationale for not supporting climate action. Risks to the economy, actual or potential, were framed as unacceptable while the risks of inaction were discounted or ignored.

Senators were sometimes perplexed by the differential treatment of risks by their colleagues, suggesting that they were picking and choosing facts as suited their needs.

For example, as part of a climate change colloquy on the Senate floor, Sanders stated,

We fund the National Institutes of Health. We fund scientific organizations. They do research on cancer. They do research on heart disease. They do all kinds of research. I don't see great political debate about what this says. And suddenly, when you have almost unanimity within the scientific community, this becomes this great dividing political issue. (*CRDE* February 15, 2012)

Sanders had astutely observed that his colleagues selectively embraced evidence, raising the question of why. The texts did not answer the question, but they suggested that the senators did not rank their preferences based solely on proof of actual or forecasted hazards. Perhaps as a group that was overwhelmingly dominated by middle age or older males, cancer and heart disease had resonance with them while climate change's future impacts were less tangible. Of course, many senators, male and female, young and old, showed concern for the effects of climate change, so other factors must be at work.

In Hertrich's visual presentation of risk perception versus actual hazards, the subjects of the study did not have privileged information and thus the results were based solely on the subjects' general knowledge and their feelings about risks. Senators have a wealth of information at their disposal and yet, as Sanders observed, there seemed to be a bias toward different types of studies. Given the emphasis that senators placed on the tradeoffs between climate action and inaction, a cultural proclivity toward certain types of risks seemed to be operative.

National Security Experts

How did national security experts construct climate change meanings? Like the executive branch, national security experts exhibited a general consensus on the threat of climate change albeit with variability across sub-audiences. Authors stressed certain frames and elements within those frames that supported their specific arguments, arguments that usually chastised the formal players in the enterprise for failing to address the problem. Thus, climate change was framed as a major issue for which the root causes must be addressed and for which the formal players, as well as some non-US players, are accountable. Having emphasized root causes, the experts used prognostic frames that targeted those causes rather than merely the effects of climate change, a decidedly different approach than seen in the executive branch or Congress. After constructing the meaning of climate change in this manner, the experts could then proffer their solution to the problem or to the lack of climate action by other audiences.

Diagnostic Frames

Diagnostic frames were present in nearly all of the texts, generally framing climate change as a phenomenon with negative implications for society, and a significant subset of these authors specifically labeled climate change as a *threat*, issue, or problem (see Figure 19). As with the other audiences, the use of terms appeared to be more of a stylistic choice rather than an effort to brand climate change with a specific label. Indeed, many of the articles grouped climate change into a broad category of problems that included terrorism, financial and energy security, and infectious diseases. In such cases, the label was less important than the characteristics of the overall category, which

typically stressed the complexity, extent, and/or collective action problems posed by the items in the category. Only two authors refuted the framing of climate change as a threat, but they both acknowledged that climate change is occurring. One saw it mostly as an opportunity, particularly in the Arctic region, and the other said that it was worth monitoring “But there is no objective reason today to list climate change as a key issue for defense and security planning” (Tertrais 2011, 26).

National Security Experts (39 texts)		Diagnostic Frame (36)		
Threat	(19)	Yes (17)		No (2)
Threat To	(10)	Vulnerable Population (4)	Humans (4)	Planet (3)
Threat Why	(14)	Social Effects (11)	Physical Effects (10)	
Threat Extent	(3)	Worsening (2)		Localized (1)
Threat Proximity	(8)	Present (4)	Future (3)	Uncertain (2)
Threat Source	(17)	Proximate Causes (10)	Human Activities (10)	Nation-States (6)

Figure 19. National Security Experts: Diagnostic Frame Findings

The *threat to* element surfaced in about a quarter of the texts. Although none of the authors said that climate change was a threat to the US, their remarks about the threats to humans, future generations, the planet’s species, and the Amazon were clearly intended to show that the threat is pervasive and that no state would escape the effects.

The discussions regarding vulnerable populations highlighted the disproportionate effects on poor, low-lying, and coastal communities, mostly in the developing world.

The *threat why* element was seldom noted unless needed to support claims made by the author. Most authors accepted that most climate change effects are negative and that their severity depends on the interaction of factors unique to each region, state, and community. The most commonly mentioned physical effects were extreme weather, natural disasters, and rising sea levels. Conflict and instability, resource scarcities, and adverse interactions with other factors emerged as the top social effects.

In general, the authors touched on the same causation chain: extreme weather contributes to food and water scarcity that interact with other social factors to produce large population migrations, instability, and violence. For example, one text referred to DOD's characterization of climate change as a "threat multiplier," adding that climate change will send "ripples of instability across the globe: new opportunities for terrorist networks, conflicts over basic human essentials like access to food and water, and of course millions of refugees" (Carney et al. 2011). A few authors discounted the inevitability of adverse social effects, offering that climate change merely changes the mix of factors that may or may not beget undesirable outcomes. Yet, even among the few optimistic experts there was recognition that climate change would create new geopolitical challenges such as the opening of the Arctic region to resource extraction, or the emergence of new centers of power based on marketable supplies of critical, climate change-affected resources. For example, a state such as Brazil with its plentiful water

resources would be able to “translate this soon-to-be scarce resource into influence well beyond its borders” in a climate changed world” (Sweig 2010, 175).

None of the texts dwelled on *threat extent* or *proximity*. In short, the reality of climate change was broadly accepted by this audience, and discussions about the temporal and spatial dimensions of the problem were not essential to their arguments. The few texts that referenced the extent of climate change effects either downplayed the scope of social effects to show that other factors matter more than climate change, or raised the specter of an irreversible tipping point to argue that major efforts must be undertaken now because of the growing likelihood of catastrophic change. Similarly, the few authors who discussed the proximity of climate change effects chose frames that suited their particular arguments. For example, when framed as a chronic and less immediate threat, the author can claim that the clean energy industry is unlikely to see windfall subsidies and thus had better find a way to become profitable. In contrast, another author framed climate change as a driving factor behind today’s food crises, supporting an argument for immediate action:

If we cannot move at wartime speed to stabilize the climate, we may not be able to avoid runaway food prices. If we cannot accelerate the shift to smaller families and stabilize the world population sooner rather than later, the ranks of the hungry will almost certainly continue to expand. The time to act is now – before the food crisis of 2011 becomes the new normal. (Brown 2011)

The *threat source* element was present in nearly half of the texts with the authors focusing on proximate causes, human activities, or states. Arguably, all three sources are interrelated, so why did authors emphasize different ones? The choice owed more to their specific argument than to their belief that any one aspect was more significant than

another. For example, a wide array of industrial activities contributes to climate change and thus market solutions that empower the private sector are likely to be effective. Two texts pointed to deforestation as a major, although often understated contributor to climate change. Yet this theme was used by one author to contend that Brazil is becoming a major global player, taking steps to address climate change by slowing the Amazon's destruction while another author used the same example to note that the destruction shows that Brazil is not ready to be a global leader.

Proximate causes were cited when authors spoke about the collective problem posed by climate change, when their arguments referred to states generically, or when they were discussing international organizations and climate change efforts such as the UNFCCC. Similar to the finding in the executive branch, short-term GHGs like HFCs and black soot were the focus when underscoring the futility of a comprehensive CO₂ agreement, but offering other feasible options. Unsurprisingly, experts mentioned states by name to enable particular arguments. Thus, Canada's recent energy boom, much like the US natural gas bonanza, is undermining climate change action by a state once heralded as an environmental leader. China and India's enormous and rapidly growing energy requirements are increasingly dependent on coal-powered plants:

But just as coal is remaking energy markets, it is also remaking the climate. Coal combustion is the world's largest source of carbon dioxide emissions, responsible for almost 13 billion tons per year. By comparison, oil and natural gas account for 11 billion tons and 6 billion tons, respectively. With demand for coal ballooning in Asia, between 2010 and 2035, fully half the total increase in global carbon dioxide emissions from fossil-fuel use will come from coal use in the region. The climate problem, in other words, is a coal problem. (Morse 2012, 102)

The emphasis on coal's contribution to GHG was juxtaposed with coal's continued use, particularly by two large countries with insatiable energy demands, setting up the argument for cleaning up coal, the author's solution to the growth and development versus climate change dilemma.

Prognostic Frames

Many of the texts exhibited prognostic frames, focusing on the types of options and how they should be implemented, or critiquing the inadequacy of climate action (see Figure 20). There was broad concurrence that suitable options must contend with the dilemma resulting from the increasing demand for energy and the causes of climate change. The most common *option* elements related to incentivizing the reduction of fossil fuels or promoting renewable energy, options that were usually framed as the only way to escape the dilemma. Highlighting CO₂ as the primary GHG, the authors argued in favor of carbon reduction through carbon regulation, clubs, fees, penalties, or caps and trading. These options were offered to mitigate GHG accruals in the atmosphere rather than as a corrective on their own or to set conditions for transitioning to a clean energy economy without harming the US economy. In contrast, renewable energy in all of its forms was endorsed as the only solution that would actually address the major contributors to climate change and the only option suitable for the long term.

Unlike the executive branch or Congress, national security experts made few mentions of options to adapt, manage consequences, or increase societal resilience, or options based on science and technology. Likewise, mitigation received scant attention except in the context of reducing fossil fuel use, improving the quality of fossil fuels, or

shifting to “cleaner” fossil fuels such as natural gas. One exception was the promotion of healthy forests as carbon sinks to help offset carbon pollution, an idea promoted by the UN and DOS in the form of the strategy for the Reduction of Emissions from Deforestation and Forest Degradation (REDD). As observers of the formal enterprise processes, the experts seemed to focus on options given short shrift by the formal players or that were controversial in at least one of the other audiences.

National Security Experts (39 texts)		Prognostic Frame (32)				
Option	(21)	Reduce Fossil Fuel Usage (10)	Renewable Energy & Efficiency (9)	Mitigation (3)	Improve Fossil Fuels (3)	Adaptation & Management (3)
Option Source	(19)	States (9)		Government (9)		International Organizations (8)
		Civil Society (6)		Private Sector (3)	Individuals (1)	Sub-National Jurisdictions (1)
Option Cost	(4)	Commercialization Costs (4)			Clean Energy Costs More (1)	All Costs not in Market Price (1)
Option Risk	(12)	Free Riders (7)		Renewable Energy Will Not Solve (3)	Technology not Up to the task (1)	Maladaptation (1)
Option Implementation	(12)	Combination of Approaches (6)		Through Market Mechanisms (5)	Treaty, Agreement, Partnerships (4)	Integrate into Routine (1)
		Transnational Governance (1)	Sub-National Structures (1)	Tailored to Local Needs (1)		International Institutions (1)
Option Justification	(11)	Costs (5)	Has other Benefits (5)	Helps other Options (3)	Feasible Now (2)	Other Options Failed (2) Option Must be Included (2)

Figure 20. National Security Experts: Prognostic Frame Findings

The *option sources* were consistent with the scale and cost of options presented in the texts, placing the onus for implementation on governments, states, and the

international community. Texts that emphasized market-driven options often referred to partnerships such as the golden triangle, “a collaborative effort between government (at every level), the private sector, and civil society as they come together to tackle big issues” (Kent quoted in Bremer 2013, 85).

State references were often non-specific, but clearly concentrated on wealthy states and states most contributing to the problem of climate change. Few of the experts mentioned the developing world in the context of options, but these same experts tended to parse the developing world more finely, treating the so-called BRICS (Brazil, Russia, India, China, and South Africa) as a separate category that must be involved in implementing options. One expert added that sub-state jurisdictions may be more willing and capable of addressing climate change, a frame that the executive branch and congressional speakers reserved for US jurisdictions. Several experts credited the US for encouraging other states to take more ownership for the outcomes of multilateral efforts of which they are part. Experts generally treated the UN as a necessary, but largely ineffectual option implementer, primarily because of the lack of progress by the UNFCCC. Yet this image was also used to show how some states, including Mexico and South Africa, were attempting to make the UNFCCC more relevant and effective. Many of the experts who argued that wealthy states and market solutions should play a prominent role also pointed to the Group of 20 major economies (G20) as a key actor for dealing with climate change.

Few experts discussed specific *option costs*. However, there was general agreement that there were costs associated with the status quo minimalist approach to

climate change action as well as with more ambitious efforts. Texts that lamented the challenges of international cooperation and US government inaction usually focused on the costs of inaction, measured in worsening physical and social effects. Texts that discussed market-based options, particularly in relation to renewable energy, highlighted the technology and commercialization obstacles that the clean energy industry must overcome to be competitive. The so-called commercialization gap served as a useful way to reframe the struggles of the nascent clean energy industry. Thus, the competitiveness, scale, and cost of clean energy suffered from inadequate infrastructure rather than any inherent failings of the industry.

Option risks garnered more attention from the experts. Experts referenced collective action problems and several gave the issue considerable attention while discussing free riders. While certainly negative, the image of the free rider was employed differently in the texts. Some experts used the image to criticize non-binding agreements and self-imposed measures that burden the economy with little impact on the problem:

Challenges such as climate change, for example, are best addressed through binding treaties, which involve real legal commitments rather than nonbinding political agreements; because in order to undertake painful reductions in carbon emissions, each country needs to know that the others are taking the plunge, too. ... Treaties create settled and reliable expectations and impose consequences for violators. In areas that touch on commercial concerns, US businesses and investors demand such predictability. Political commitments, on the other hand, can be reversed in an instant. (Kaye 2013, 123)

Typically, these experts argued in favor of market-based solutions and binding agreements. Other texts recognized the free rider problem, but argued in favor of coalitions of the willing and leadership that would pull recalcitrant actors into line:

To be fair, no one expected the problem to be solved easily. Collective action problems tend to be more difficult when the number of actors is high, costs are proximate and clear while the benefits are distant and diffuse, and individuals have strong incentives to free ride on the sacrifices of others. By these measures, climate change is perhaps the toughest collective action problem society has ever faced. But even these issues could be overcome with strong leadership from the major powers. (Hale 2011, 91)

Although only a few other risks were mentioned, they are notable because they are associated with renewable energy, one of the primary options discussed in most of the texts. The risks of renewable energy were tied to the state of the clean energy industry, the dependability of clean energy sources, the maturity of clean energy technology, and the inability to offset the demand for fossil fuels. The experts referenced these risks while arguing for more investment in the clean energy industry, for improvements in fossil fuels, or for a more diverse energy portfolio.

Regarding *option implementation*, the experts favored agreements or treaties, market mechanisms, or a combination of various approaches. Many authors acknowledged the desirability of a binding international treaty, but conceded that the likelihood was remote. In lieu of a treaty, the experts advocated for multilateral agreements and mini-laterals to overcome the problem of irresponsible stakeholders. Mini-laterals were described as non-binding agreements among subsets of key states that subsequently help to galvanize support for more ambitious multilateral agreements.

Many authors mentioned market-mechanism, but few authors provided details. Indeed, the breadth of meanings and absence of details allowed market-mechanisms to be framed as the cure all for an assortment of woes, ranging from the obstacles faced by the clean energy industry and the need to spur new technologies to the inability to secure a

binding international agreement. Even among those few articles that provided details, market mechanisms could be presented as part of the solution or the problem. Some experts were in favor of extensive government incentive programs, noting that the renewable energy industry is deserving of the same advantages provided to the fossil fuel industry, particularly with regards to subsidies. Subsidies were essential to increase the competitiveness of clean energy, especially by helping to close the commercialization gap largely resulting from inadequate infrastructure.

Others were more skeptical, offering that heavy subsidies had favored equipment manufacturing rather than the actual production of power. Such a subsidy structure helped the clean energy industry in many countries to compete with foreign competitors, but it produced little return on the investment. As a result, equipment is waiting on infrastructure that is necessary to bring renewable power online in sufficient quantity to make it competitive and to wean it from subsidies.

Some experts advocated for a combination of ways to implement options. A few offered that the golden triangle of government, business, and civil society must be an integral part of implementing climate change options. Those who focused on the international dimensions of implementation favored blends of mini-lateral treaties, unilateral regulation, voluntary private regulation, and commitments by cities, communities, states, and regions. Another expert added high-level political commitments by leaders who invest personal political capital, coalitions of the willing, and standards for gauging if states are meeting their benchmarks. The expert further noted that

If the international community focuses only on one of these, it is much more likely to be disappointed with the results. Of course, these individual elements

are not new. The novelty is in conceiving of them as a wider ecosystem of international cooperation, a set of modular building blocks that can be assembled in different combinations to improve the performance of the international system on various problems. (Samans et al. 2011, 82)

The low density *option implementation* findings surfaced in the other audiences as well, usually as one of many ways to implement climate action. Likewise, while mentioning implementation methods or concerns, some experts would occasionally add an option without much elaboration. Thus, responses such as integrating climate change into routine planning, tailoring to local needs, and leveraging international institutions were unsurprising and not particularly noteworthy.

About a quarter of the texts elaborated on *option justification*. Cost was a common refrain with less costly options preferred, but cost can be framed in many ways and the experts generally fell into one of two categories. A minority of the experts justified inaction, limited actions, or a go slow approach based on arguments that the economy is too weak and jobs are at stake. A few noted that some options would disadvantage American businesses vis-à-vis foreign competitors by saddling them with burdensome regulations that hurt their competitiveness. The same options would take a toll on the economic instrument of power. Of course, inaction also has costs. The majority of the experts justified climate action based on the actual costs in dollars, lives, and resources that climate change would impose plus the opportunity costs that result from ceding the clean energy race to other countries, most notably China.

Several experts observed that climate change action has other benefits. The US could lead the clean energy race, developing new technologies and innovative approaches to renewable production and energy efficiency that stimulate the economy and create

jobs. A few experts offered that the goal should be nothing less than the transformation to a clean energy economy. One particularly optimistic expert tied his justifications for the transformation away from fossil fuels to US national interests, especially security:

Getting the United States off fossil fuels would transform its foreign policy. A world where the United States and other countries buy no oil because its price and price volatility exceed its value would have less oil-fed tyranny, corruption, terrorism, tension, and war. Washington, no longer needing an oil-centric foreign policy, could maintain normal relations with oil-exporting countries and treat diplomatic issues on their merits. The Pentagon would be pleased, too. Today, every one of the US military's nine combatant commands must protect oil assets and transportation routes—fighting tanker-hijacking pirates on the coast of Somalia or pipeline-attacking militants from Latin America to Central Asia. The US Army would love Mission Unnecessary in the Persian Gulf; the US Navy would no longer need to worry as much about conflicts from the Arctic to the South China Sea. (Lovins 2012, 141)

A justification that was also prominent in executive branch discourses is the idea that modest options can set conditions for more ambitious follow-on actions. Experts often used this argument after granting that climate diplomacy had largely stagnated and was in dire need of a fresh approach. Such an approach could take the form of a focus on short-term GHGs such as black soot, methane, HFCs, and CFCs that can be addressed through initiatives that do not threaten entrenched special interests or hurt economies. These initiatives include uses of existing technologies to reduce emissions or displace harmful compounds such as HFCs or CFCs with available alternatives. Another example is the clean cook stove initiative backed by the executive branch. As one expert commented, “the best way to restore faith in climate diplomacy is to make tangible progress on those measures. After all, only once countries revive climate diplomacy can they take on the much harder challenge of taming carbon dioxide emissions” (Victor et

al. 2012, 121). Another expert made a similar argument in favor of coalitions of the willing in lieu of a binding international treaty:

A critical mass is necessary. By summoning a coalition of the willing for the climate, political leaders can take non-multilateral approaches to a scale where they can both make a substantive difference in the fight against climate change and lay the groundwork for a possible rebirth of the multilateral approach. (Hale 2011, 90)

The remaining *option justification* findings framed specific climate actions as either feasible or necessary. Experts highlighted the feasibility of climate action in order to emphasize that technology, funding, and willingness to support the action were not impediments. Necessity themes took one of two forms. Some experts observed that other efforts, particular in Congress or through the UN, had failed, justifying actions that by-pass Congress through executive branch regulation or the UN through coalitions of the willing and partnerships. A couple of experts stressed that states must take action to curb GHG emissions and/or transition to a clean energy economy in order to forestall or mitigate adverse climate change effects.

Motivational Frames

The experts identified where different parties stood on climate change, who must help, and why the chances to implement options were unfavorable. Their comments on the rationale to act, the chances of making a difference about climate change, and how to contend with detractors were relatively muted (see Figure 21). I attribute this finding to the composition of the audience and the purpose for their writing. As noted earlier, the expert audience consisted of a mix of those who generally write about national security topics and those who have expertise in other fields but rarely publish in national security

journals. This audience is less interested in speaking to its own somewhat amorphous membership than it is in making an argument to a readership of decision makers and their influencers. Most of these arguments are offered as criticisms of decisions, behaviors, and outcomes related to climate change actions taken or not. In short, these experts are standing on the periphery, seeking to motivate others to embrace their ideas.

National Security Experts (39 texts)		Motivational Frame (29)			
Supporters (13)	Congress Opposes (8)	Developing States Oppose (5)	Energy Special Interests Oppose (3)	Executive & Security Experts Support (2)	
Helpers (15)	States (12)		Government (2)	Private Sector (2)	Civil Society (1)
Rationale to Act (1)	To Act (1)				
Chance to Implement (26)	Unfavorable (25)				Favorable (2)
Chance to Counter Threat (8)	Somewhat (5)		No (3)	Yes (1)	
Detractors (3)	Work Around (1)	Compromise (1)	Pressure (1)		

Figure 21. National Security Experts: Motivational Frame Findings

Among these experts, those from non-security academic fields were the most alarmed by the lack of climate action and made the most passionate pleas for action, but were also the least inclined to single out guilty parties. For example, Brown and Homer-Dixon portrayed gloomy futures owing to climate change while merely imploring the formal audiences to do more. In contrast, the more traditional security experts did not belabor climate change effects, but dwelled on how ineffective the formal audiences had been in addressing climate change. I attribute this finding, in part, to the ambitions of the

different sub-audiences. Security experts usually understand the enterprise and know the inside players better than non-security experts. Typically, they use realist language and understand the realist paradigm that drives the enterprise's thinking. Moreover, they often seek to join the formal audiences or influence their behavior in order to raise their own bona fides.

Experts from other fields are interested in changing opinions and behaviors, but few of them are seeking formal membership in the enterprise and most do not speak the realist language of the formal players nor comprehend or accept the realist paradigm. Hansen was a notable exception. As a climate scientist, a former NASA employee, and a subject of derision by climate skeptics, he straddled the sub-audiences, combining a scientist's insights on climate change with his knowledge of the enterprise's inner workings, a combination he wielded to criticize the formal audiences.

One-third of the texts yielded insights on *supporters*. Only two experts cited supporters of climate action, referring to the Obama Administration and the apparent alignment between security experts and environmentalists who agree on the need to take action. Most experts dwelled on special interest groups, developing countries, and Congress as the primary opponents to climate change options. Fossil fuel-friendly special interest groups thwarted actions related to emissions reductions and the promotion of renewables. Experts mentioned the firewall, noting that developing countries wanted climate change action, but insisted that rich countries and those responsible for the problem pay for it.

The experts were especially critical of the failure to support any major climate action, describing Congress as divided, gridlocked, unsupportive, and obstructionist. Although the experts largely attributed the problem to the political party divide, they also noted that special interests and the unique circumstances of each state sometimes blur party distinctions. For example, some experts offered that association with an energy producing US state is often better than party affiliation as a predictor of support or opposition to climate change action. A few pointed to the US natural gas bonanza to demonstrate how even enthusiastic supporters of climate change action must reconcile their views with the prospect of jobs and reduced dependence on foreign oil. However, the party divide still factored prominently for all experts with some of the harshest criticism reserved for the Senate:

The US Senate rejects multilateral treaties as if it were sport.... The foundation of the Senate's posture is the belief, widespread among conservative Republicans, that multilateral treaties represent a grave threat to American sovereignty and democracy. Treaties, they argue, create rules that interfere with the democratic process by allowing foreigners to make law that binds the United States... These Republicans automatically resist, in the words of the 2012 GOP platform, "treaties that weaken or encroach upon American sovereignty." And because such a small group of senators can block any given treaty, they essentially control ratification. (Kaye 2013, 113)

Regarding *helpers*, the experts singled out states as the group that most needs to change its behavior in order to contend with climate change. Many of the experts spoke of the need for emerging powers to take a more active role in global governance. For example, one author expressed a typical sentiment that rising powers should “help shoulder the burden of fostering a stable, peaceful world order that delivers security and prosperity” (Hachigian and Shorr 2013, 73). Half of the references mentioned China and

India, either as major GHG contributors or as actors that played the distinction between developed and developing states to their advantage. Different experts described Brazil as alternately helpful or unhelpful, largely dependent on its Amazon policies and readiness to play a global leadership role for climate action.

Unlike speakers from the executive branch and Congress who made frequent and lengthy comments, national security experts did not address the *rationale to act*. Hansen was the only expert to reference any rationale, offering a moral argument:

Lest we forget, stabilizing climate change is a moral issue. Our fossil-fuel addiction, if unabated, threatens our children and grandchildren, and most species on the planet. If Obama dreams of being a great president, he needs to take on the great moral challenge of our century. (Hansen 2010, 76)

Other experts seemed to take the requirement for action as a given, a finding consistent with their focus on criticizing the decisions, actions, and behaviors of others. Thus, experts recommended what should be done and how, but not why they should be done.

The experts had a lot to say about the *chances to implement* climate actions, most of it unfavorable. The two most common reasons for why options were unlikely to be realized were political obstacles (15) and states' lack of willingness to act (15).

Congressional inaction provided grist for many experts who discussed the usual party differences and special interest influences, but also offered that timing matters. Thus, given the state of the economy and the boom in domestic natural gas, congressional members have recast old economic arguments against costly climate action infusing them with themes related to job creation, "cleaner" fossil fuels, and energy independence.

The experts were equally critical of states, typically citing China, India, and other developing states as obstacles to a comprehensive binding agreement that addresses the

biggest GHG, CO2. Yet, the same experts conceded that these countries are facing competing interests. One expert even referred to a prominent advocate for climate action who came to the same conclusion:

As the Indian economist Rajendra Pachauri, chair of the [IPCC], has asked, "Can you imagine 400 million people who do not have a light bulb in their homes?" He continued, "You cannot, in a democracy, ignore some of these realities. . . . We really don't have any choice but to use coal." (Morse 2012, 106)

Of course, the experts aptly noted that the lack of political will is not exclusive to the developing world. For example, Canada is enjoying its own energy bonanza thanks to bitumen rich tar sands and its support for climate action has waned dramatically, leading one expert to challenge Canada's image as an environmental champion:

Over the last decade, Canada has not so quietly become an international mining center and a rogue petro-state. It's no longer America's better half, but a dystopian vision of the continent's energy-soaked future. (Nikiforuk 2013, 18)

Other experts commented on Russia's powerful carbon lobby, Australia's concerns over its economic competitiveness, and Japan's increasing use of fossil fuels after its nuclear power plant disaster. All three countries have declined to extend the Kyoto Protocol.

Among the other reasons that the experts were pessimistic about the implementation of climate options, two stand out. First, climate change is linked to many issues (9). An issue that drew interest from the experts was the relationship between global economic growth and climate change, an interdependent relationship without near term prospects for decoupling them. One expert captured this theme succinctly:

Humankind is in a box. For the 2.7 billion people now living on less than \$2 a day, economic growth is essential to satisfying the most basic requirements of human dignity. And in much wealthier societies, people need growth to pay off their debts, support liberty, and maintain civil peace. To produce and sustain this growth, they must expend vast amounts of energy. Yet our best energy source—

fossil fuel— is the main thing contributing to climate change, and climate change, if unchecked, will halt growth. We can't live with growth, and we can't live without it. This contradiction is humankind's biggest challenge this century, but as long as conventional wisdom holds that growth can continue forever, it's a challenge we can't possibly address. (Homer-Dixon 2011, 56)

Second, climate change options are costly and carry economic risks (8). Cost concerns emphasized one of two interrelated points. Some experts emphasized that renewable energy costs more than fossil fuel-based energy per unit of power. Scaling up the infrastructure to make it more competitive would be expensive and thus difficult to sell in a slow economy that sees many advantages in cheap natural gas. Other experts believe that regardless of the state of the economy, “governments' fear that attempting to stop climate change will harm economic growth and reduce standards of living, all with a regressive distribution of costs and benefits among rich and poor countries and among rich and poor people within countries” (Patchell and Hayter 2013, 21).

The pessimistic tone of the texts continued with regards to the *chance to counter the threat* of climate change. Some experts acknowledged that climate actions would have some positive effect, but the actions were not commensurate with the scale of the problem. “Not enough” was the common reprise following mention of climate actions. For example, efforts to reduce short-lived GHGs, increase the use of renewable energy, displace dirty fossil fuels with cleaner natural gas, and promote healthy forests were all followed by words declaring them woefully inadequate solutions. Other experts dispensed with any semblance of optimism, offering that current options will not make a dent, investments are inadequate, and stakeholders cannot agree on what to do.

Only three experts commented on how to deal with *detractors* and each looked at a different impasse. One observed that the executive branch has become adept at bypassing Congress, using a form of stealth multilateralism to participate and even exercise leadership in international climate change forums. Another expert looked at the disagreements between fossil fuel advocates, supporters of renewable energy, and climate action advocates, concluding that compromise is possible:

Compromise need not be fatal for anyone. People who are worried about climate change are right that unfettered fossil fuel consumption is unacceptable. But that does not mean that accepting some fossil fuel development would destroy their cause—in fact, in the case of natural gas, it would help. Meanwhile, those who are worried about state intervention in the economy are right to criticize inflexible and indiscriminate government regulations. But not all schemes to curb emissions or to protect communities from the downsides of energy development fit that bill. A most-of-the-above agenda would eliminate the genuine deal killers for each side, leaving a package that could deliver the essentials of what both want, take advantage of gains across the board, and avoid the risk of an extended battle that would devastate everyone and satisfy no one. (Levi 2013, 104)

The third expert argued that coalitions of the willing can create member incentives such as technology partnerships and clean energy markets that pressure climate laggards to reduce their emissions and punish members who break their commitments. A supporting theme was that market pricing is misleading and serves to reinforce the dominant market position of the fossil fuel industry. The industry keeps prices low by externalizing many of the geopolitical and environmental costs of their product. The US military assures access to foreign sources of oil, a monetary cost borne by taxpayers. Similarly, Americans must contend with the health and monetary costs of nature's degraded resources and life support systems.

Summary

This project focused on describing the climate change meanings evidenced within the national security enterprise. Of course, the challenge is that meanings are socially constructed, created through cognitive processes that I cannot observe directly and social interactions to which I have only limited access. For that reason, I turned to frame analysis because frames render objects with meaning, organize experience, and guide action (Benford and Snow 2000, 614). Moreover, I can analyze how individuals use frames in their publicly available climate change discourses and, by examining their construction of meanings via frames, I can reveal the meanings and the ends that these meanings serve. The extensive findings in chapter five resulted from the application of my analytic framework to 213 texts produced by the executive branch, Congress, and national security experts. These findings revealed how the audiences constructed the meaning of climate change. While I do not repeat the copious findings here, I will summarize key overarching themes regarding how the meanings were constructed that contributed to the development of the meaning maps that I present in chapter six.

In general, there was substantial uniformity in the frames used by executive branch speakers. They consistently cast climate change as an undesirable phenomenon that humans are causing and/or aggravating. Most frames emphasized the negative implications of climate change, the need for climate action, and the importance of overcoming resistance to taking climate action. Indeed, my initial thought about the executive branch was that the speakers were using nearly identical frames, perhaps

indicative of their embrace of Obama's securitizing move. However, as I worked through the analytic process, I noted found key nuances in climate change meanings.

Although the speakers broadly framed climate change as a threat, they stressed a variety of physical and social effects, evidencing a pattern that was consistent with the challenges that climate change presents to their respective departments and mission sets. Frames related to climate action followed a similar pattern with speakers clearly favoring efforts to address climate change that aligned with the jurisdiction of their departments. Many speakers framed climate change as an issue that the executive branch is taking seriously, but only high profile speakers such as Clinton and Kerry included specific references to detractors in their frames.

The importance of these nuances became particularly clear as I looked at frames that portrayed climate change as a national security threat. While climate change was framed as a security problem by many speakers, each speaker offered a wide variety of causal paths upon which to build that claim. Thus, climate change can endanger national interests, military bases, trade partners, health, low lying communities, infrastructure, and resources, among many other threatened objects. In short, the complexity and scope of climate change allowed each speaker to highlight whatever aspect of the threat and related actions suited their particularly needs while remaining consistent with Obama's statements on the threat posed by climate change and the need for climate action.

While the nuances between frames were the key indicators of meanings held within the executive branch, the competition between frames or the absence of frames served as key indicators of meanings in Congress. The findings revealed that most

members framed climate change as a threat, issue, or problem and focused primarily on domestic endangered objects. A small number of members framed climate change as and overstated or non-existent threat. However, many members did not use diagnostic frames at all and many others were largely silent regarding climate change.

As noted in chapter four, sometimes people choose prognostic frames that subsequently require a change in their diagnostic frame because they discover that the action they favor or oppose requires them to cast the problem differently. Based on the findings in this chapter, I would add that members did not feel compelled to use or at least to reveal any diagnostic frame. Focusing on prognostic frames, motivational frames, and interactional frames related to climate actions revealed a different axis of polarization with more and different members occupying the poles than found on the climate change is a threat or not a threat axis.

If *nuanced* summarizes executive branch meaning making and *polarized* does the same for Congress, then *solution-focused* encapsulates how national security experts constructed climate change meanings. Generally, the experts were writing to critique various parties who should be taking action on climate change, but were not for a variety of reasons. Most of the experts constructed climate change as a threat and there was a high degree of uniformity in diagnostic frames. Indeed, few of the experts elaborated on the threat, granting just enough space to allow references to rising seas and vulnerable populations to state the obvious. However, each expert clearly had an opinion on the obstacles to climate action and an accompanying recommendation on how to move

forward. Since each of the authors had a particular solution in mind, they used prognostic and motivational frames that assigned blame for the impasse.

There was some differentiation in frames between experts who normally write in security journals and those who do not. The former tended to frame climate change as a daunting, even quintessential collective action problem, perhaps leaving the critiqued parties some face-saving room. After all, as I discussed in chapter four, many of the national security experts are merely waiting to (re)join the formal audiences and thus they do not want to alienate actual or potential colleagues. In contrast, those who do not normally write in national security journals were less reluctant to use frames that sought to blame and shame specific parties.

The balance of threat theory, three streams model, social identity theory, and the cultural theory of risk proved useful as analytic tools, revealing insights that frame analysis alone might have missed. For example, I suspected that the realist paradigm would influence the meaning of climate change in the executive branch. However, executive branch speakers used a variety of frames to portray the national security implications of climate change, suggesting a more nuanced application of the realist paradigm. This discovery led me to look more closely at and search for further evidence of subtle differences meanings, leading to the *nuanced* label described earlier.

In Congress, the findings for the balance of threat theory were most evident in the SFRC and in any member discourses that framed climate change as a national security problem. Of course, as I discussed previously, members often invoked references to national security and/or national security practitioners as part of a larger strategy to

convince naysayers and to rally supporters. Equally unsurprising, the three streams model produced robust results and, as I will show in chapter six, the model provides a useful way to describe Congress' behavior and how they constructed climate change meanings following Obama's securitizing move.

The three streams model produced few findings for the executive branch, but robust findings for Congress. The model focuses on agenda-setting and the speakers in the executive branch generally viewed Obama's securitization move as an agenda-setting action. The theory did provide insights, however, when speakers were commenting on the domestic obstacles to climate action. In contrast, many members of Congress contested the placement or prioritization of climate change on the security agenda. Thus, as I will show in chapter six, the model provides a useful way to describe Congress' behavior and how they constructed climate change meanings after securitizing moves.

Social identity theory produced few findings for the executive branch, but substantial findings for Congress. The relative homogeneity of the executive branch, especially among the speakers who served as the sources of most of the texts, might have degraded the theory's value somewhat. Nonetheless, I did find that identities were often invoked as part of motivation frames in an attempt to persuade or shame opponents into action. The salience of identities was particularly noteworthy in Congress, particularly with regards to the axes described above. For example, while party affiliation was salient relative to climate change as a threat or not, it did not tell the whole story because so many members were silent on the subject. However, when looking at the axis with competing views on climate action, different identities were increasingly salient. In

particular, cross-cutting identities such as state affiliation and industry association often trumped hierarchical identities such as party affiliation.

The cultural theory of risk produced the fewest results for the executive branch and Congress. In my findings, I surmised that an influx of egalitarians and communitarians into the executive branch, spurred by Obama's election, might have created an opening for nuanced climate change meanings to take hold. I was surprised that the theory did not produce substantially more results for Congress given party affiliations and the variety of other identities operative among members. However, as discussed above, the findings were strongly suggestive of a cultural role in risk perception as evidenced in the way in which members selectively used and interpreted information while framing climate change and/or climate action.

In chapter six, I present climate change meaning maps, showing the variety of climate change meanings within each of the audiences and the purpose that those meanings serve. I also elaborate on how the meanings were constructed and assess the value of the balance of threat theory, three streams model, social identity theory, and the cultural theory of risk for describing audience behavior after securitizing moves. I conclude the project with my thoughts on the contributions of the project, reflections on my research design and methodology, and recommendations for future research.

CHAPTER SIX: CONCLUSION

There be dragons there!” wrote the ancient mapmakers, marking off the frightening unknown. As adventurous explorers penetrated every region of the globe, these monster-marked patches gradually disappeared. But there are still lots of dragon-infested areas in our mental map of how different parts of the world fit together...⁹⁴

Chapter five presented the findings that resulted from the systematic application of the analytic framework to 213 texts produced by the speakers from the executive branch, members of Congress, and national security experts. The focus on frames provided the means to uncover how these audiences constructed climate change meanings. I presented the findings by audience, by frame, and by theory, discussing each in detail. I characterized meaning making by the executive branch, Congress, and national security experts as nuanced, polarized, and solution-focused, respectively. In the process of exploring how audiences constructed climate change meanings, I identified the actual meanings embraced by the audiences and the ends that those meanings serve.

In this concluding chapter, I present and explain a climate change meaning map for each of the three audiences. These maps provide answers to the research questions, focusing on what climate change means to each of the audiences and to what end, and

⁹⁴ Albert-László Barabási is a physicist who specializes in complex network theory. The reference is from *Linked* (2003, 5), a work that inspired my thinking about how the enterprise, as comprised of linked audiences, constructs the meaning of threats and how those meanings evolve.

elaborating as needed on how those meanings were constructed as discussed in the previous chapter. Then I return to the balance of threat theory, three streams model, social identity theory, and the cultural theory of risk, providing my assessment of their value for describing audience behavior after securitizing moves and thereby strengthening securitization theory's treatment of audiences. I conclude the chapter with the contributions of this project, reflections on my research design and methodology, and recommendations for future research.

An Initial Mapping of Climate Change Discourses

This chapter presents a map of the discursive complexity of the enterprise as derived from the findings and insights from the previous chapters. The map metaphor is fitting for this descriptive project. Much like mapmaking efforts during the Age of Exploration, this foray into climate change meanings is incomplete.⁹⁵ Like explorers seeking new lands, riches, and trade routes, and the mapmakers who tried to make sense of their discoveries, I found climate change meanings, and can show their rough contours and some areas of greater detail. Just as wealth hunters and naturalists might view the same piece of ground differently, I acknowledge that my experiences and education likely affected my map in the same way, influencing what I thought was relevant and worth further exploration. I used the theories as lenses to help guard against biased interpretations. The map is subject to change and may have already changed much like Earth's forces change the contours of physical maps and human forces change the

⁹⁵ Also called the Age of Discovery, the label is associated with European global exploration from the late 15th into the 17th century, a period that greatly increased geographic knowledge.

contours of political maps. In the pages that follow, I answer the project's research questions, focusing on the meanings held by each audience and the ends that those meanings serve, and elaborating on how the meanings were constructed as described in chapter five. I present my conclusions in the form of climate change meaning maps that reveal climate change meanings embraced by each audience.

The maps take the form of Venn diagrams with each circle representing a meaning. For example, as seen in the meaning map for the executive branch (see Figure 22), meanings can be nested within other meanings, such as *climate change is a threat to national interests* being a nuanced version of *climate change is a threat*. Meanings may also overlap or underlap in the sense that different meanings may be mutually reinforcing or mutually exclusive. For example, *climate change as a threat to our image* was often linked to *climate action is an opportunity* to bolster our image. After I present the meaning maps for the executive branch, Congress, and national security experts, I discuss the value of the theories for describing the audiences' behaviors after securitizing moves.

The Executive Branch

Obama's securitizing moves referred to climate change as a threat. Each move expressed an unequivocal sense of urgency and a plea for action, and most were embellished with brief references to one or more negative physical and/or social consequences. He framed the threat spatially and temporally, noting that no one will escape its consequences today or in the future. To Obama and the executive branch in general, *climate change is a threat and actions to address the threat create opportunities* (see Figure 22).



Figure 22. Executive Branch Climate Change Meaning Map

This broadly shared meaning is understandable. After all, the executive branch enjoys a higher degree of cohesiveness than the other audiences. The president directs the actions of the executive branch, largely through a network of political appointees who run the departments, agencies, and embassies. He is the commander-in-chief of the armed services. His executive orders are legally binding for all executive branch members. In short, the president has a reasonable expectation that the executive branch will follow his orders, guidance, and direction regarding climate change.

Yet reasonable expectations do not equate to assured outcomes because the executive branch is subject to its own dynamic forces. Each department has its own distinctive mission, the pursuit of which is shaped by politically appointed leaders and the department's unique characteristics. These departments are large and complex, each with its own rules, norms, bureaucracy, traditions, cultures, history, resources, personalities,

and workforce composition. Thus, while the departments accepted the generic meaning of climate change, they also tailored the meaning to suit their unique circumstances and their desired ends. As a result, the executive branch evidenced a variety of meanings in the form of *climate change is a threat to X*, where *X* is national interests, vulnerable populations, mission or organization, instruments of power, and/or image or prestige.

I anticipated two of these variations, national interests and vulnerable populations, because I had heard them in the enterprise previously and, frankly, this is how I have often thought of climate change as an intelligence officer. However, the other three variations were somewhat surprising, calling attention to efforts by parts of the executive branch to make sense of Obama's securitizing move in the context of specific sub-audiences. Regardless, the construction of each of these variations in meaning required the activation of different sets of frames as revealed in chapter five, and the variations served distinct albeit often overlapping ends.

Climate Change is a Threat to National Interests

National security commands much of the executive branch's attention and the protection and advancement of US national interests are central to the realist paradigm that governs how the enterprise thinks about security. The distinction between national interests and national security is an important one although executive branch speakers used the terms interchangeably. Many speakers referred to the threat that climate change poses to national security, but they did not conceive of the threat the same way that they regarded traditional threats such as terrorism or a specific enemy state. Rather, climate change threatened US national interests, especially the maintenance of international order

and the growth and prosperity of the US economy. In other words, speakers were not thinking about the threat that climate change posed to the territorial integrity of the US or even to the lives of US citizens. Instead, they were adopting the conception of climate change as a “threat multiplier” or an “accelerant of instability” as promulgated by DOD and the CIA. These ideas situated the threat of climate change beyond US borders in places where instability would undermine security and security arrangements, trade agreements, alliances, overseas investments, corporate activities, and other features of a stable international environment from which the US benefits.

Conceiving of climate change as a threat to national interests served three purposes. First, using realist language with which the executive branch is intimately familiar, a meaning grounded in national interests sent a signal to the entire enterprise that climate change is serious and deserving of special attention and higher placement on the security agenda. Obama used realist language in his securitizing moves and his secretaries did likewise within their respective departments and in public forums.

Second, the national interest label is itself both a securitizing move and a political maneuver that confronts the skeptical listener with a dilemma. Since speakers who used national interest frames often did so while referencing the armed services and intelligence agencies, listeners had to consider whether and how to oppose or ignore identities held in high regard by most of the enterprise, especially members of Congress. Moreover, these security organizations authored assessments that gave the frame its credibility. Thus, branding climate change a threat to US national interests immediately accorded the problem a status normally reserved for the likes of terrorism, North Korea, and the

proliferation of WMD. The speakers who embraced this meaning were daring skeptical listeners to disregard the conclusions of national security professionals and to appear weak or disinterested in US national security.

Third, a meaning focused on national interests supported diplomatic efforts to address climate change as a collective action problem. As noted in the introduction, US threat identification and prioritization have broad implications. If the US securitizes climate change or at least takes earnest actions to address the threat, then diplomats gain leverage as they pursue multilateral agreements, partnerships, and binding treaties. Concurrently, the pursuit of international climate actions helps to offset skeptics' concerns that free riding states would take advantage of US climate actions. Of course, credibility matters and thus proclaiming a concern for another state's glacier ice melt, droughts, rising seas, or severe weather may ring hollow absent tangible evidence of US climate action, a concern that many speakers highlighted as rationale for climate action.

Climate Change is a Threat to Vulnerable Populations

Most executive branch speakers made climate change more tangible and descriptive by narrowing the frame to vulnerable populations. Climate change is an enormous, complex phenomenon that manifests itself in ways that often defy easy explanation. Indeed, one needs look no further than the US to see how easily skeptics can cast doubt on climate change science and preclude comprehensive climate action. Furthermore, many of the effects accrue over time, creating a sense of creeping normalcy where people become insensitive to changing climates. Sometimes this normalcy is punctuated by events such as worse than usual storms, wildfires, or droughts, but rarely

does this linger in the minds of anyone other than the vulnerable. In fact, climate change's adverse effects and burdens are and will be felt disproportionately by vulnerable people. As seen in chapter five, speakers often highlighted their concern for people living on islands, in low lying coastal areas, or in areas prone to disasters. Communities dependent on subsistence agriculture, particularly in water scarce areas, were considered vulnerable as were people whose political, economic, or social status left them unable to adapt to changing conditions or recover from catastrophic events.

Although executive branch speakers seemed genuinely concerned about vulnerable populations, and climate change certainly produces adverse effects on these populations, the speakers constructed and often drew upon this meaning of climate change to serve three ends. First, this meaning reinforced concerns about climate change's effects on national interests. Vulnerable populations figured prominently in discourses about societal instability and the causal linkages between climate change, physical effects, and negative social consequences.

Second, this meaning put a human face on climate change, confronting climate and/or climate action skeptics with the image of people in need juxtaposed with the image of America as a country that helps others—it is what we do as several of the speakers said. The tangible effects and risks to vulnerable people also translated into the US context as speakers reminded their listeners that large swaths of US geography are at risk, including the coastline, forests, and agricultural areas. After all, the US has already relocated villages in Alaska away from receding ice sheets to protect them and their cultural heritage. Thus, whether speakers pointed to the Philippines in the aftermath of

Typhoon Haiyan and said we must help or used those images from the Philippines to remind listeners that the US could be next, the intent was to confront listeners with the rationale for action and the human cost of inaction.

Third, executive branch speakers cited vulnerable populations when pursuing climate action in the international arena. These speakers reminded leaders from other countries that they have a stake in contributing to the solution since the effects on their own vulnerable populations may include declining economic performance, large scale migrations, instability, and violence. Even if a country possesses the resources to contend with negative effects, their neighbors or trade partners may not and thus the problem remains. Speakers sometimes leveraged this meaning to portray other countries as helpful in addressing climate change and therefore looking out for their own people as well as the world. At other times, speakers used this meaning to pressure states to take more climate action, portraying the leaders as facing a choice between helping their own people and being calloused to their plight.

Climate Change is a Threat to the Mission/Organization

Constructing climate change as a threat to the mission or to an organization is a meaning that I had not anticipated in the executive branch. Speakers from different departments looked at the intersection of climate change with their respective missions and the vulnerabilities that their organizations might encounter because of climate change. For example, DOI is the steward of vast American natural resources and charged with representing the interests of indigenous Americans. Thus, DOI speakers often emphasized that climate change undermines the department's core mission because it is

degrading US natural resources. Similarly, losses of natural resources are tantamount to the loss of cultural heritage for many indigenous people, a concern voiced by DOI speakers. DHS speakers expressed similar concerns with regards to the challenges that an influx of climate refugees would pose for border security or an increase in the number and scale of natural disasters would create for FEMA. DOD saw less of a threat to its mission than a potential distraction to its core warfighting mission as it undertakes an increasing number of humanitarian assistance and disaster relief missions, and adds new operational missions such as required by the opening of the Arctic Ocean. GAO concluded that the physical effects of climate change will lead to enormous damages to and loss of government property, a point that speakers from across the departments acknowledged. Extrapolating to the whole of the executive branch, climate change portends to affect the functionality of government and to burden it with enormous costs.

Speakers constructed this meaning for two purposes. First, the narrow framing of the threat of climate change on a specific department or agency made climate change tangible and personal for employees. Then, the secretary could motivate her department to address the threat without belaboring its causation. In short, climate change is happening, we are feeling its effects, and we must contend with it or we fail in our mission. Second, speakers often invoked this meaning when testifying or otherwise communicating to Congress. Since climate change is threatening the mission and departmental assets, the only solutions are to eliminate the threat or to adapt and protect that which is entrusted to the care of the department. Since the former is unlikely and the latter requires funding, speakers went to great lengths to show how the number and pace

of challenges they are facing as a result of climate change have exceeded their capacity to respond. Without more funding, the departments will be unable to fulfill their mission to provide vital services for the American people. As seen in chapter five, this meaning was sometimes contested as members of Congress asked whether climate actions here or overseas would still be worth undertaking absent the climate change label.

Climate Change is a Threat to Instruments of Power

Thinking of climate change as a threat to US instruments of power was another meaning that I had not expected, yet much like the meaning related to mission, it served an important role in operationalizing climate change in specific contexts. As discussed in chapter two, the enterprise thinks of the economic, military, informational, and diplomatic instruments of power as the means by which the US protects and advances its national interests. In turn, these instruments are used to contend with threats such as terrorists or enemy states, or to advance US interests by expanding markets or preserving international order. When speakers talked about the climate change threat to national security, many of them meant that climate change threatened or degraded US instruments of power. For example, DOS speakers commented that congressional inaction on climate was undercutting the credibility of their diplomatic efforts in multiple areas, not only climate action. DOD speakers said that rising sea levels and increasingly severe storms endangered key military bases globally, ranging from Norfolk, Virginia to Diego Garcia in the Indian Ocean. These bases are platforms from which the US projects military power. Some DOD speakers included adverse effects on training environments, many of which are in low lying coastal areas. Many speakers commented that the economic

consequences of climate change would degrade the key resources upon which the economy relies, including the agricultural sector that has often served to mitigate food insecurities elsewhere.

Conceiving of climate change as a threat to the instruments of power served three purposes. First, executive branch speakers could embrace a more nuanced version of Obama's securitization move, a version that allowed them to speak to Congress and others about climate change using realist language. Using this language, the speakers showed how climate change and/or climate inaction degraded the instruments of power needed to safeguard and promote national interests. While the listeners may have been climate change skeptics, they were unlikely to discount concerns about declining US national power. Second, speakers used this meaning in the context of asking for specific legislation or funding. Having raised the specter of declining US power, department secretaries implored Congress to support climate-related legislation and to approve department budget requests. In short, without this support or funding, the US grows weaker. Third, and implied by the first two, this meaning also puts skeptics in a quandary where any decision carries implications for them. For example, a skeptic may deny support, incurring criticism for his failure to put the well-being of the nation first or he may choose to support the meaning, endangering his own identity, group status, or credibility.

Climate Change is a Threat to Our Image/Prestige

Climate change as a threat to our image or prestige was another meaning that I had not anticipated. Typically, speakers said that the US was at odds with the scientific

consensus and the international community. The US position on climate change, largely viewed as legislative inaction, portrayed the US as backward and its political system as incapable of leading the global response to transnational threats such as climate change. The US professes to lead, but fails to lead on an urgent issue, allowing the threat to grow or for others to fill the void and benefit accordingly.

This meaning served two purposes. First, speakers sought to persuade opponents or to shame skeptics into action and to rally supporters' efforts by highlighting the essential role that the US has always played in addressing difficult, seemingly insurmountable problems. This meaning played to American exceptionalism and the widely held belief, certainly within the enterprise, that US leadership is essential for preserving global order and promoting human well-being. DOS speakers often used this meaning to reinforce their concern about the loss of US credibility and the corresponding degradation in their diplomatic efforts. This meaning also called into question America's innovative and entrepreneurial spirit, a force for overcoming any challenge. Thus, how dare we step aside and permit other nations to lead against this threat and to dominate a multi-trillion dollar emerging clean energy market.

Second, some speakers used this meaning to defend departmental actions related to climate change, noting that inaction exacts opportunity costs. For example, DOD recognized that climate change brought unwelcomed attention to its enormous consumption of fossil fuels and to the lives lost while providing fossil fuel in combat zones. Such negative publicity tainted the military image, encouraging DOD to pursue clean energy technology. DOD speakers used this climate change meaning when

showcasing their leadership in clean technology or their efforts to improve power projection capabilities and to reduce troop vulnerabilities.⁹⁶

Climate Action is an Opportunity

Executive branch spokespersons rarely expressed a negative meaning of climate change without attaching a positive meaning, meanings that served to reinforce the need and the appeal of climate actions. Although climate change effects provided the rationale for climate action, the same actions provided other benefits. As a threat to national interests, climate change gave the Administration new opportunities for cooperation with allies and new partners. For example, while many people had commented on the security and environmental risks associated with Arctic ice melt, executive branch speakers highlighted how the threat and actions taken to contend with the threat had positive consequences. Arctic nations had cooperated more than ever before, creating dispute resolution mechanisms, solving border disputes, and sharing responsibility for security and safety in the region. Similarly, speakers expressed the importance of natural disaster and humanitarian assistance training and operations as ways for improving relations with states upon whom the US relies for safeguarding and promoting national interests. For example, many of the Pacific Islands subject to natural disasters served as key allies for the US pivot to Asia, a pivot oriented on China and Asian economic markets.

In line with the realist paradigm, the executive branch recognized that actions taken to reduce the vulnerability of populations also lessened the likelihood of instability

⁹⁶ One of the major challenges for projecting military power is the requirement to move large quantities of fuel over long distances into remote areas that lack infrastructure.

that would threaten US interests. USAID played on this meaning when defending its budget to Congress, noting that climate action projects have value beyond the climate change label because they build societal resilience in places important to US security and prosperity. Clinton also commented on how some diplomacy and development related climate actions address factors associated with instability. Since instability exacts high costs, often including US military deployments or loss of markets, climate actions are also a form of cost avoidance.

Although executive branch departments expressed concern about climate change effects on their missions and organizations, they also leveraged the challenge of responding in order to rally their departments, create new organizational structures, and seek additional funding. Executive branch speakers seemed to understand that once an organization and its people are invested in something, reversing that orientation is difficult. The challenge was to motivate them to embrace the opportunity as illustrated by Jewell's efforts to unite her department around its new role of providing the best possible information and support to decision makers confronting climate change effects.

Many executive branch spokespersons constructed climate actions as opportunities to strengthen US instruments of power. Clearly, speakers were concerned about the loss of US credibility vis-à-vis climate change and the corresponding weakening of US diplomatic efforts. However, the same speakers concocted positive meanings, offering that climate change is a global collective action problem of such magnitude that only the US can provide the requisite leadership to overcome it. Executive branch speakers also positioned climate change as a superordinate goal, one

that all states could find common interest in addressing. Indeed, many of the speakers specifically commented on the US and China's climate action efforts, efforts that could build trust and confidence while contending with a common threat. Moreover, a US-China partnership would encourage other states to take action.

The diplomatic instrument of power was not the only instrument that speakers claimed would benefit from climate action. Several executive branch speakers picked up on the theme of leveraging climate actions for other purposes. As noted earlier, the military found common interest in climate change issues, creating new opportunities for cooperation such as combined humanitarian assistance and disaster relief operations.⁹⁷ Positive meanings most often referred to economic benefits such as the prospect of dominating an emerging clean energy market that would strengthen the economy and thus the economic instrument of power.

Image enhancement was a subtle, but notable opportunity raised by executive branch speakers, and one that overlapped with the opportunities discussed above. Whether fictionalized or real, the US brand, American identity, and even departmental pride are bound to notions of American exceptionalism. I observed this concern for image repeatedly throughout my career and heard it in the discourses for this project. Once an organization embraced the meaning of climate change as a threat, the organization's credibility was at stake. Speakers noted that US leadership was essential and that others expected the US to lead, and leading and helping others is who we are.

⁹⁷ Combined operations are those in which two or more states provide military forces. In contrast, joint operations involve two or more armed services from the same state such as a joint army-air force exercise. Oftentimes, states participate in joint-combined operations such as when US marine and navy forces support a host nation's joint response to a natural disaster.

Secretaries and other senior department leaders implored their teams to rise to the occasion because others depend on them. In somewhat of a twist, DOD knew that its image was on the line as an enormous consumer of fossil fuels, the use of which put service members at greater risk. Thus, climate actions such as DOD efficiency awards and the pursuit of green technologies helped to promote a positive image of DOD.

Congress

Unlike the executive branch, Congress did not embrace a singular meaning of climate change, even one with nuanced variations. Clearly, Congress lacked many of the characteristics that constrained the construction of meanings in the executive branch. Party affiliation mattered most, but other factors such as represented constituencies, election cycles, committee membership, member seniority, and special interest influences also contributed to meaning construction. These factors yielded two expected and two unexpected climate change meanings (See Figure 23).

I expected to find polar opposite meanings: *climate change is a threat* versus *climate change is a hoax or not a threat*. Frankly, anyone who reads the daily news would find it unsurprising to hear that many congressional members do not believe in climate change, the anthropogenic causes of climate change, and/or the negative consequences that climate change engenders. In general, this dichotomy followed party lines with Democrats embracing the former meaning and Republicans the latter. Like within the executive branch, there was some variation in the *climate change is a threat* meaning, particularly with regards to the threatened object.

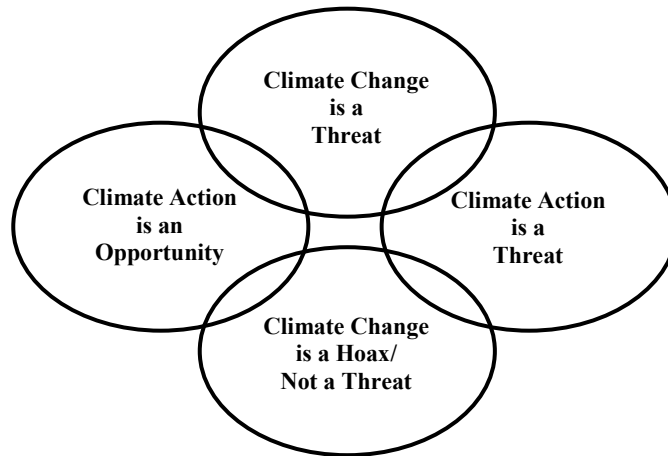


Figure 23. Congress Climate Change Meaning Map

While these meanings recurred frequently, two unexpected meanings were more common in the discourse: *climate action is an opportunity* versus *climate action is a threat*. These meanings did not align cleanly by party and not all of the members who held one of these meanings necessarily held one of the previous two. Moreover, for those who did embrace one meaning from each pair, they did not necessarily pair as one might expect. For example, some Democrats accepted climate change science, but viewed climate action as harmful. Some Republicans did not believe in climate change, but saw benefit in some climate actions. There were also members from both major parties who were silent on their climate change beliefs, but still commented on climate actions.

Climate Change is a Threat

Democratic members of Congress were the most outspoken on climate change as a threat, echoing and co-creating many of the climate change meanings held by the democratically-led executive branch. Like the executive branch, these members

embraced variations in meaning by adding threatened objects that suited the subject of the discussion at hand. For example, in a CENR hearing on US wildfires, a member stressed how forests are threatened by changing precipitation patterns (the forests are drier) and warming temperatures (tree pests are surviving winter) thereby leaving forests more vulnerable. Similarly, SFRC members often mentioned how climate change threatens national interests through a variety of causal paths, all leading to instability and violence and thus risks to US security or economic well-being.

While this pattern appears similar to the executive branch's meaning of *climate change is a threat to X*, where *X* is one of any number of threatened objects, members of Congress tended to move fluidly from one threatened object to another while the departments settled on a meaning or set of meanings around which they then organized and predicated their respective climate related actions. Although explaining the differential uptake of the climate change threat by different audiences is beyond the scope of this project, members of Congress appeared to seize upon any threatened object that might persuade their colleagues to accept their argument. In contrast, Obama's securitization moves and executive orders made the Administration's position on climate change clear and directed the departments to focus on climate actions in line with their specific jurisdictions. The departments' interpretations of how climate change intersected with their missions gave rise to a nuanced, but focused set of climate change is a threat meanings. Another explanation may simply be that Congress has a wide breadth of interests, and its members sit on multiple committees with a variety of jurisdictions and thus they invoke climate change meanings apropos the setting.

The *climate change is a threat* meaning served three purposes. First, members used it to confront deniers with the overwhelming scientific consensus on climate change. Usually these discourses were accompanied by references to national security experts, intelligence agencies, businesses, religious groups, and a host of other identities that also embraced this meaning. The threat label distinguished climate change as a different kind of issue from the host of others considered by Congress. The intent was to position the denier relative to the threat, showing observers that an individual or group held an anomalous view of climate change that can only be due to ignorance or the influence of special interests.

Second, this meaning served to market climate change as a threat deserving of attention and placement on the decision agenda. As discussed previously, many members were silent on climate change regardless of their position on the subject. A few avid climate action advocates such as Whitehouse kept the topic alive through repetitive references to the threat posed by climate change, knowing that agenda crowding can quickly relegate issues to the periphery in Congress.⁹⁸ Unlike traditional, actor-based threats, climate change lacks voice and intentionality. Moreover, the complex causal sequence of events upon which the threat claim relies is susceptible to challenge and doubt. Whereas members see a rising and more assertive China, a WMD-brandishing North Korean state, or terrorist groups publicizing their intentions to harm US citizens, the same members do not see climate change with the same vividness and sense of urgency. Climate change gets lost in the noise of other issues and/or fails to generate

⁹⁸ Whitehouse delivered his 50th consecutive weekly climate change talk on the Senate floor on November 17, 2013.

sufficient fear to engender action. Thus, many climate action advocates have constructed climate change as a threat and have marketed the threat for the purpose of building momentum in favor of climate action.

Third, members in favor of climate action normally preceded their argument by diagnosing the threat in order to show the logic of their recommended action. Since most climate actions have met substantial resistance in Congress, supporters selected threatened objects that aligned with the intended action under consideration and, when possible, might help to persuade their colleagues. For example, sea level rise was emphasized by members who were reviewing FEMA's budget request related to improving societal resilience and post-disaster responsiveness. Supporters noted that disasters strike all states, regardless of the party affiliation of their representatives.

Climate Change is a Hoax/Not a Threat

Few members openly challenged the reality of climate and fewer still espoused a meaning that conceived of climate change as a hoax. Inhofe was the most outspoken member holding the latter view and he seemed to take pride in his role defending the US from "climate change alarmists." In his assessment, climate change was not occurring and observed changes in weather patterns were attributable exclusively to natural cycles and not to human causes. Inhofe constructed this meaning by drawing on scientists and other experts who shared his views and then framing climate change as a questionable phenomenon. These experts and their publications provided him with references that he used to portray climate science and the so-called climate debate as unsettled. Inhofe often used climate scientists' own words to further reinforce this meaning, focusing on

their disclaimers regarding the temporal and spatial uncertainties of climate change effects. While I was initially inclined to discount Inhofe's conception of climate change as a fringe meaning, I realized that he was serving as the spokesperson, perhaps even the vanguard for many of his less loquacious colleagues. Otherwise, climate action advocates would not have singled out Inhofe so frequently and challenged him openly.

While other members certainly shared Inhofe's views, most were more circumspect in their skepticism of climate change, preferring to highlight its uncertainty in order to cast doubt on the proximity and/or extent of adverse effects. This group benefited from Inhofe's willingness to openly challenge climate science because it was mutually supportive of a meaning that merely cast doubt on the threat posed by climate change. This meaning afforded skeptics greater latitude in accommodating their constituencies and working with colleagues on legislation tied to climate change that might benefit their states.

The *climate change is a hoax/not a threat* meaning served two major purposes. First, it kept the so-called climate science debate alive in Congress. By continually asserting that climate change was a hoax or that its adverse effects were overstated, skeptics ensured that climate action advocates had to expend considerable effort persuading their colleagues that the threat was real. Indeed, congressional discourses were laden with statements and colloquies seeking to establish the reality of climate change by appealing to the overwhelming scientific evidence and the recognition of the threat by security experts. Clearly, the doubt sown by skeptics had helped to block previous climate actions and thus advocates such as Whitehouse had become more

assertive in their promotion of climate change as a threat. However, by feeding the perception of a debate, skeptics also signaled their colleagues that they did not have to subscribe to climate change science as interpreted by the advocates or to support climate actions sought by outspoken “alarmists,” all of them Democrats or Independents.

Second, meanings that were predicated on disbelief or uncertainty provided the rationale for challenging climate actions. Comprehensive climate actions were expensive and most actions required a change in behavior by consumers and businesses. Skeptics tended to be fiscally conservative and opposed to regulatory constraints on the private sector. Casting doubt on the reality, extent, proximity, and/or severity of climate change equipped opponents with another argument that resonated with constituencies faced by difficult economic conditions. In short, we cannot afford to chase possible threats that may never materialize when we are confronted with real challenges now.

Climate Action is an Opportunity

Proponents usually portrayed climate actions as necessary to mitigate climate change and/or to contend with its consequences. Thus, a reduction in GHG emissions, perhaps accompanied by a shift to clean energy sources, could limit temperature increases and thereby delay or reduce future adverse effects. Other actions might improve societal resilience such as building protective barriers and hardening infrastructure. This action-reaction response to climate change was typical of the enterprise’s responses to more traditional threats. When the enterprise identifies a threat, it immediately assesses its own abilities to eliminate the threat and/or to reduce US vulnerability to the threat. For example, when North Korea acquired ballistic missiles

capable of WMD payloads, the US improved and deployed anti-ballistic missile systems to counter the threat against the US and its allies.

Climate change provoked slightly different responses from Congress. Proponents did not always frame climate actions solely in terms of countering the threat, and many made no mention of the threat at all. Rather, they conceived of climate action as an opportunity to transform the US to a clean energy economy, to wean the US off of oil from unstable regions, to promote job growth and economic prosperity, to dominate an emerging multi-trillion dollar clean energy market, and/or to demonstrate US leadership for a global collective action problem. Many of these variations in the *climate action is an opportunity* meaning were adopted by skeptics and Republicans who were silent on their climate change position. Skeptics downplayed the climate change connection, but were willing to consider actions that had other benefits. For example, a bipartisan effort to raise efficiency standards was cast as a good business practice. Similarly, bipartisan support for increasing FEMA's budget was possible because disasters, regardless of their underlying causation, strike all states regardless of the member's party affiliation or belief in climate change. Members also saw wind, solar, and carbon sequestration projects as sources of revenue and jobs for their states.

Members constructed the *climate action is an opportunity* meaning in order to pursue two ends. First, frustrated by failed efforts to achieve comprehensive climate action, some members pursued more modest actions, framed as something other than or in addition to addressing climate change. As mentioned above, the bipartisan effort to set standards for building energy efficiency was one such modest effort. By providing

ready-made rationalizations that could be divorced from climate change related reasons, proponents tried to appeal to members' interests in the economy and the welfare of their constituencies. This meaning appealed most to Republicans who were not so invested in climate change skepticism that they could be assailed as hypocritical by their constituents, colleagues, or election opponents. After all, even if a member embraces a meaning grounded in the opportunity for job creation, someone could portray the member as a climate action supporter. The meaning also provided some Democrats with alternate explanations for their voting record when seeking reelection from constituencies that may not share the member's view on climate change or climate actions.

Second, the *climate action is an opportunity* meaning was also intended to subvert efforts to undermine climate actions. Chapter five presented numerous examples of proponents criticizing their opponents for preventing the US from leading the emerging clean energy market or denying Americans the jobs, prosperity, and security that they deserve. Proponents cast climate change as an impetus for innovation and new technology, portraying those opposed to action as pessimistic toward American ingenuity. Similarly, climate action gave the US an opportunity to lead and partner with other states against a common, globally acknowledged threat, bolstering the US image in ways that would likely spill over into many areas unrelated to climate change. Thus, opponents were not only undermining climate actions, but denying the US many other opportunities that would come from these actions.

Climate Action is a Threat

Climate actions incur costs, including opportunity costs. While the same could be said for almost any legislation, opponents of climate action went to great lengths, as evidenced in chapter five, to construct climate action as a detriment to the economy, jobs, and even national security. Climate actions threatened to deny US energy independence based on the bonanza in new sources of fossil fuels, leaving the US at the mercy of unstable, undemocratic regimes. Accordingly, the US military would have to secure foreign sources of energy while waiting for clean energy solutions to come online, a possibility that skeptics touted as remote as best. Climate actions threatened industries that relied on low energy costs, putting jobs and state and local revenues at risk. Emission regulations threatened the oil, gas, and coal industries as well as the energy producers, businesses, and consumers dependent on them. Concurrently, opponents raised the specter of free riders like China and India who would take advantage of US climate actions in order to increase their economic power relative to the US. These images of climate action harms gained added resonance because of chronic US economic malaise and its adverse effects on constituencies across the country.

Some opponents aligned *climate action is a hoax/not a threat* and *climate action is a threat* meanings. By casting doubt on the existence, causes, extent, and/or the proximity of the threat, opponents framed climate actions as needless harms. A few opponents such as Inhofe took this meaning further, suggesting that proponents must have another agenda, one that includes harming America. However, most opponents of

climate action, including some Democrats, saw spending as a zero-sum game in which climate actions would endanger other legislation related to jobs and the economy.

The *climate action is a threat* meaning served three purposes. First, opponents sought to shift congressional debate from the science of climate change to the cost of climate action. This shift provided space for members to challenge climate actions even if their personal beliefs and/or the beliefs of their constituents generally acknowledged the threat posed by climate change. This meaning had cross-party appeal because all members must consider the ramifications of their congressional actions on their constituencies and on their own political futures. As discussed in chapter five, Senator Manchin, a Democrat, opposed climate actions that harmed West Virginia's coal industry, an action for which he was supported by numerous Republican senators, most of them from energy producing states. Barrasso was one of Manchin's strongest supporters, the same senator who challenged DOI and DOS budget submissions because they seemed to favor climate actions over more pressing maintenance or development needs.

The second purpose was to counter the meaning that climate action is an opportunity. Since proponents were trying to entice bipartisan support for climate actions by appealing to Republicans who were largely quiet on climate change, opponents wanted to generate bipartisan resistance. For example, Inhofe often commented that cap and trade actions were defeated by Republicans and Democrats who saw the action as harmful to the economy and consumers.

The third purpose was to emphasize the opportunity costs of climate action in order to influence agenda setting and the prioritization and funding of climate actions. Constructing climate action as a threat and juxtaposing it with other threats, allowed opponents to appeal to rational actor mindsets in Congress. Congress faced numerous challenges during this period, including a weakened economy, high unemployment, debt issues, nuclear threats from North Korea and Iran, the war in Afghanistan and operations against terrorists more broadly, and a rising China, among others. Members and most Americans felt some or all of these problems on a personal level. In contrast, the effects of climate change are more diffuse, unequally distributed, and susceptible to numerous intervening variables, and the worst effects are unlikely to present themselves for decades. Thus, climate change action was cast as a threat in the form of an unacceptable opportunity cost given the presence of more pressing, immediate threats.

National Security Experts

In general, the experts wrote to make an argument, and most of their arguments followed a similar pattern: climate change is a problem for a variety of reasons, the solutions are known, the US and/or other actors are failing to take action, and here is my (our) recommendation. The majority of experts conceived of climate change as a threat with negative consequences for society, but they seldom belabored the details of those consequences (see Figure 24). Rather, they predicated their arguments on and saved space through short references to well-known physical and social effects that threaten vulnerable populations, humans, and the planet. Thus, physical effects such as extreme

weather, natural disasters, and rising seas, and social effects such as conflict, instability, and resource scarcity were merely illustrative.

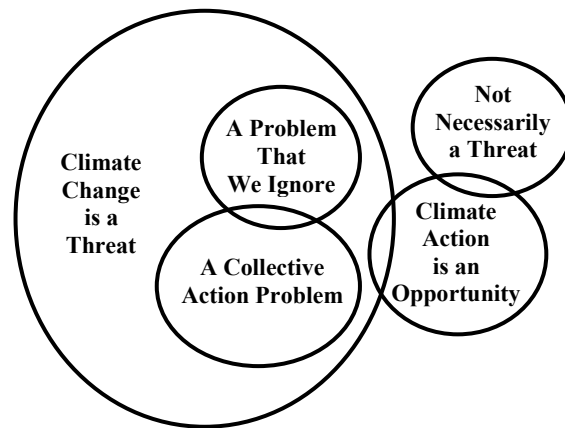


Figure 24. National Security Experts Climate Change Meaning Map

The experts freely adopted and shaped meanings of climate change and climate actions to support their arguments. This is not to suggest that the experts constructed meanings opportunistically supportive of their arguments. Rather, like members of the executive branch, the experts seemed to hold a common conception of climate change as a threat from which they chose specific elements to highlight when making their arguments. Unlike the executive branch, however, the experts did not dwell on distinctions based on threatened objects. Instead, they focused on the reasons for inaction, setting up their arguments to critique formal players in the enterprise and/or other states.

Climate Change is a Problem That We Ignore

A minority of the experts, mostly from the sub-audience of experts from other fields who seldom contribute to national security journals, tended to think of climate change as a problem that we ignore. These experts constructed this meaning by briefly summarizing a range of adverse climate change effects and then framing decision makers, governments, states and international bodies as failing to take appropriate action. These arguments seldom suggested specific recommendations to overcome the impasse, offering only that the current trend of inaction or inadequate action ensured that conditions will get much worse. Thus, the climate change problem that we ignore constitutes a moral failing, a failure of people who should know better, and a failure of governments and states with the capacity to change the outcome.

This meaning served two ends. First, the experts who projected this meaning sought to shame decision makers and organizations into action and to encourage the broader readership to demand more of their leaders. Having described the threat and costs of inaction, these experts were essentially calling into question the integrity and/or motivations of those who were not acting. Like many of the climate action proponents in Congress, these experts were bearing witness to the failure to act, reminding those responsible for taking action that they would not be judged favorably today or tomorrow. Second, constructing this meaning within the pages of national security journals served to reinforce the security implications of climate change. I do not claim that securitizing climate change is necessarily the preferred path for effectively addressing climate change. However, the benefits of securitization include leader emphasis, new policies, and

additional resources. Since these experts highlighted these shortfalls, perhaps they would have welcomed the securitization of climate change as an approach to a solution, even if it is not the preferred approach.

Climate Change is a Collective Action Problem

Most of the experts built their arguments on the idea that climate change is a collective action problem, one that touches all states and from which no state is immune. The physical effects of climate change may be felt differentially over time, by location, and by socio-economic groups, but adverse social effects will spill well beyond the place where physical effects present themselves. For example, several authors noted that droughts in one location can contribute to food insecurity and thus instability in another location. Hence, climate change is a problem of the global commons, one that transcends boundaries and affects everyone in some way.

Yet, as pressing a matter as climate change is to some, it is but one of many issues faced by states and people writ large. As noted by one expert, even climate experts acknowledge that poverty, underdevelopment, and rising expectations put a premium on growth and that growth will exacerbate climate change and discourage pursuit of comprehensive climate actions that portend to slow growth. Concurrently, some experts observed that developed states are accustomed to a certain quality of life, which renewable energy is presently unable to sustain. Also, collective action problems inevitably face the difficulty of free riders who are all too willing to benefit at the expense of others.

In general, the experts constructed the *climate change is a collective action problem* meaning in order to serve two purposes. First, the meaning served as a platform for critiquing a variety of actors for their failure to undertake significant climate actions. Most experts focused on competing actors and their interests in the US domestic context while others looked at the international system. Congress earned the sharpest rebukes from the experts who cited special interest influences, the allure of a domestic energy bonanza, and party politics as impediments to meaningful action. Others criticized the UN for its inability to overcome the firewall divide between developed and developing states. Regardless of where they directed their critique, the message was the same—these institutions are unlikely to do better.

Naturally, the experts proffered their solutions or recommendations to remedy the collective action problem, including coalitions of the willing, multilateral agreements, community-based solutions, market-based solutions, and/or partnerships between governments, civil society, and the private sector. Sometimes these solutions were offered as pathways to build trust, confidence, and momentum between actors that would later serve to enable more comprehensive solutions to the collective action problem. At other times, the experts were more pessimistic, offering a realist perspective that states will inevitably act in their own self-interest and thus collective action will always be situational and fleeting.

Second, some experts used this meaning to rationalize a cautious approach to collective action solutions. These experts framed climate change as a chronic, long term problem that invites free riders. In the international context, China, India, and others

were framed as recalcitrant climate action participants who would gladly free ride on the actions of others as they accrued economic advantages relative to the US. While the experts who focused on free riders encouraged many of the same voluntary and free-market solutions discussed above, a few added that any state genuinely interested in leading on the global level needs to step up and demonstrate their leadership on a collective action problem.

Climate Change is Not Necessarily a Threat

Only a few experts conceived of climate change as something other than a threat. However, these experts were not discounting climate change and the potential for negative consequences. Rather, they argued that the causal path between climate change and adverse social effects is complex and non-linear. Moreover, while climate change certainly brings about physical changes and interacts with a multitude of other factors, the consequences need not be negative. These experts tended to downplay the oft cited casual chain from climate change to instability and violence. They also offered that there will also be positive effects from climate change and that states and governments would be wise to plan for both positive and negative outcomes. These experts referred to the Arctic region as an area that many claimed would become an area of conflict and competition, but which has so far proven to be the opposite. Furthermore, these experts claimed that the Arctic region represents a new frontier that will spur substantial global economic growth.

The *climate change is not necessarily a threat* meaning served one purpose. In fairness to the position taken by these experts, their contrarian perspective was grounded

in truth. After all, if climate action presents opportunities, then why cannot the threat itself present opportunities? Granted, considered as a whole, climate change is overwhelmingly negative, but the authors merely highlighted differential effects, including localized benefits. Clearly, this meaning appealed to skeptics and those favoring a measured approach to climate action. However, the experts wielding this meaning were also reminding us that there are many others who hold this view, a view that further complicates efforts to implement comprehensive climate actions.

Climate Action is an Opportunity

Most of the experts conceived of climate action as an opportunity, mentioning the same benefits found in executive branch and congressional discourses, but providing much greater detail. The experts claimed that climate action would transform the economy, create jobs, improve health, enhance security, demonstrate US leadership, strengthen US instruments of power, and encourage technological innovation, among many other benefits, including addressing the climate threat. The experts selected from among these benefits based on the recommendations that they were proposing, but most included references to economic benefits.

The *climate action is an opportunity* meaning served two ends. First, like speakers from the other audiences, the experts typically employed combinations of meanings when they constructed their arguments. Whereas one of the previous meanings highlighted the problem and the impediments to solving the problem, this meaning served to strengthen the case for the author's recommended solution. The greater the added benefits of the solution, the stronger the case for adopting the solution and the more

foolhardy climate action opponents appeared. Since the experts' discourses were almost uniformly an indictment of the formal players, few of them applauded the decisions and behaviors of the formal players.

Second, the experts wanted to motivate domestic actors through a combination of persuasion and guilt. Since climate action opponents often used economic arguments and occasionally security arguments successfully to prevent comprehensive climate action, the experts were reminding them and the broader readership that their decisions carried enormous opportunity costs. In other words, their opposition was costing jobs and revenues, degrading security and health, and undermining US power and prestige. While unlikely to persuade stalwart skeptics such as Inhofe, the experts were definitely targeting those actors who were focused more on the cost-benefit analysis of climate actions than on the science or even the chance of actually countering the threat.

Revisiting Securitization Theory's Treatment of Audiences

Applicability of other Theories: An Overview

The balance of threat theory, three streams model, social identity theory, and the cultural theory of risk contributed to this project in two ways. First, they deepened my analysis, providing a set of theoretical lenses for examining discourses from different perspectives. I applied these lenses continually in conjunction with frame analysis and my own insights from a career in the enterprise, thereby sensitizing me to possible alternative meanings while applying the framework. However, since I applied each of the three parts of the framework separately, I also used each lens individually as I analyzed the discourses. The combination of the theories and my approach to applying

the theories helped to generate the robust findings presented in chapter five. Granted, I could have selected other theories, but I privileged these theories for reasons described in chapter three, and later in this chapter I recommend how other theories might provide further insights.

I also enlisted these theories to determine whether they could help to describe audience reactions to securitizing moves, potentially serving to improve securitization theory's treatment of audiences. In chapter two, I described securitization theory, emphasizing scholarship that has attempted to refine the theory's concept of audiences (Slater 2008, Vuori 2008, Balzacq 2005, 2011, Leonard and Kaunert 2011, Williams 2011). Among these conceptions, three seemed most applicable to the enterprise.

First, Balzacq (2011) emphasized the importance of persuading an audience that an issue is a threat and deserving of attention. Moreover, this audience must empower the securitizing actor by accepting the claim and enabling the actor to adopt measures to counter the threat. This outcome is more likely if the securitizing actor accounts for the needs and feelings of the audience, using language that resonates with them. Obama and other climate action proponents from all three audiences tried repeatedly to persuade others to accept the threat of climate change and to enable actions to counter the threat.

Second, multiple audiences comprise the securitizing audience, which is clearly the case in the enterprise (Balzacq 2005, Vuori 2008, Roe 2008, Salter 2008). Some of these audiences may provide formal support (e.g., the executive branch and Congress) while others provide moral support (e.g., national security experts). In the case of climate change, none of these audiences are the target of the securitization since they are not the

threatened object. Instead, they are elite audiences that can provide the securitizing actor whatever is needed for securitization if they accept the securitizing move.

Third, the setting matters, and each setting is unique with its own set of actors, debates, audience expectations, specialized language, conventions, and procedures (Salter 2008, Leonard and Kaunert 2011). The executive branch and Congress are elite audiences whose settings overlap but are not synonymous. The national security experts come from a mix of settings, including the elite, technocratic, and scientific settings highlighted by Salter (2008). People aligned with these settings view securitization moves through the norms, conventions of discourse, bureaucratic politics, social identities, collective memories, and self-defined interests of the setting (Salter 2008). As demonstrated in this study, the enterprise's audiences and their sub-audiences embraced different meanings of the climate change threat, meanings that often did not align at all or only in part with Obama's securitizing moves. In the following sections, I discuss the value of each of the four theories for describing audience behavior relative to Obama's securitizing move. In other words, do these theories help to describe what climate change means to each audience, how the audiences constructed these meanings, and to what end?

Balance of Threat Theory

The balance of threat theory served as a proxy for the family of realist theories predicated on rational actor behavior and the state-centric realist paradigm. The realist paradigm is institutionalized through executive branch structures, norms, and processes. The paradigm and its related national security strategy framework are the conceptual tools used by national security practitioners to assess threats, develop counteractions, and

persuade others of the need and value of those actions. Threats are conceived in relationship to national interests, and state instruments of power protect those interests.

In general, the theory helped to describe some but not all of the meanings embraced by the executive branch. It also helped to describe, in part, how the executive branch constructed these meanings and to what end. Obama's securitizing move was cloaked in the language of the realist paradigm, an appeal to elite, empowering audiences who take national security and their role in providing it seriously. The executive branch largely embraced climate change as a threat. However, sub-audiences in the executive branch interpreted Obama's securitizing moves in ways that worked for their particular settings, yielding the nuanced executive branch meaning map presented above. Some of these meanings included references to national interests and instruments of power, but others were more suggestive of sub-audiences trying to come to terms with the threat to them rather than to national security. In short, the balance of threat theory does not adequately describe the behavior of all of the sub-audiences in the executive branch.

Since I expected the balance of threat theory to be more prominent in executive branch discourses and thus more helpful for describing audience behavior, I offer a brief, preliminary explanation. DOD, DOS, and the IC have been major players in the enterprise since its inception and the realist paradigm was most noticeable in their discourses and the manner in which they framed climate change as a threat. DHS is a relative newcomer to the executive branch, an organization that emerged after the events of 9/11. As a security focused department, DHS exhibited an affinity for realist language, but the realist paradigm was not as operative. I suspect that the amalgamation

of widely disparate and longstanding agencies under DHS, each with their own unique cultures and lexicons, produced this anomaly. Since the realist paradigm considers threats to US national interests, focused at the state level, some of the departments found the paradigm an awkward fit for them. DHS looked at the security implications of the Arctic ice melt and climate change refugees because of USCG and Border Service equities, respectively. DOI rarely concerned itself with traditional security issues and was largely focused on domestic concerns. Thus, the realist language and paradigm were least evident in DOI discourses.

The balance of threat theory fared similarly for the congressional audience. The realist paradigm was present, but less entrenched and much less operative for Congress as a whole. While Congress has national security responsibilities, it normally focused inward on the domestic implications of climate change and climate action. Few of the committee jurisdictions included security and most of their climate change discourses took place with infrequent or no references to climate change as a security threat. This is not to say that the committee members did not conceive of climate change as threat, but the threatened object was rarely the US itself. Instead, members worried about adverse effects on communities, resources, and industries. The SFRC was a notable exception and its discourses included references to climate change's threat to national interests. Members from all committees occasionally borrowed realist language and some even applied the realist paradigm, but usually in a bid to persuade their colleagues through an appeal to national security concerns as promulgated by national security practitioners.

Ironically, the only national security experts to invoke elements of the realist paradigm were those who were contesting the need to securitize climate change at all. Most of the experts viewed climate change as a threat, but they did not conceive of the threat in terms of its national security implications. A few did conceive of climate actions in terms of their value for national security, but these were promoted as additional benefits rather than the focus of their arguments in favor of action. Experts who normally write for security journals were more likely to use realist language than those from other fields who rarely published in these journals.

Although I did not enlist these theories to explain audience behavior, the preceding discussion suggests that different conceptions of security and the security related roles of audiences and sub-audiences may explain the variety in climate change meanings. Obama attempted to securitize climate change, casting it as a national security threat. Audiences that typically concerned themselves with threats to the nation struggled to attach the realist meaning of threat to climate change. Audiences that did not dwell on security issues did not have to overcome the paradigm's limitations, but their view of the threat was not dependent on framing climate change as a threat to the US.

Three Streams Model

The three streams model is the most useful of the four theories for describing audience behavior toward Obama's securitizing move. Kingdon developed the model to explore how and why issues get labeled as problems and how they are or are not resolved. Using Kingdon's concepts, the meaning of the climate change threat dominated the problem stream. Obama sought to elevate climate change on the agenda and his

securitization move implored enterprise audiences to accept climate change as a problem deserving of special attention. He was, in Kingdon's terms, a prominent, visible participant in the policy process. As discussed previously, the acceptance of Obama's problem definition varied by audience and sub-audience. The executive branch accepted climate change as a problem, albeit with nuanced interpretations by sub-audiences. However, while the executive branch certainly played a role in problem definition, especially in the realm of national security, it cannot pass laws and thus its ability to contend with climate change through its own authorities was limited. Therefore, Congress played the pivotal role in the securitization or non-securitization of climate change.

Some members of Congress accepted climate change as a problem, but others did not and sought to impede the placement and ascension of climate change on the agenda. Even among those that accepted climate change as an issue, problem, or threat, not all of them conceived of it as a security threat. As the meaning maps revealed, members of Congress like the members of the other audiences, conceived of climate change in a variety of ways with some preferring to see climate change as an environmental issue, an energy issue, a health concern, or an economic problem. This variability in meanings undermined efforts to build consensus on the nature of the problem. Some of the most visible participants such as Whitehouse, Franken, and Sanders attempted to use focusing events such as droughts, wildfires, natural disasters, and even the climate actions of China and others in order to get their colleagues' attention. However, climate change competed with many other pressing issues related to security and the economy and thus it

rarely stayed on the agenda long enough to garner a vote. Many members were dismayed at the lack of progress, and failure tended to give way to frustration and reluctance to invest more time and energy in a losing cause. Policy entrepreneurs from both sides of the issue were evidenced in the discourses, including members such as Whitehouse and Inhofe, military leaders, department senior leaders, national security experts, and a host of special interest groups, including energy, insurance, environmental, and various industrial groups.

Climate change meanings often aligned by party, as did views on climate action, and member concerns related to their constituencies and elections. The three streams model describes these differences in terms of the politics stream. The politics stream includes concerns about public opinion, election results, interest group pressure, and party and ideological distributions in Congress. Moreover, climate change could not be divorced from other issues, especially those related to the economy, jobs, and energy. Thus, the politics stream was less about persuasion than about bargaining as evidenced in the struggle by each party to entice members of the other party to support or oppose climate actions. Often members referred to the national mood or public opinion about climate change, selectively highlighting polls, surveys, statistics, and anecdotal information showed people to be alternately supportive or not of climate action.

The array of proposed climate actions corresponds to the specification of alternatives attendant to the policy stream. In the policy stream, alternative climate actions vied for adoption. The findings revealed that both the executive branch and Congress eschewed comprehensive climate actions, especially those that targeted GHG

emissions, in favor of climate actions that put a premium on efficiency and societal resilience. This does not suggest that climate action proponents found this desirable. Indeed, the executive branch turned to regulatory authorities to compensate somewhat for the lack of support for comprehensive legislation. Nonetheless, policy entrepreneurs pursued policy options that were less controversial and less costly and thus had a reasonable chance of passing within the available policy window.

Part of the failure of passing significant climate legislation resulted from the inability to couple any of the streams. Optimally, policy entrepreneurs try to align the problem, policy proposals, and political receptivity into a single package. Although a three way alignment is rare, climate change actions suffered from the inability to fully align any of the streams. As witnessed through the discourses, members did not agree on the problem and the disagreement largely manifested along party lines. Advocates proposed a wide assortment of climate actions, many of which would stand on their own absent the linkage to climate change. This ability to divorce the action from its climate change rationale gave advocates the option to couple the policy to a different problem. Although the results have been mixed, renewable energy projects tied to jobs and efficiency proposals tied to business competitiveness are illustrative of such couplings. Clearly, bipartisan political receptivity regarding climate change was absent and thus this stream was not coupled with the others.

Social Identity Theory

Social identity theory assists in describing audience behavior toward Obama's securitizing move in three ways. First, it helps to describe the traits and behaviors of

audiences. Each of the audiences can be regarded as a social identity group with its own culture, norms, patterns of behavior, and function within the enterprise. Concurrently, these social identity groups consist of other social identity groups and cross-cutting identities, and are concurrently part of hierarchical identity structures. The executive branch and Congress certainly viewed themselves as distinct entities and often compared themselves to the other with regards to climate change beliefs and actions. As a social identity group, the executive branch followed a single leader who selected the subordinate leaders of the departments. This social identity group was run by the Democratic Party even though its actual membership was considerably more diverse. Thus, when the leader of the group made his securitizing move on the climate threat, he had a reasonable expectation that his group would rally behind him and, in general, the climate change meanings found in the executive branch supported this expectation.

The nuances in climate change meaning within the executive branch was almost certainly influenced by social identities. Each of the departments constituted its own identity group, which also consisted of a wide variety of identities. From my own experiences, people routinely identified themselves saying, “I’m from State,” “I’m from the Army staff,” or “I’m from the Agency” (meaning the CIA). These identities mattered, concurrently shaping and constraining the meanings embraced by individuals from these organizations. For example, DOI’s climate change meanings exhibited the least national security content of any executive branch sub-audience. Of all of the departments that I studied for this project, DOI had the fewest security related personnel, but the most scientists and engineers relative to its size. The realist paradigm was not

prominent in its discourses. Perhaps DOI was receptive to accepting climate change and Obama's securitizing move without the need for appealing to national security because DOI's scientific and technocratic setting accepted the science on face value.

The social identity group called Congress may be characterized as a hierarchical identity, below which are numerous other identity groups and cross-cutting identities. While the same may be said of the executive branch, its single party dominance, presidential authorities, and the day-to-day demands of running the federal government generally made the executive branch identity more salient than party, department, or other identities. In Congress, party membership matters greatly as do other identities based on state, occupation, and special interests, among others. Thus, unlike the executive branch, the hierarchical identity of Congress did not correlate with its variety of climate meanings. Generally, climate change beliefs followed party affiliation. Democrats and Independents acknowledged the anthropogenic causes of climate change while Republicans either denied the same or remained quiet on the subject. Interestingly, these quiet Republicans might well have chosen that position in order to avoid breaking group norms and incurring the costs associated with defying the group. Climate action meanings did not adhere as closely to party affiliation, suggesting that some identities may have greater salience on some issues. Thus, state affiliation may matter more when a member's constituency welcomes the jobs and revenues related to climate action or snubs climate actions that risk jobs and increase taxes.

National security experts saw themselves as outsiders who were comparing their views with the actions of the formal audiences, a comparison that was rarely

complementary of those audiences. However, these experts did not really constitute a social identity group per se. Arguably, the experts carry that title as a cross-cutting identity because they come from a multitude of other social identity groups and constitute an audience only in as much as they are focused on critiquing the same set of players.

Second, audience members freely invoked a wide assortment of identities in their bid to persuade others. Scientists garnered numerous mentions as did the military and intelligence experts. Sometimes speakers wielded these identities as oppositional identities, those that would logically be associated with one position but take the opposite. The purpose was to generate cognitive dissonance in the listener, blurring the lines of identity and the climate meanings that are taken for granted with those identities. Thus, Inhofe found scientists who discounted climate change or IPCC scientists who conceded that coal energy production was not going away, and Whitehouse referred to military leaders and prominent Republicans who demanded action on climate change.

Many speakers referred to American identity. Most used it to contrast our present behavior and actions toward climate change against some idea type that expects Americans to do the right and honorable thing. These speakers often contrasted our behavior with other identities such as China or European countries that were doing better than the US. Some went further, pushing the idea of American exceptionalism while arguing that the problem is of such monumental proportions that the US is the only country that can lead the response to this collective action problem. In any case, the invocation of the American identity was frequent and purposeful, and the speakers who

mentioned it knew that the identity had an emotional appeal for all members of audiences the enterprise.

Third, Obama's securitizing move had to appeal to two key empowering audiences (the executive branch and Congress) and a host of moral audiences, including national security experts and the public. Given that Congress was the least inclined to accept Obama's securitizing move, perhaps Obama's effort to persuade Congress fell victim to a contest between social identity groups. As discussed above, Congress is a unique setting where party identities clash as a matter of routine. Indeed, Obama's securitizing moves occurred in a period in which partisan politics were the norm. Thus, the contest over climate change and climate action may be described as a political conflict between two powerful and roughly equal social identity groups.

Cultural Theory of Risk

Research based on the cultural theory of risk often employs questionnaires and survey as tools to determine a respondent's preferred form of social organization and attendant way of life. Although I did not have comparable data to draw definitive conclusions, I did glean insights on speaker preferences from their discourses. I also drew insights from Douglas and Wildavsky's original conception of the theory, which was predicated primarily on their study of environmental risks (1982). Thus, the following discussion is merely suggestive of how the cultural theory of risk may help to describe the relationship between Obama's securitizing moves and their reception by enterprise audiences.

At its core, the theory posits that people hold different views of the ideal society. As discussed in chapter three, the formal players of the enterprise fall into the grid-group typology as mostly individualists or hierarchists. Typically, these groups are not very concerned with environmental issues. Individualists put their faith in markets and believe that the problem will remedy itself as long as they remain unencumbered by regulation. With a focus on the near term, individualists are even more disinclined to concern themselves with climate change framed as a future problem that will be felt primarily by the poor and vulnerable. Decidedly Darwinian in outlook, individualists accept long-term risks as long as they are permitted to keep the rewards. Hierarchists view climate change alarmism as an indictment of government elites who are charged with society's order and well-being. They believe that maintaining the current system is the best hedge against future threats and thus they tend to worry about threats to the system such as terrorism, hostile state enemies, and economic problems.

In the executive branch, hierarchists may have accepted Obama's securitizing move and largely embraced his meaning of the climate threat because they follow orders and uphold the system. While hierarchists seldom worry about environmental issues, the securitizing move framed climate change as a national security issue, putting it on par with more traditional exogenous, actor-based enemies. Perhaps the hierarchists in DHS, DOD, DOS, and the IC constructed their meanings of climate change with the realist paradigm in mind. Thus, a threat to national interests, instruments of power, or to the organizations that safeguard those interests and wield those instruments is a threat worthy of the hierarchists' attention.

These characterizations are not absolute and thus individuals can exhibit tendencies along the grid axis from hierarchy to egalitarian and along the group axis from individualism to solidarism/communitarianism. In chapter three, I posited that Obama's arrival in office may have increased the number of enterprise members who would identify as individualist-egalitarians and/or hierarchical communitarians. Egalitarians and communitarians tend to be more sympathetic to environmental risks and supportive of laws, regulations, and policies regarding commercial activities, social inequality, and unconstrained self-interest. They may have given climate change a voice that it lacked under the previous president. People with these inclinations may have been attracted naturally to DHS and DOI, in particular, because the department missions contribute to their preferred way of life. Indeed, the climate meanings found in DHS and DOI mostly focused on vulnerable populations and natural resources.

Congress may have split along group-grid typology lines with respect to Obama's securitizing moves. Many of the findings in chapter five showed that members were concerned about the economic consequences of climate change and climate action. Individualists opposed any climate action whose costs would burden individuals, consumers, businesses, and entrepreneurs for the sake of distant rewards that may or may not be realized. Some hierarchists saw costly climate actions in the context of a zero-sum game in which climate actions to benefit future generations would supplant programs that would benefit their constituents today. Of course, other hierarchists adopted a similar perspective to those in the executive branch, seeing climate change as a current security and economic threat. Accordingly, they were more inclined to support at least some form

of climate action. Some congressional members also exhibited concerns for climate change more consistent with individualist-egalitarian or hierarchical-communitarian views. Meanings suggestive of these grid-group inclinations were more common in CEPW and CENR. Perhaps these committees drew the interest of those with communitarian or egalitarian leanings much as DHS and DOI did in the executive branch.

The sub-audience of national security experts that traditionally writes in security journals embraced a meaning of climate change consistent with those hierarchists in the other audiences that conceived of climate change as a threat to the system as we know it. Consequently, the majority of these experts argued in favor of comprehensive actions to counter the threat while rationalizing the costs. The smaller sub-audience consisted of experts from a mixture of disciplines and their climate meanings were more typical of egalitarian and communitarian views on environmental issues or of the hybrid group-grid inclinations that I described above. Accordingly, these experts also demanded comprehensive climate action, but they seldom belabored the costs of climate action.

I began the discussion of the cultural theory of risk with a caution that I only have the discourses from the dataset from which to infer a speaker's preferred social organization and way of life. I end with a related caution. The correlation between party affiliation and preferred social organization and way of life cannot be discounted. Granted, the executive branch also consists of both major political parties, but the dominance of one and this study's focus on senior audience members may cloak an even more nuanced set of meanings deeper within the executive branch. Regardless of

whether party trumps preferred way of life or vice versa, the uptake of Obama's securitizing move certainly varied across and within audiences, suggesting that multiple factors are at play.

Was Climate Change Securitized?

The national security enterprise did not securitize climate change. Securitization requires an authoritative person to label climate change as a threat, leading to focused actions, leadership attention, mobilization of resources, and emergency measures to contend with the threat and/or to reduce the threatened object's vulnerability. Although climate change was identified as a threat to people, communities, the US, and the world, the response has not been commensurate with the threat.

President Obama made frequent securitizing moves, showing his commitment to addressing the threat and his willingness to use his power absent support from Congress. Within the limits of his legal authorities, he directed the executive branch to take actions to address the threat of climate change. However, as shown in the climate meaning maps, the departments embraced nuanced views of the threat, views that generally allowed them to undertake minimalist actions vis-à-vis climate change. In part, these nuances may derive from the degree of uptake of the climate change threat by audience members. In short, political appointees embraced Obama's securitizing moves, but the degree of acceptance may have declined across the breadth and depth of these large organizations. DOI was an exception, reorganizing structurally and procedurally within its constrained budget and limited personnel resources to undertake substantial actions to address climate

change. Of note, DOI was the one department in this study least involved with national security and yet it took the boldest steps.

At most, Congress politicized the issue of climate change, keeping the topic alive in debates, but little more. In short, climate change never rose above politics as usual. Advocates of climate action struggled to get climate change on the decision making agenda, finding that resistance came from both major parties. The few policies that drew bipartisan support were those that could be construed in terms other than climate change responses, such as efforts to improve energy efficiency, to create jobs through new energy sources, or to improve disaster preparedness.

Generally, the national security experts called upon the executive branch and Congress to take substantial actions to address climate change, essentially a step toward securitization. However, as an informal audience, the experts can offer only their approval and moral support of securitization.

Contributions of this Project

This project makes six substantial contributions. First and foremost, the project revealed that uniform threat meanings may not ensure meaningful actions to address the threat and that conflicting meanings may still harbor opportunities for action. The executive branch's seemingly uniform embrace of climate change concealed much greater nuance than I had anticipated, nuance that hid inaction and impeded meaningful action to contend with the threat. While the departments complied with executive orders, only DOI and the senior leaders in DOS pursued climate change solutions with the same level of fervor and commitment evidenced by President Obama. Congress is clearly an

impediment to securitizing climate change and yet the identification of meanings constructed around the value of climate action offers a potential pathway for gaining support for more ambitious climate related efforts.

Second, it contributes to the literature regarding the treatment of non-traditional threats, including climate change, by the national security enterprise. Combining an insider's acumens and experiences with a robust dataset yielded a thorough albeit preliminary map of climate change meanings in the enterprise. Thus, the project serves as an apt foundation for continuing research on the enterprise and the threats that it does or does not securitize.

Third, the project validated an innovative research design and methodology that is suitable for ascertaining the meanings that audiences and their members ascribe to climate change. Scholars can use this approach to expand, enhance, or even challenge the discursive map presented in this chapter. The approach is also suitable for exploring and describing the meanings of other non-traditional threats that are identified by a securitizing actor within or outside of national security enterprises.

Fourth, this project expanded on a conception of the national security enterprise that called into question the more dominant, realist models found in the literature. Realist models treat national security as the purview of the state and a small group of anointed rational actors who identify and prioritize threats objectively. In contrast, the enterprise concept recognizes that people socially construct national security, threats, and threatened objects, a process that may or may not produce rational, objective results. Helping the enterprise to see itself and the implications of its present structures, behaviors, and norms

is a first step toward aligning the enterprise and its energies and resources against genuine threats and threats that truly warrant its attention.

Fifth, few scholars have applied securitization theory to the American political scene much less the national security enterprise. This project adds to that scant body of literature by describing the meanings ascribed to climate change by various audiences after a securitizing move. Moreover, the project builds on securitization theory's treatment of audiences by confirming other scholars' recommendations that the three streams model may prove particularly beneficial in policy making settings. This project further found that realist theories, represented in this study by the balance of threat theory, offer key insights on national security audiences. Also social identity theory and the cultural theory of risk were found to provide additional insights on audience behavior that warrant further study.

Sixth, climate change is an existential threat to humanity and societies as we presently conceive of them. Thus, climate change is an important topic in its own right, and what the US thinks about it and chooses to do or not to do about it have profound implications for everyone on the planet. The preliminary description provided above is merely part of a much needed effort to describe what climate change means to the enterprise, which is but a small step toward understanding why climate change has not earned top billing on the national security agenda. The next step is to figure out what needs to be done to address climate change effectively and whether or not that requires the securitization of the threat.

Reflections on the Research Design and Methodology

I learned four lessons that will inform my future research projects and may benefit others as they consider my recommendations for future research. First, use the most apropos approach to frame analysis suited to the topic and the available dataset. This project explored climate change meanings using two approaches to frame analysis. An analysis using diagnostic, prognostic, and motivational frames guided a structured and thorough coding of a large dataset. Although scholars often employ this approach to look at social movements, it proved adaptable to the audiences in the enterprise. Moreover, the climate change issue provided a singular focus for analysis and thus all elements for all frames and audiences were directed toward the meaning of climate change.

The other approach to frame analysis was the cognitive frame/interactional framing approach. This approach provided additional insights not gleaned solely through the other approach. Whereas the other approach is highly structured, cognitive/interactional approach is less structured, looking more broadly at the issue, identities and relationships, and the process. Cognitive frame analysis required me to analyze more generally for frames that might not fit neatly within diagnostic, prognostic, and motivational frames. In other words, diagnostic, prognostic, and motivational frames nest within the broader category of cognitive frames. Similarly, interactional framing analysis forced me to look more closely at the co-production of meanings within the audiences.

While both approaches contributed to the project's analysis, scholars should consider their time and resource constraints before employing both methods. In general,

cognitive frame analysis proved redundant. Since this project was focused on a single problem for which different audiences held a range of diagnoses and prognoses, the first part of the analytic framework produced robust finding to which the cognitive frame added few new insights. Interactional framing analysis might have proven more useful if the entire dataset consisted of texts akin to those for hearings and colloquies in the Senate. In short, interactional framing analysis works best when interactions are observed or captured by texts in which multiple speakers are engaged or across texts that are interrelated by topic, time, and audience.

Second, ensure that alternative meanings are provided adequate voice. I used a logical and methodical approach for selecting audiences, sub-audiences, and texts. Looking for the intersection of national security and climate change discourses led me to departments and committees that I might not otherwise have considered. Also, the selection of texts with a certain number of “climate change” and/or “global warming” references helped to distill the population of available texts into a reasonable albeit still challenging dataset. However, as I analyzed the texts, I found that people do not always use those terms when thinking about them. People can talk about climate change effects or actions to improve efficiency or reduce emissions without necessarily mentioning climate change. Perhaps a speaker mentions “climate change” once, but the substantive content of his discourse was still about climate change.

Audience members almost certainly hold some conception of climate change when the subject is mentioned, but that does not mean that they speak or write about it.

For example, committee members, usually Republicans, often chose to remain silent. Their silence was noteworthy, but how do researchers give voice to that silence and of what value is frame analysis? Did they seek to avoid adding credibility to the terms by not using them? Was peer pressure a factor? I conducted additional research to identify which senators accepted or denied climate change, finding that many senators on both sides of the issue did not speak in the texts, among them Republicans who accept the reality of climate change. In this study, I considered their silence as I was developing my findings and the map of climate change meanings. However, I would have welcomed the opportunity to ask those members what they were thinking. Thus, silent members did not have voice in this project, an omission that might be remedied through a research design that includes interviews, surveys, focus groups, or a broader sample of texts.

Third, ensure that the project remains focused on the research questions. As discussed above, either of the two approaches to frame analysis would have yielded robust findings from which to develop a preliminary map of climate change discourses. I used both approaches although the dataset limited my analysis of interactional framing. However, I also used four theories for two purposes, achieving both, but adding yet another layer of complexity to the project. The theories certainly enhanced my analysis of the texts, requiring me to look at frames and meanings from multiple perspectives. However, looking at the theories with regards to how they could bolster securitization theory's treatment of audiences was a time consuming undertaking that did not directly focus on answering the research questions. Granted, the findings for securitization theory

were valuable in their own right and merit further study, but, in hindsight, I would have constrained my use of the four theories to aiding my analysis.

Fourth, the analysis of large datasets consisting of complex and often long texts benefits greatly from analytic software. This project relied on the methodical application of the project's analytic framework combined with the coding, analytic, query, and visualization tools of *NVivo* 10 qualitative software. Although I became adept at using the tools, I did not fully exploit the potential of *NVivo* 10. I took *NVivo* 10 courses, used the abundant online tutorials, and participated in *NVivo* workshops online and through the George Mason University library. These efforts greatly improved my analysis and the overall quality of the project.

Recommendations for Future Research

This project was an initial foray into an area that has received scant attention in the literature and, while the resulting map was merely an initial foray into this uncharted territory, it offers a point of departure for future research. Six additional lines of inquiry would likely reveal valuable insights. First, there are many other patches of the enterprise's landscape that merit exploration and description. This project focused on three audiences and a smaller set of sub-audiences within them. Other executive branch sub-audiences warrant study. For example, the Departments of Energy, Commerce, and Transportation have a stake in the meaning ascribed to climate change. As noted in the findings, many speakers referred to climate change as an energy problem, a problem in need of an energy policy solution, and a problem that could provide the impetus to

transform the economy. All three departments are likely involved in the discourses surrounding such claims.

A broader look at Congress is warranted. This project looked at three of the twenty Senate committees. The findings suggest that other committees focused on the US domestic context would likely reveal other climate change discourses. Based on the committee memberships of the most outspoken speakers within this project's dataset, I would recommend the following committees: Appropriations; Budget; Agriculture, Nutrition, and Forestry; Homeland Security and Government Affairs; and Commerce, Science, and Transportation. Many senators referenced how their colleagues in the House of Representatives were thinking about climate change and climate actions. Thus, a look at House committees where national security and climate change discourses may intersect would greatly benefit the map, filling in a few more patches. I would begin my exploration with four committees: Foreign Affairs, Natural Resources, Energy and Commerce, and Intelligence.

As explained earlier, I found two unexpected sets of authors within the journals that I selected for this project: national security experts and environmental experts. This finding suggests two other areas to explore. First, I would add other security related journals to search for climate change discourses, including *International Security*, *World Politics*, *International Studies Quarterly*, *Security Dialogue*, and *Survival*. The journals have substantial readerships and attract a wide range of national security experts. Second, using the logic applied for selecting some of the sub-audiences within the executive branch and Congress, I would add non-security, perhaps environmentally

focused journals in order to explore for security discourses related to climate change. The list of environmental journals is extensive, but I would begin with a look at a peer-reviewed journal such as *Ecology Law Quarterly*, online journals such as *Inside Climate New*, *Climate Wire*, and *E-The Environmental Magazine*, and popular periodicals such as *National Geographic* and *Mother Earth News*.

Other audiences, especially informal audiences, constitute a second area worthy of exploration. Many of the texts in the dataset referenced think tanks, special interest groups, and the media. As informal players in the outer circle of the enterprise, they clearly exercised considerable influence on the formal players with respect to their views on climate change and climate action. For think tanks, I would begin with those most highly ranked by their peers and those that have taken an interest in the climate change issue. Brookings Institute, Carnegie Endowment for International Peace, and the Council on Foreign Relations would be my first destinations. Some of the congressional texts referred to the American Enterprise Institute and the Heritage Foundation.⁹⁹ Special interest groups focused on energy and the environment warrant a look, particularly since many of the texts mentioned the influence of special interest groups. As described in chapter four, mapping the meaning of climate change within the media is a deserving project in its own right. I would begin with *The Washington Post*, *The New York Times*, and the *Wall Street Journal* because they are cited frequently by members of the enterprise.

⁹⁹The Think Tank and Civil Society Program at the University of Pennsylvania does an annual international survey that ranks think tanks based on 18 criteria (see <http://gotothinktank.com/>).

The third line of inquiry would look at the map as it changes over time. A longitudinal study of one or more enterprise audiences would provide insights on the evolving meaning of climate change. As discussed in the first chapter, US presidential administrations have treated climate change differently. Similarly, the composition and party leadership of Congress have changed over time. A description of climate change meanings over a longer period or to contrast between periods would provide insights on why audiences embrace certain climate change meanings.

Fourth, this project was focused on the US national security enterprise. However, the US is not the only state for which the nexus of security and climate change is relevant. As suggested earlier in the paper, Canada would provide an interesting case for a study similar to this one. Given its tradition of environmental protections, recent bonanza in bitumen sources of oil (shale sands), proximity to the US, and a similarly structured enterprise, Canada affords an excellent comparative study.

The theoretical component of this project revealed that all four theories informed my analysis and provided insights on audience behavior that may benefit securitization theory. Thus, the fifth area for research is the application of other tools of inquiry to the same or other patches of the map. For example, the three streams model clearly aligned well with the nature of the enterprise and thus a return trip to the map presented above, but solely through the lens of the three streams model, may provide new descriptive material or help to explain why particular meanings took hold.

Lastly, I defined this dissertation as a descriptive project, one to map climate change meanings. This map is intended to assist with the next journey, a journey to

ascertain why climate change has not garnered the sense of urgency nor inspired the comprehensive actions necessary to contend with a threat of such magnitude. In short, why has climate change not been securitized? For the intrepid traveler who thrives on challenges and the unknown, the *why* question is a worthy destination.

APPENDIX I. ADDITIONAL FINDINGS CHARTS

Executive Branch (94 texts)	Interactional Framing (0)
Issue	None Found
Identity & Relationship	None Found
Process	None Found

Congress (80 texts)	Cognitive Frame (74)																		
Issue (42)	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <td style="padding: 2px;">Real Issue (24)</td> <td style="padding: 2px;">Isn't Real, Overstated (12)</td> <td style="padding: 2px;">Climate or Security (12)</td> <td style="padding: 2px;">Cross-Cutting Issue (5)</td> <td style="padding: 2px;">Unpopular Topic (4)</td> <td style="padding: 2px;">Energy Issue (3)</td> <td style="padding: 2px;">Superordinate Issue (3)</td> </tr> <tr> <td style="padding: 2px;">Fight, Battle, Combat (2)</td> <td style="padding: 2px;">Like the Health Mandate (1)</td> <td style="padding: 2px;">Action for Vibrant Economy (1)</td> <td style="padding: 2px;">Not a Security Issue (1)</td> <td style="padding: 2px;">Security and Economic Issue (1)</td> <td colspan="2"></td> </tr> </table>	Real Issue (24)	Isn't Real, Overstated (12)	Climate or Security (12)	Cross-Cutting Issue (5)	Unpopular Topic (4)	Energy Issue (3)	Superordinate Issue (3)	Fight, Battle, Combat (2)	Like the Health Mandate (1)	Action for Vibrant Economy (1)	Not a Security Issue (1)	Security and Economic Issue (1)						
Real Issue (24)	Isn't Real, Overstated (12)	Climate or Security (12)	Cross-Cutting Issue (5)	Unpopular Topic (4)	Energy Issue (3)	Superordinate Issue (3)													
Fight, Battle, Combat (2)	Like the Health Mandate (1)	Action for Vibrant Economy (1)	Not a Security Issue (1)	Security and Economic Issue (1)															
Identity & Relationship (60)	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <td style="padding: 2px;">Refer to Experts (33)</td> <td style="padding: 2px;">Special Interests (27)</td> <td style="padding: 2px;">Congress & Climate Change (25)</td> <td style="padding: 2px;">We Ignore the Issue (22)</td> <td style="padding: 2px;">Believers vs. Deniers (21)</td> <td style="padding: 2px;">Personalize the Issue (21)</td> </tr> <tr> <td style="padding: 2px;">Refer to Party (19)</td> <td style="padding: 2px;">National Security (16)</td> <td style="padding: 2px;">Others Doing Better (12)</td> <td style="padding: 2px;">President and the Issue (9)</td> <td style="padding: 2px;">In US Interest to Act (9)</td> <td style="padding: 2px;">Americans and the Issue (9)</td> </tr> <tr> <td style="padding: 2px;">Government Agencies (8)</td> <td style="padding: 2px;">Supporters are Liberals (5)</td> <td style="padding: 2px;">Invokes Religion (4)</td> <td style="padding: 2px;">International Bodies (3)</td> <td style="padding: 2px;">China Not Leading (1)</td> <td style="padding: 2px;">Corporations Accept (1)</td> </tr> </table>	Refer to Experts (33)	Special Interests (27)	Congress & Climate Change (25)	We Ignore the Issue (22)	Believers vs. Deniers (21)	Personalize the Issue (21)	Refer to Party (19)	National Security (16)	Others Doing Better (12)	President and the Issue (9)	In US Interest to Act (9)	Americans and the Issue (9)	Government Agencies (8)	Supporters are Liberals (5)	Invokes Religion (4)	International Bodies (3)	China Not Leading (1)	Corporations Accept (1)
Refer to Experts (33)	Special Interests (27)	Congress & Climate Change (25)	We Ignore the Issue (22)	Believers vs. Deniers (21)	Personalize the Issue (21)														
Refer to Party (19)	National Security (16)	Others Doing Better (12)	President and the Issue (9)	In US Interest to Act (9)	Americans and the Issue (9)														
Government Agencies (8)	Supporters are Liberals (5)	Invokes Religion (4)	International Bodies (3)	China Not Leading (1)	Corporations Accept (1)														
Process (57)	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <td style="padding: 2px;">Climate Change Social Effects (44)</td> <td style="padding: 2px;">Facts Beget Logical Actions (31)</td> <td style="padding: 2px;">Others Follow US Lead (9)</td> </tr> </table>	Climate Change Social Effects (44)	Facts Beget Logical Actions (31)	Others Follow US Lead (9)															
Climate Change Social Effects (44)	Facts Beget Logical Actions (31)	Others Follow US Lead (9)																	

National Security Experts (39 texts)		Cognitive Frame (35)					
Issue (21)	Energy Issue (8)	Isn't all Bad (3)	Superordinate Issue (3)	Diplomacy a Failure (2)	Fight, Battle, Combat (2)	It is Real (1)	
	Our Greatest Failure (1)	Most Difficult Problem (1)	Moral Issue (1)	Enshrined in Language of Doom (1)		Reframe as Solution (1)	West's Issue (1)
Identity & Relationship (19)	Congress is Ineffective (7)		Firewall between States (6)	Special Interests Thwart Action (3)		Others are Doing Better (4)	Energy Bonanza Problem (2)
	Believers vs. Deniers (1)	Biggest Contributors Must Lead (1)		Administration Sidesteps Congress (1)		Hawk and Environmentalists (1)	
Process (14)	Climate Change Social Effects (14)						

National Security Experts (39 texts)		Interactional Framing (0)
Issue (0)	None Found	
Identity & Relationship (0)	None Found	
Process (0)	None Found	

National Security Experts (39 texts)		Theories (32)				
Balance of Threat (23)	Realist Paradigm (21)				Realist Language (5)	
Three Streams Model (15)	Politics (6)	Participants (5)	Problem (5)	Window or Coupling (4)	Policy (1)	
Social Identity Theory (19)	Comparison (12)			Categorization (10)		Saliency (1)
Cultural Theory of Risk (4)	Way of Life or Worldview (4)					

APPENDIX II. DATA SET

The Executive Branch

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