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The Diffusion of a Debate: Cultural Resonance and Resource Control in American
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By

Rachel A. Wetts

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

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in the

Graduate Division

of the

University of California, Berkeley

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Professor Heather A. Haveman, Chair

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Abstract

The Diffusion of a Debate: Cultural Resonance and Resource Control in American Organizations' Framings of Climate Change

by

Rachel A. Wetts

Doctor of Philosophy in Sociology

University of California, Berkeley

Professor Heather A. Haveman, Chair

In this dissertation, I examine how American organizations have framed the issue of climate change, and how cultural and organizational processes affect which conceptions of climate change become dominant in mainstream media. First, I use a variety of automated text analysis procedures (topic modeling, multi-dimensional scaling, and cluster analysis) to describe a large, random sample of business, government, and social advocacy organizations' press releases about climate change from 1985 to 2013 ($N = 1,768$). Next, I use plagiarism-detection software to track how organizations' messages have been picked up in all articles about climate change published in *The New York Times*, *The Wall Street Journal*, and *USA Today* from 1985 to 2014 (total $N = 34,948$). These techniques allow me to describe organizations' framing attempts and then to investigate why some succeed and diffuse into the larger discursive environment and others do not, highlighting organizational power and cultural resonance as two distinct paths through which organizations' messages gain visibility.

The dissertation is organized around three empirical chapters. In the first empirical chapter, I describe how American organizations have framed the issue of climate change over the course of the climate change debate. Across a range of organizations with different motivations and strategies, one would expect very different framings, particularly from corporations seeking to oppose action on climate change as compared to advocacy organizations trying to affect those changes. Instead, I find that a single, "post-political" frame of climate change dominates discourse. This framing is expert-oriented and technocratic, casting consensual action among economic and political elites as the appropriate way to address the climate problem, and neglecting concerns of values and identity widely believed to be important for social movement mobilization. This suggests that both businesses and civil society organizations have responded to mounting evidence of climate change by proposing methods to address environmental

degradation that reinforce rather than challenge the economic and political status quo. In addition, to the extent that earlier scholars are correct that conflict-oriented discursive strategies—such as identification of a common antagonist—are effective at rousing public concern, this suggests that climate discourse is unlikely to mobilize strong public emotion and activism.

The second empirical chapter examines how organizations' characteristics affect their ability to influence wider discourse. I find that advocates against action to address climate change are about twice as likely to be cited in national newspapers as are advocates for climate action. In addition, business coalitions and very large businesses are more likely than other types of organizations to receive coverage, either because these firms are seen as important players in the national economy or because these organizations have more human resources to expend promoting their messages. Surprisingly, scientific and technical organizations are less likely to receive news coverage than are other organizations, suggesting that organizations with presumably greater expertise to speak to the scientific issues around climate change are afforded less media attention. My findings therefore suggest that climate discourse may contribute to the problem of stalled action to address climate change on two fronts: organizations primarily advocate for action to address climate change in ways that are unlikely to mobilize a public response, while the relatively small number of organizations that advocate against any action whatsoever receive heightened visibility in the public sphere.

Finally, in the third empirical chapter, I examine how broad-based cultural narratives and the interventions of powerful organizations have each influenced the American climate change debate. I code press releases according to whether they would be expected to (a) resonate with latent American cultural narratives, (b) appeal to audiences' values, emotions, and identities, or (c) speak to audiences' topical concerns, allowing me to perform a rare deductive test of whether cultural resonance influences whether organizations' framings of climate change receive coverage in mainstream media. My results suggest that climate change messages that appeal to audiences' values, emotions, and identities receive heightened media visibility, as do messages that appeal to audiences' topical concerns for economic well-being during periods of economic downturn. In addition, appeals that accord with American cultural models of rational, market-based behavior receive more news coverage than those which do not. At the same time, business coalitions and very large businesses are more likely than other types of organizations to receive news coverage, consistent with the claim that the structural power of business interests leads their perspectives to receive disproportionate visibility. Together, these results suggest that the public debate around climate change is shaped by both the cultural meanings of climate messages and the power relationships of the organizations that promote them.

DEDICATION

To my late father, Richard Wetts,
whose intellect, integrity, and humility continue to inspire me.

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First, I wish to thank Heather Haveman and Robb Willer for their invaluable mentorship. They gave generously of their time and wisdom in so many ways: from careful edits on manuscripts, to encouragement to learn new methods, to pointed critique of any less-than-convincing analysis. I am so grateful to have had their guidance throughout the course of this project and throughout graduate school. I am also grateful that each of them supported me in the emotional demands of academic life, from the not-so-subtle pushes I often needed to put myself out there and promote my work, to sympathy in the face of (sometimes seemingly-endless) rejections.

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Finally, I am deeply grateful for my husband, Gabe, who makes my life more full of joy and meaning, and on whom I depend for so much. I love you and thank you, thank you, thank you.

CHAPTER 1

INTRODUCTION

In this dissertation, I examine how American organizations have framed the issue of climate change, and how cultural and organizational processes affect which conceptions of climate change become dominant in mainstream media. First, I use a variety of automated text analysis procedures (topic modeling, multi-dimensional scaling, and cluster analysis) to describe a large, random sample of business, government, and social advocacy organizations' press releases about climate change from 1985 to 2013 ($N = 1,768$). Next, I use plagiarism-detection software to track how organizations' messages have been picked up in all articles about climate change published in *The New York Times*, *The Wall Street Journal*, and *USA Today* from 1985 to 2014 (total $N = 34,948$). These techniques allow me to describe organizations' framing attempts and then to investigate why some succeed and diffuse into the larger discursive environment and others do not, highlighting organizational power and cultural resonance as two distinct paths through which organizations' messages gain visibility.

The dissertation is organized around three empirical chapters. In the first empirical chapter, I describe how American organizations have framed the issue of climate change over the course of the climate change debate. Across a range of organizations with different motivations and strategies, one would expect very different framings, particularly from corporations seeking to oppose action on climate change as compared to advocacy organizations trying to affect those changes. Instead, I find that a single, "post-political" frame of climate change dominates discourse. This framing is expert-oriented and technocratic, casting consensual action among economic and political elites as the appropriate way to address the climate problem, and neglecting concerns of values and identity widely believed to be important for social movement mobilization. This suggests that both businesses and civil society organizations have responded to mounting evidence of climate change by proposing methods to address environmental degradation that reinforce rather than challenge the economic and political status quo. In addition, to the extent that earlier scholars are correct that conflict-oriented discursive strategies—such as identification of a common antagonist—are effective at rousing public concern, this suggests that climate discourse is unlikely to mobilize strong public emotion and activism.

The second empirical chapter examines how organizations' characteristics affect their ability to influence wider discourse. I find that advocates against action to address climate change are far more likely to be cited in mainstream media sources than are advocates for climate action. In addition, business coalitions and very large businesses are more likely than other types of organizations to receive coverage, either because these firms are seen as important players in the national economy or because these organizations have more human resources to expend

promoting their messages. Surprisingly, scientific and technical organizations are less likely to receive news coverage than are other organizations, suggesting that organizations with presumably greater expertise to speak to the scientific issues around climate change are afforded less media attention. My findings therefore suggest that climate discourse may contribute to the problem of stalled action to address climate change on two fronts: organizations primarily advocate for action to address climate change in ways that are unlikely to mobilize a public response, while the relatively small number of organizations that advocate against any action whatsoever receive heightened visibility in the public sphere.

Finally, in the third empirical chapter, I examine how broad-based cultural narratives and the interventions of powerful organizations have each influenced the American climate change debate. I code press releases according to whether they would be expected to (a) resonate with latent American cultural narratives, (b) appeal to audiences' values, emotions, and identities, or (c) speak to audiences' topical concerns, allowing me to perform a rare deductive test of whether cultural resonance influences whether organizations' framings of climate change receive coverage in mainstream media. My results suggest that climate change messages that appeal to audiences' values, emotions, and identities receive heightened media visibility, as do messages that appeal to audiences' topical concerns for economic well-being during periods of economic downturn. In addition, appeals that accord with American cultural models of rational, market-based behavior receive more news coverage than those which do not. At the same time, business coalitions and very large businesses are more likely than other types of organizations to receive news coverage, consistent with the claim that the structural power of business interests leads their perspectives to receive disproportionate visibility. Together, these results suggest that the public debate around climate change is shaped by both the cultural meanings of climate messages and the power relationships of the organizations that promote them.

CHAPTER 2

MODELS AND MORALS: ELITE-ORIENTED AND VALUE-NEUTRAL DISCOURSE DOMINATES AMERICAN ORGANIZATIONS' FRAMINGS OF CLIMATE CHANGE

In this chapter, I describe how American organizations have framed the issue of climate change over the course of the climate change debate. Specifically, I examine whether climate change discourse is highly politicized and divisive, or if the debate has instead become “post-political,” oriented around consensus, problem-solving and administrative management. Adjudicating this debate is important for pragmatic and theoretical reasons. Pragmatically, these divergent characterizations suggest different barriers climate discourse might pose for engaging public concern and citizen mobilization. Theoretically, these characterizations provide different understandings of how elites respond to structural crisis. Using automated text analysis to describe a large corpus of organizations’ press releases about climate change from 1985 to 2013 ($N=1,768$), I find that this discourse has been largely expert-oriented and technocratic, neglecting concerns of values and identity widely believed to be important for social movement mobilization. Organizations predominantly frame climate change as a problem that, while real and serious, is best handled through the careful and deliberate work of scientific, political, and economic elites. Surprisingly, these observations remain true even among the advocacy organizations in my sample.

These findings provide empirical support that a “post-political” framing of climate change, where the issue is discussed in a way that neutralizes social and political power dynamics, dominates American organizations’ official pronouncements about climate change. This suggests that businesses and their civil society allies have responded to mounting evidence of climate change by proposing methods to address environmental degradation that simultaneously entrench the economic and political status quo. However, it also opens up questions as to why environmental organizations have similarly adopted a discourse that fails to identify structural sources of the problem, poses several barriers to public engagement, and limits the range of public response.

Introduction

After centuries of industrial development relying on relatively unfettered access to fossil fuels, scientists now widely agree that unabated fossil fuel emissions would lead to climatic changes with devastating consequences for the natural world and human society (e.g., International Energy Agency 2012; National Research Council 2012). American civil society and business organizations have responded in complex ways to an existential threat to global well-being that also presents a fundamental challenge to the prevailing system of economic production (Grumbach 2015; Peetz et al. 2017). In the case of business, efforts to undermine mainstream climate science and frame the problem as uncertain or benign are well-documented (Boussalis and Coan 2016; Brulle 2014a; Farrell 2016; McCright and Dunlap 2000, 2003), but so are efforts to reform business practices and advance policy proposals to mitigate global warming (Meckling 2011; Kolk and Levy 2001; Pulver 2007; Wright and Nyberg 2017). Reflecting these opposing responses, scholars examining organizations' framings of climate change have promoted conflicting characterizations of the American climate change debate, one describing it as rife with antagonism, the other as marked by cooperation and accommodation.

Scholars advocating for the latter characterization have suggested that business and civil society organizations predominantly promote a "post-political" frame, where issues of power or social structure are avoided, and consensual action among economic and political elites is cast as the appropriate way to address environmental problems (Brulle and Dunlap 2015; Kenis and Lievens 2014; Swyngedouw 2010, 2011). If this claim were true, it would go against much prevailing wisdom and empirical evidence that suggests the climate change debate is instead highly politicized and contentious (Hoffman 2011, 2015; Jasny, Waggle, and Fisher 2015; Kahan 2012; McCright and Dunlap 2011; Urry 2011). In addition, it would open up questions about how effective this framing is in galvanizing public concern, with prior work suggesting that such elite-oriented, value-neutral, and non-confrontational discourse is unlikely to mobilize strong public emotion and activism.

In what follows, I use automated text analysis to intervene in this debate, examining a large corpus of American business, government, and advocacy organizations' press releases about climate change from 1985 to 2013. Across a range of organizations with different goals, motivations, and strategies, one would expect very different framings, particularly from corporations seeking to oppose action on climate change as compared to advocacy organizations trying to affect those changes. Instead, I find that a single, post-political frame of climate change dominates this discourse. This framing is expert-oriented and technocratic, neglecting concerns of values and identity widely believed to be important for social movement mobilization (e.g., Gamson 1992; Mols 2012; Sears and Funk 1991; Simon and Klandermans 2001). Organizations predominantly describe climate change as a problem that, while real and serious, is best handled through the careful and deliberate work of scientific, political, and economic elites. These observations remain true even among the social movement organizations in my sample, where one would expect contentious and politicized appeals to be common.

My findings provide empirical support that a post-political framing dominates American organizations' official pronouncements about climate change. While climate discourse has been characterized as post-political by previous scholars, others have contested this characterization (e.g., McCarthy 2013; Urry 2011), and to my knowledge no large-scale empirical work has supported this claim. This finding suggests that both businesses and civil society organizations have responded to mounting evidence of climate change by proposing methods to address environmental degradation that simultaneously entrench the economic and political status quo.

The prevalence of post-political discourse is all the more striking in the U.S. context, where public and elite polarization around climate change is well-documented, suggesting American organizations consistently—and curiously—portray a highly contentious issue that challenges the interests of powerful individuals and institutions as devoid of political struggle.

Climate Change Framing and Barriers to Public Engagement

Understanding how organizations frame climate change is important because the frames that movements and elites use to characterize social problems shape public understanding, facilitate specific interpretations, and influence the direction of policy (Cress and Snow 2000; Goffman 1974; Kinder 1998). Policy frames guide cognition in a number of ways: by providing a simplified description of the problem (diagnostic framing); by advocating a particular type of ameliorative action (prognostic framing); by providing justification for action (motivational framing) (Snow and Benford 1988); and by constructing groups as friends or foes of the public good (identity framing) (Gamson 1992).

Previous research has uncovered several frames prevalent in discussions of climate change, including scientific uncertainty, national security, polar bears, and “small actions” (Ereaut and Segnit 2006; Hulme 2009; Shanahan 2007). In analyses that seek to understand public disengagement with this issue, climate discourse has been critiqued as disjointed. Scholars note that frames describing climate change as an unprecedented catastrophe are often paired with suggestions that citizens can solve the problem with simple steps like changing a lightbulb (Ereaut and Segnit 2006; Shanahan 2007), making discussion of the issue appear logically and emotionally incoherent. Others have suggested that the slow-building nature of the problem and its presentation as a matter of expert knowledge make climate discourse inaccessible to modes of cognition that engage public concern (Hoffman 2015; Jasanoff 2010). Further, the scientific literacy of many Americans is relatively low, so seeing climate change as a debate over scientific fact has led many to disengage, feeling ill-equipped to join a seemingly technical conversation (Moser and Berzonsky 2014).

While this research has generated insights into how climate discourse might engage the American public, this literature suffers from two key limitations. First, studies usually limit their investigation to a single empirical site of climate change framing, for example by focusing on either environmental movements’ or corporations’ framing activities. Therefore, few analysts have examined how different types of actors might vary in the frames they promote (though see Hoffman 2015). Second, and perhaps relatedly, the literature has not come to a consensus on the degree to which climate discourse is politicized, with scholars providing conflicting accounts. These divergent accounts carry very different implications for what barriers the current state of climate discourse might pose for public engagement.

Climate Discourse: Polarized or Post-Political?

Many scholars characterize the American climate change debate as politicized, polarized and divisive. Hoffman (2011, 2015), for example, argues that the debate is characterized by “a cultural schism” where opposing factions are largely “talking past one another” rather than engaging with each other’s claims. Supporting this characterization, evidence suggests there is a growing partisan split in public opinion on climate issues (McCright and Dunlap 2011), and citizens consider their opinions on climate change to be a matter of cultural identity (Kahan 2012). Polarization also is evident at the elite level, where climate policymakers’ professional

networks have the appearance of “echo chambers” where network members reinforce one another’s views (Jasny et al. 2015).

Further evidence of the politicization of climate change lies in the number of interest groups mobilized around the issue and the intensity of their mobilization efforts (e.g., Brulle 2014a). Some observers suggest that this high degree of interest-group mobilization is all but inevitable given the profound challenge that mitigating climate change poses to the modern socioeconomic order. The close relationship between global warming and the fossil fuels on which the global energy infrastructure is based leads to a “sense of high politics” (Newell 2006), with the prospect of curtailing greenhouse gas emissions challenging the economic interests of powerful organizations and institutions (Levy and Egan 2003).

Yet despite this evidence of climate change as “high politics,” some scholars argue that climate discourse is depoliticized or “post-political” in that framings of climate change tend to downplay issues of inter-group conflict, power, or social structure (Brulle and Dunlap 2015; Kenis and Lievens 2014; Swyngedouw 2010, 2011). According to this characterization, climate discourse does not identify causes of the problem in the existing socioeconomic order. Instead, participants in the climate debate assume neoliberal capitalism as the basis from which reform begins. This leads to a “paradoxical situation” in which an awareness of environmental crisis is combined with an “effort to sustain the unsustainable” dynamics of consumer capitalism (Blühdorn 2013, 32).

In addition to its missing critique of the socioeconomic order, two other features lead scholars to characterize this discourse as post-political. First, it avoids what Gamson (1992) calls identity framing—that is, demarcating specific groups of actors as responsible for the problem, and other groups as specifically harmed. Instead, participants in the climate debate tend to identify an impersonal, reified enemy—carbon dioxide emissions—and imply that all humanity is in peril and also more or less culpable. Second, these tendencies to deny inter-group conflict and to assume neoliberal capitalism as the inevitable socioeconomic order lead to calls for solutions organized around consensual action and the continued growth of the market. These include economic incentives, market-based trading schemes, and expert problem-solving (Blühdorn 2013; Kenis and Lievens 2014; Swyngedown 2010). So, instead of a conflict-based view of politics that diagnoses social problems in social structure or the actions of powerful interests, post-political climate discourse characterizes climate change in impersonal terms and argues that it can be solved through “the collaboration of enlightened technocrats” (Kenis and Lievens 2014, 536; Žižek 2000, 198).

While the post-political perspective has proven theoretically generative, this characterization is controversial. For example, Urry (2011) points to several instances of social movements rallying against “carbon capitalism” to dismiss claims that climate discourse is depoliticized. Other authors agree that varieties of post-political discourse are dominant, such as the market-oriented discourse of “ecological modernization,” but argue that radical environmental discourses remain an important component in the debate (Bäckstrand and Lövbrand 2007; Brulle 2014b; Caniglia, Brulle, and Szasz 2015; Newell 2006).

Some of this disagreement may stem from analysts’ empirical focus on different sites of climate discourse. For example, polarized and contentious framings are likely to be common in social movements’ claims-making activities, but post-political framing could prevail among businesses and in high-level negotiations where elites dominate discussion. In addition, post-political discourse may be common in European nations, where there is relatively high consensus about the seriousness of climate change; however, this characterization may not be appropriate in

the U.S. context, given the evidence of polarization and interest-group mobilization discussed above (Dunlap and Brulle 2015; McCarthy 2013).

Thus, a central contribution of the current research is to empirically investigate American climate discourse across a broad range of organizations, asking whether it displays the characteristics of a post-political discourse. Adjudicating this debate is important in part because these characterizations suggest distinct barriers that climate discourse might pose for public concern and citizen mobilization. Characterizing the climate change debate as polarized and divisive suggests, for example, that in-group bias, motivated reasoning and network homophily may present challenges to engaging the public (Hoffman 2015; Kahan 2012). Therefore, framing strategies that lower the salience of partisan group identities might lead to a more productive public conversation (Kahan et al. 2012). For instance, advocates of increased action against global warming might invoke values such as purity or loyalty more likely to resonate with conservatives (Feinberg and Willer 2013) or use “climate brokers” such as business leaders to speak to conservative audiences (Hoffman 2015).

A post-political discourse, on the other hand, faces different challenges and suggests different tactics. First, frames suggesting climate change is best handled through collaborative expert management may discourage interest in the issue among the substantial portion of Americans with negative associations toward elite groups (Kazin 1998; Mudde 2004). Second, the lack of frames identifying friends and foes of the public good may impede processes of consciousness-raising and political identity formation that facilitate social movement mobilization (Gamson 1992; Mansbridge and Morris 2001; Mols 2012; Simon and Klandermans 2001). This would suggest that frames identifying specific culpable parties may be more effective in rallying political support than a consensus-oriented discourse where the cause of the problem is impersonal and the locus of blame is diffuse.

Empirical Overview

In what follows, I intervene in this debate by using automated text analysis to analyze a large corpus of American organizations’ press releases about climate change from 1985 to 2013 ($N=1,768$). I use topic modeling to identify the diagnostic, prognostic, motivational, and identity frames that organizational spokespeople use to discuss climate change. I then use multidimensional scaling and cluster analysis to graphically represent patterns in frame usage, facilitating interpretation of the linkages spokespeople make between different frame types. Because previous scholars largely base their characterizations of climate discourse on these frame combinations, we can compare results of these analyses against what different characterizations of climate discourse would predict.

If scholars arguing that the climate change debate is polarized and divisive are correct, we would expect organizations’ framings of climate change to separate into two distinct clusters corresponding to different sides of the debate. Organizations within each cluster should mobilize different characterizations of the problem, potential solutions, and motivations for action or inaction, consistent with Hoffman’s (2011) claim that opposing factions do not seriously engage with one another’s claims. Confrontational identity frames should appear within each cluster as organizations vilify prominent members of the opposing side. Finally, the frames that constitute each cluster should be relatively prevalent in the debate, such that no one side dominates discourse.

On the other hand, if theorists arguing that the climate debate is depoliticized are correct, organizational spokespeople should link prognostic frames describing market-based solutions

with identity frames describing business leaders, policymakers, and other elites as protagonists. These frames should not be used in conjunction with diagnostic frames locating the source of the problem in socioeconomic structure, or with frames citing particular groups as responsible for the problem. We would expect this single, distinct cluster of frames to dominate discourse.

After testing which description better fits discourse as a whole, I examine the extent to which this description applies to different types of organizations, as framing strategies may vary systematically across organization type. There is reason to suspect that depoliticized framing may be attractive to businesses and professional associations seeking to signal support for environmental protection while constricting the terms of debate to those that largely preserve the status quo. We would not expect this to be the case, however, for advocacy organizations, where politicized framing is likely more common.

This analytic strategy has several advantages given my research goals. Studying press releases allows me to examine framing strategies across a wide array of organizations, including business, government, and advocacy organizations. Moreover, because a substantial portion of newspaper coverage is derived from press releases, these releases represent attempts by organizations to influence the wider public debate (Bennett 2004). Finally, automated techniques should be helpful in adjudicating between the conflicting characterizations that have arisen in the literature, since automated techniques reduce the risk that confirmation bias will lead researchers to unconsciously search for, and hence find, evidence of their own latent theories within texts (DiMaggio, Nag, and Blei 2013; Nelson 2015).

Therefore, this strategy allows me to examine a broad cross-section of organizations' attempts to influence public understandings of climate change, while reducing concerns that results will conform to my preexisting conceptions of the debate. Of course, conclusions based on analysis of organizations' press releases cannot necessarily be generalized to other arenas of climate discourse. However, to the degree that discourse in this arena is either polarized or post-political, this would suggest that this characterization applies to an empirical site of climate discourse that is large and diverse in terms of the types of organizations that use this medium, and politically consequential in terms of its effects on wider public discourse.

Methods

Sample. I use the searchable database of *PR Newswire*, the largest national distributor of press releases, to discover U.S. press releases from 1985 to 2013 containing the words “climate change,” “global warming,” “greenhouse effect,” “greenhouse gas,” or any of their derivations. Because climate change was not broadly discussed in American media prior to the 1988 drought (Trumbo 1996), I begin my study period in 1985 for comprehensiveness.

My search of *PR Newswire* results in a population of 21,599 press releases. I take a 20% systematic sample for most years in the study period.¹ To ensure large enough sample sizes to uncover frames prevalent in earlier years of the debate, when framing was limited, I sample all press releases in years with fewer than 70 releases and take 50% systematic samples in years with fewer than 175 releases. The resulting sample yields 4,653 press releases. I analyze only press releases that engage in some substantive discussion of climate change. These constitute about forty percent of press releases, for a final sample of 1,768 releases.

Next, I identify the industry of each organization in the sample, using the OneSource and Business Source Complete databases to identify its North American Industry Classification

¹ Some phases of my analysis require manual processing of press releases (e.g., excluding irrelevant releases). Thus, I take a systematic sample to make the corpus manageable for analysis.

System (NAICS) code. Organizations that could not be found in these databases I coded by hand as business or civil society organizations. Finally, I examine the mission statements of advocacy organizations to identify their main issue areas and ideological orientation.

Ten percent of press releases are from government agencies such as NASA and the EPA. The rest originate about evenly from businesses and civil society. Table 2.1 summarizes the frequency of press releases by industry.

Table 2.1: Organization Types Represented in Analytic Sample: Number and percent of press releases by industry of organization that produced the release.

Organization Type	Number of Press Releases	Percent
Goods, Wholesale Trade, Transportation and Warehousing	318	18.0
Services and Retail Trade, Except Advocacy Associations	397	22.5
Other Businesses*	67	3.8
Social and Political Advocacy Organizations	479	27.1
Business, Professional or Trade Associations and Coalitions	210	11.9
Other Civil Society**	121	6.8
Government	176	10.0
Total	1,768	100.0

*NAICS code is 'Other' or no code found.

**Includes religious, grant-making and civic organizations; labor unions; individuals, events, or blogs; and political candidates and campaigns.

Social and political advocacy organizations released about twenty-seven percent of all press releases (N=479). These releases come from environmental organizations (41.3% of releases from advocacy organizations), other groups whose primary focus is addressing climate change (16.7%),² organizations advocating against climate action (16.3%), and organizations whose focus areas do not include climate or energy (25.7%). Business coalitions and professional or trade associations released about twelve percent of all press releases (N=210). An additional 6.8% come from other civil society groups, including labor unions, religious and civic organizations, and political campaigns.

² These organizations' mission statements highlight climate and energy issues, but otherwise do not focus on environmental degradation (e.g., American Council for an Energy-Efficient Economy, Carbon Disclosure Project).

Businesses produce forty-five percent of press releases. Eighteen percent (N=318) originate from businesses concerned with production of goods, transportation, and warehousing. Of these, the majority are produced by utilities (37.4%) and manufacturers (40.6%). About twenty-three percent of all releases (N=397) originate from businesses concerned with services and retail trade. Press releases from the service sector come from organizations providing professional, scientific and technical services (35.3%), information services (22.7%), and educational services (13.6%), as well as finance and insurance organizations (8.8%). 3.8% of releases come from businesses whose industry could not be identified.

Identifying Frames. To identify the frames that organizations use to discuss climate change, I use topic modeling techniques. These techniques are a set of machine-learning algorithms that aid in the identification of themes running throughout a collection of documents by identifying constellations of words that tend to co-occur within texts (Blei 2012). The assumption underlying the techniques is that documents are collections of topics, the number and distribution of which can vary between documents. So, while some press releases may be composed of words almost entirely from a single topic, other releases may be composed of multiple topics. Topics, in turn, are collections of words that are often found together throughout the text corpus. For example, “war,” “Iraq,” and “terrorism” tend to appear together in press releases, so the algorithm identifies these words (and those that occur with them) as comprising one of the topics that make up the releases. By “reading” a collection of documents and outputting a pre-specified number of topics, words most characteristic of these topics, and documents most representative of each topic, topic modeling can help researchers identify latent categories that appear across a collection of texts. For a non-technical introduction, see Mohr and Bogdanov (2013), and for a more technical introduction, see Blei (2012).

Results of topic modeling analyses have been shown to be comparable to those produced by human coders (Roberts et al. 2014). In addition, topic modeling has methodological advantages compared to content analysis performed by human analysts. Computer-assisted text analysis increases the reproducibility of results and allows for a larger number of documents to be analyzed within a reasonable timeframe (Blei 2012), facilitating construction of more representative samples. Further, limited researcher interference in identifying topics allows for a more fully inductive analysis (Mohr and Bogdanov 2013), avoiding the potential problem of researchers imposing invalid, pre-formed interpretive categories onto texts (DiMaggio et al. 2013; Nelson 2015).

I use Latent Dirichlet Allocation (LDA), a topic modeling technique that is relatively simple and computationally efficient in part because it relies on three simplifying assumptions: first, that we can ignore the order of words or their location within the document (the “bag of words” assumption); second, that we can ignore the order of the documents within the corpus; and third, that the number of topics that make up the documents is known (Blei, Ng, and Jordan 2003; Blei 2012). These assumptions impose limitations on what themes LDA can distinguish between, and what inferences researchers can draw.

First, the “bag of words” assumption means that information about the ordering and context in which words occur is ignored. Thus, LDA cannot distinguish between semantically similar topics where contextual information has important implications (Fligstein, Brundage and Schultz 2017). As far as LDA is concerned, speakers who assert and those who deny the scientific consensus on climate change may both use the same topic so long as speakers do not use distinct words characteristic of their positions. Second, the assumption that the order of

documents in the corpus does not matter means that the content of topics is assumed to be static over time. Because many more press releases appeared after 2006 than before, LDA may therefore have difficulty identifying frames that were used mainly in the earlier period, since it does not give special priority to texts based on chronological ordering. Oversampling of years with smaller numbers of releases partially alleviates this problem.

To address these limitations, I complement my identification of frames through topic modeling with close readings of fifty to one hundred press releases representative of each topic. The qualitative analysis allows me to enrich my interpretations of the meanings of topics and to gain a deeper understanding of how the same topic may shift in meaning over time and depending on its use by different types of organizations. I also note which frames are contested or used differently across the political divide.³

I use the MALLET software program to implement LDA (McCallum 2002). I generate and interpret models ranging from 20 to 175 topics, basing my interpretation of topics on words that characterize the topic and close readings of representative releases. In selecting a final model, I consider the following principal criteria:

1) *Analytic utility*: The model identifies topics that are “substantively meaningful and analytically useful,” while sorting filler speech into a smaller number of irrelevant topics (DiMaggio et al. 2013);

2) *Topic quality*: Relevant topics do not exhibit flaws such as joining multiple concepts or combining very specific and very general words (Mimno et al. 2011);

3) *Comprehensiveness*: The model captures all topics an informed observer knows are present within the corpus; and

4) *Robustness*: Topics in the selected model are not idiosyncratic to that model, but rather appear in multiple iterations of models in slightly different forms (DiMaggio et al. 2013).

Mapping Frame Combinations. Next, I use multidimensional scaling (“MDS”) and cluster analysis to graphically represent patterns in frame usage. These techniques allow me to examine how organizational spokespeople combine different frames to construct larger narratives. I first construct a frame co-occurrence matrix describing how often each frame identified in the topic model was used with each other frame in organizations’ press releases. The co-occurrence matrix is a symmetrical square matrix where values describe the proportion of press releases in which topic I co-occurs with topic J , relative to how often each occurs individually. Formally, I compute this proportion as $C_{I,J} = \frac{m}{i+j}$, where i is the number of press releases employing topic I , j is the number of releases employing topic J , and m is the number of releases employing both frames. Therefore, the co-occurrence value equals 0 if topics I and J never co-occur and 1 if both frames appear together every time either frame appears.

I submit this frame co-occurrence matrix to MDS. MDS facilitates analysis of the underlying factors producing patterns of similarity and difference among objects (in this case, occurrence of climate change frames) by producing an n -dimensional spatial configuration where more similar objects are located closer together in space (Borg and Groenen 2005). This allows me to visually represent frames that organizations tend to invoke together. Next, I submit the co-occurrence matrix to an average linkage cluster analysis, an automated classification algorithm,

³ Frames were considered uncontested if none of the fifty most representative press releases argued against a particular description of climate change or proposed solution.

to identify sets of frames that corporate spokespeople are more likely to use together in the same release (Kaufman and Rousseuw 2009), suggesting a cohesive narrative of appropriate action. I then compare the prevalence of frames in each identified cluster to examine whether any one narrative dominates organizational discourse.

Results

Topic Model. Balancing concerns for analytic utility, topic quality, comprehensiveness, and robustness, I prefer an eighty-five topic model to describe organizational climate discourse. This model generates meaningful topics appearing across multiple iterations of models and identifies topics corresponding to prominent frames discussed in the literature. For example, the “polar bears” and “small actions” frames identified in previous studies (Ereaut and Segnit 2006; Shanahan 2007) correspond respectively to topics I label “Climate Effects on Oceans, Wildlife, and Habitats” and “Everyday Green: Importance of Individual Choices, Purchases and Actions.”

Of the eighty-five topics, twenty-one represent descriptions of events or describe political topics not closely related to climate change (e.g., “Honors and Awards” and “Schools and Education”). An additional eleven topics capture combinations of tangentially-related issues (e.g., “Real Estate, Rainforests, and Paper/Catalogs”). Because these topics do not represent climate framing or are incoherent, I disregard them for the remainder of the analysis, leaving fifty-three substantive topics. Table 2.2 lists substantive topics by frame type. For a detailed description of all topics, including characteristic words and excerpts from representative press releases, see Supplementary Table A.1.

Some features of the topic model are consistent with a characterization of the climate debate as depoliticized. First, many prognostic frames describe market-based, technological, or voluntary solutions, and these frames are uncontested, meaning they have few or no detractors among the organizations in my sample. In one topic, for example, market-based interventions and financial products such as green investment and carbon offsetting are described as good for business interests as well as the environment. One of the most representative press releases from this topic describes an “Eco-Conscious Credit Card” that allows “consumers to fight global warming with every card purchase” (Fintura Corporation 2007). In addition, economic motivations to address climate change are highlighted, and no frame locates the source of the problem in structural features of capitalism.

Also consistent with a post-political characterization, organizational spokespeople propose principles to guide efforts to solve the problem that include collaboration between policymakers and stakeholders from multiple sectors of the economy, and policymaking that is responsive to industry’s needs. Press releases from these topics discuss how climate action can and should reconcile environmental benefits with businesses’ concerns. For example, the most representative release from the “Industry Demands for Regulation Mindful of the Needs of Business” topic advocates for a regulatory reform that “marries what industry needs—which is technological flexibility, economic certainty, and predictability—with guarantees for environmental progress” (Clean Power Group 2001). In addition, the model identifies an identity frame where businesses are described as allies in addressing climate change (“Businesses and Organizations as Committed to Sustainability”). This is consistent with a view that the climate debate takes the existing socio-economic structure for granted and replaces a conflictual view of politics as a clash of interests and ideologies with a call for technocratic management and collaboration among elites.

Table 2.2: Topic Model with 53 Substantive Frames: Topics by frame type and abbreviation used in subsequent analyses.

Frame	Abbreviation
Diagnostic Frames (Descriptions)	
1. Climate change as business issue: climate risk and investors.	Climate as Business Issue
2. Climate effects on oceans, wildlife, and habitats.	Effects on Natural World
3. Climate change as harming public health.	Health
4. Pollution, toxins, and clean water and air. (Many discuss carbon emissions as pollution.)	Pollution
5. International problems and threats, including climate.	Internat'l Threats and War
6. Climate change as catastrophe: Sense of urgency, extremity, and history.	Climate Change as Catastrophe
Descriptions paired with sources of authority	
7. Climate science and climate effects on oceans, glaciers and ice.	Climate Science
8. Evidence of global warming: Certainty and negative effects.	Evidence GWarming
Descriptions paired with prognostic framing (calls for solutions)	
9. Climate change as global problem with disproportionate impacts; and calls for action and adaptation.	Climate Change as Global Problem
10. Climate change as causing increased risk, especially of extreme weather; and need for preparation and adaptation.* (Also expeditions showing effects of climate change.)	Extreme Weather
Descriptions paired with identity framing (naming group responsible for problem)	
11. Oil drilling as destruction of sensitive areas; government-industry relations responsible.	Oil Drilling Destructive
Prognostic Frames (Solutions)	
Goals or criteria for action	
12. Clean but also reliable and affordable electricity. (Emphasis on renewables, especially wind, but also coal, other fossil fuels.)	Grid Clean & Reliable
13. Industry demands for regulation mindful of the needs of business. (Emphasis on energy efficiency; costs & benefits; lead time to implementation; incentives; economic growth.)	Regulation Mindful of Business Needs
14. Need for strategic, deliberative policy-planning, including stakeholders from multiple sectors of economy.	Strategic Policymaking and Planning
15. Principles, frameworks, and effective processes for policies and agreements. (Emphasis that policies be grounded in scientific and business expertise.)	Framework Process
Particular, contested solutions	
<i>Technologies and fuels</i>	
16. Smart grid and electricity transmission.	Smart Grid
17. Nuclear power.	Nuclear Power
18. Biofuels.	Biofuels
<i>Policies or state-based action</i>	

19. Regional and state-based climate initiatives. (Emphasis on Cape Wind and RGGI.)	Regional
20. Federal legislation. (Prognostic framing and description.)	Federal Legislation
21. EPA regulations.	EPA Regulation
22. Environmental regulation as protecting human health and safety.	Regulations to Protect Public Health
23. Cleaner transportation: Public transit, infrastructure, vehicles and fuels.	Clean Transport
24. Fuel efficiency & fuel economy standards.	Fuel Economy
25. International action and treaties on environment. (Prognostic framing and description.)	Internat'l Treaty
Particular, uncontested solutions	
<i>International cooperation</i>	
26. International affairs and international cooperation. (Prognostic framing and descriptive.)	Internat'l Affairs
27. International cooperation, in the public and private sector, especially with China.	Internat'l Coop
<i>Local initiatives</i>	
28. Green building and urban planning.	Green Building
29. Local action and cities' adaptation and greenhouse gas reduction efforts.	Local Action
<i>Technologies and fuels</i>	
30. Low-emissions vehicles.	Low-Emit Vehicles
31. Advanced technologies, research and development.	Advanced Tech
32. Alternative fuels, particularly clean diesel/biodiesel.	Alternative Fuel
<i>Voluntary actions and market-based mitigation methods</i>	
33. Voluntary conservation efforts of utilities and electric companies.	Voluntary Conserve
34. Greenhouse gas reduction methods described as good for business goals: Offsets, trading, and pilot programs.	GHG Reduction Good for Business
35. Climate finance: Need for green investment and implications for financial sector.	Climate Finance
<i>Individual behavior</i>	
36. "Everyday green:" Importance of individual choices, purchases and actions.	Everyday Green
37. Energy efficiency and economic incentives to conserve. (Primarily discussing consumers and households as drivers of change.)	Energy Efficiency
38. Consumer choices, recycling, and environmentally friendly products.	Green Consumer
Prognostic frames where topic flaws prevent further categorization.	
39. Agriculture, animals, and food.* (Includes several agriculture-related solutions, contributions of farming to climate change, and unrelated press releases.)	Agriculture
40. Forests, deforestation, and tree planting projects.* (Includes reforestation efforts, climate impacts on forests, and descriptions of forests.)	Forests

Motivational Frames (Motives for action or inaction)	
<i>Economy</i>	
41. Energy policy and jobs.	Energy Jobs
42. Costs and economic consequences of climate treaties and policies.	Costs Climate Policy
43. Taxes, costs, budgets and economic effects.* (Includes descriptive discussion of budgets.)	Budgets & Costs
<i>National security and national identity</i>	
44. Energy dependence.* (Also discussions of global oil markets.)	Energy Dependence
45. Patriotism, hope, and American greatness.	Patriotism
<i>Values and public opinion</i>	
46. Public opinion specific to climate and energy.	Public Opinion (Climate)
47. Public opinion, with emphasis on international public opinion and lifestyle/marketing issues.* (Includes some unrelated topics.)	Public Opinion (General)
48. Faith, morality and stewardship.* (Also discussions of Leipzig Declaration.)	Morality and Faith
Identity Frames (Portrayals of friends or foes of the common good)	
49. Shareholder activism vs. bad corporate actors.	Bad Corporation
50. Science and the public.	Public Science
51. Accusations and calls for accountability.* (Accusations directed against oil companies, but also Barack Obama, others.)	Accuse
52. Businesses and organizations as committed to sustainability. (Sub-theme arguing that private company partnerships and innovation can solve environmental problems.)	Businesses Committed to Sustainability
Uncategorized Frames	
53. Small business as solution or motivation for action (or inaction).* (Includes discussion of entrepreneurship as solution to climate change, impacts on small business as a reason for action or inaction, or small business support for, or opposition to, a proposed action.)	Small Business

*=topic somewhat flawed. Following Mimno et al. (2011), I consider topics flawed if they join multiple concepts, combine very specific and very general words, or if there is no clear pattern relating the words that comprise the topic. For details on all topics, including non-substantive or incoherent topics excluded from analysis, see Supplementary Table A.1.

However, other characteristics of the model are consistent with the view that climate discourse is polarized and divisive. The model identifies two conflict-oriented identity frames that describe groups or individuals as engaged in actions opposed to the public good. With these frames, organizations levy accusations (“Accusations and Calls for Accountability”) and identify irresponsible corporate actors (“Shareholder Activism vs. Bad Corporate Actors”). One frame (“Oil Drilling as Destruction of Sensitive Areas”) describes collusive government-industry relations as responsible for environmental degradation.

In addition, diagnostic frames describe climate change as a threat to human health and safety, coming in the form of pollution, rising sea levels, and extreme weather events. Concerns of justice, morality, and faith are cited in motivating action to combat climate change (“Faith, Morality, and Stewardship”), with many representative press releases coming from faith-based organizations or environmental groups citing concerns of environmental justice. These topics frame climate change as a moral problem rather than a technical or economic issue. Finally, my qualitative reading indicates many of these topics are used differently across the political divide, suggesting a contentious discourse.

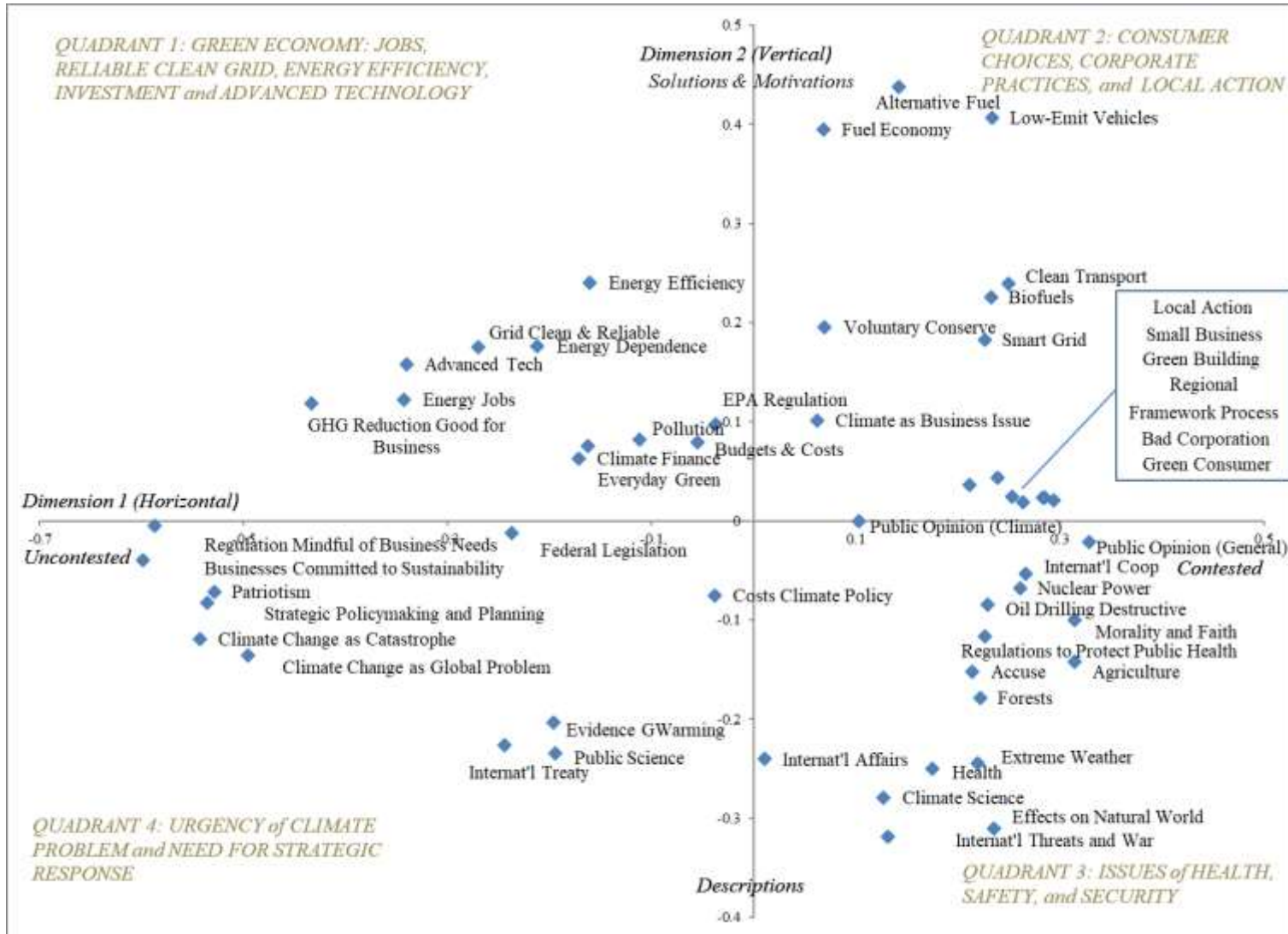
The topic model therefore identifies frames consistent with each of the prominent, conflicting characterizations of the climate change debate that exist in the literature. I next turn to multidimensional scaling to represent how organizational actors combine different types of frames.

Multidimensional Scaling. Multidimensional scaling (“MDS”) allows me to graphically represent patterns in how organizations combine frames to produce meanings. As a reminder, MDS plots objects in n -dimensional space, such that frames closer together on the MDS graph are more likely to appear together. Examination of the scree plot of eigenvalues suggests a two-dimensional solution, with the amount of variation explained leveling off after the second dimension (see Supplementary Figure A.1). Together, these two dimensions explain 38.7% of variation in frame co-occurrence.

Inspection of the MDS configuration (Figure 2.1) shows that frames co-occur in meaningful patterns, suggesting larger interpretive frameworks. For example, the upper left-hand quadrant primarily describes methods and motivations for reconciling environmental concerns with economic growth. Meanwhile, the frames in the upper right-hand quadrant primarily concern business practices, consumer choices, and local action. Most important for my purposes, however, are the bottom two quadrants.

The bottom right-hand quadrant includes frames characteristic of environmentalist discourse, where issues of health and safety are motivated by moral and democratic concerns. Climate change is described as a threat to human health and the natural world, and these descriptions are paired with a discussion of climate science. Prognostic frames include calls for environmental regulation and debates over nuclear power, and motivational frames cite concerns of morality, faith, and public opinion. In addition, my close reading of press releases suggests many of these frames are used by different organizations with opposite political intent. Thus, this quadrant represents environmentalist frames that other organizations attempt to discredit. For example, releases that combine discussion of climate science with descriptions of effects on health include warnings from biologists that warmer summers will increase prevalence of botulism outbreaks (Buffalo State College 2011), but also include press releases seeking to delegitimize these claims as “Scaremongers’ ‘Bleak, Black’ Tales” (Phillips Industries 1996).

Figure 2.1: Patterns of Frame Usage: Multidimensional scaling analysis of climate change frames' co-occurrence in organizations' press releases.



The bottom left-hand quadrant, on the other hand, suggests a potentially paradoxical combination of frames that simultaneously stresses the seriousness of the climate threat and argues for a deliberate and measured response. Here, a description of climate change as an urgent, catastrophic problem is matched with a call for strategic, business-friendly policy solutions. While this combination of frames might seem self-contradictory, theorists of post-politics have argued that framing climate change as an unprecedented and historical threat reinforces a depoliticized framing of the issue because such an “apocalyptic imaginary” is “powerful in disavowing or displacing social conflict and antagonisms” (Swyngedouw 2010, pg. 219). Here, automated techniques reproduce this theorized pattern, where organizations employ a catastrophic framing of climate change at the same time as they advance strategic and cooperative policy-making as the proper way to address the issue. In addition, business elites are framed as committed to sustainability and so as allies in advancing climate policy, further evidence that this combination of frames represents post-political discourse.

Finally, examining the overall configuration of frames suggests that the first, horizontal MDS dimension separates contentious from depoliticized frames. The two conflict-oriented identity frames (“Accusations and Calls for Accountability” and “Shareholder Activism vs. Bad Corporate Actors”) fall on the right-hand side of the graph, as does the only diagnostic frame that names an identifiable group as the cause of the problem (“Oil Drilling as Destruction of Sensitive Areas”). The right-hand side also includes frames that cast climate change as an issue of health and safety and that motivate action by highlighting moral concerns.⁴ Conversely, frames that emphasize the need to balance environmental protection with economic growth fall on the left-hand side of the graph, as do frames describing elite collaboration and market-based mitigation techniques. The frame on the furthest left-hand extreme of the graph is the consensus-oriented identity frame, “Businesses and Organizations as Committed to Sustainability.”

So far, then, results from the topic model and the MDS configuration suggest that scholars arguing that climate discourse is polarized and those arguing that it is depoliticized may both be right. Frames where groups are named as antagonists, where claims are contested, and where action is motivated by moral concerns tend to be used together, suggesting a contentious discourse. At the same time, frames that stress the maintenance of economic growth, collaboration among elites, and governmental policy that defers to business needs tend to be used together as well, suggesting a depoliticized discourse. As mentioned above, it is possible that these two types of discourse exist in parallel, likely used in different contexts and by different organizations. So far, this is the resolution my analysis suggests.

Cluster Analysis. I turn next to cluster analysis to lend further clarity to this debate. To recall, scholars of post-politics would predict that prognostic frames describing market-based solutions and collaborative expert management should cluster with identity frames describing business leaders and other elites as protagonists. The MDS analysis suggests these frames regularly co-occur in organizations’ press releases. If this single frame cluster dominates discourse, it would be strong evidence this discourse is largely depoliticized.

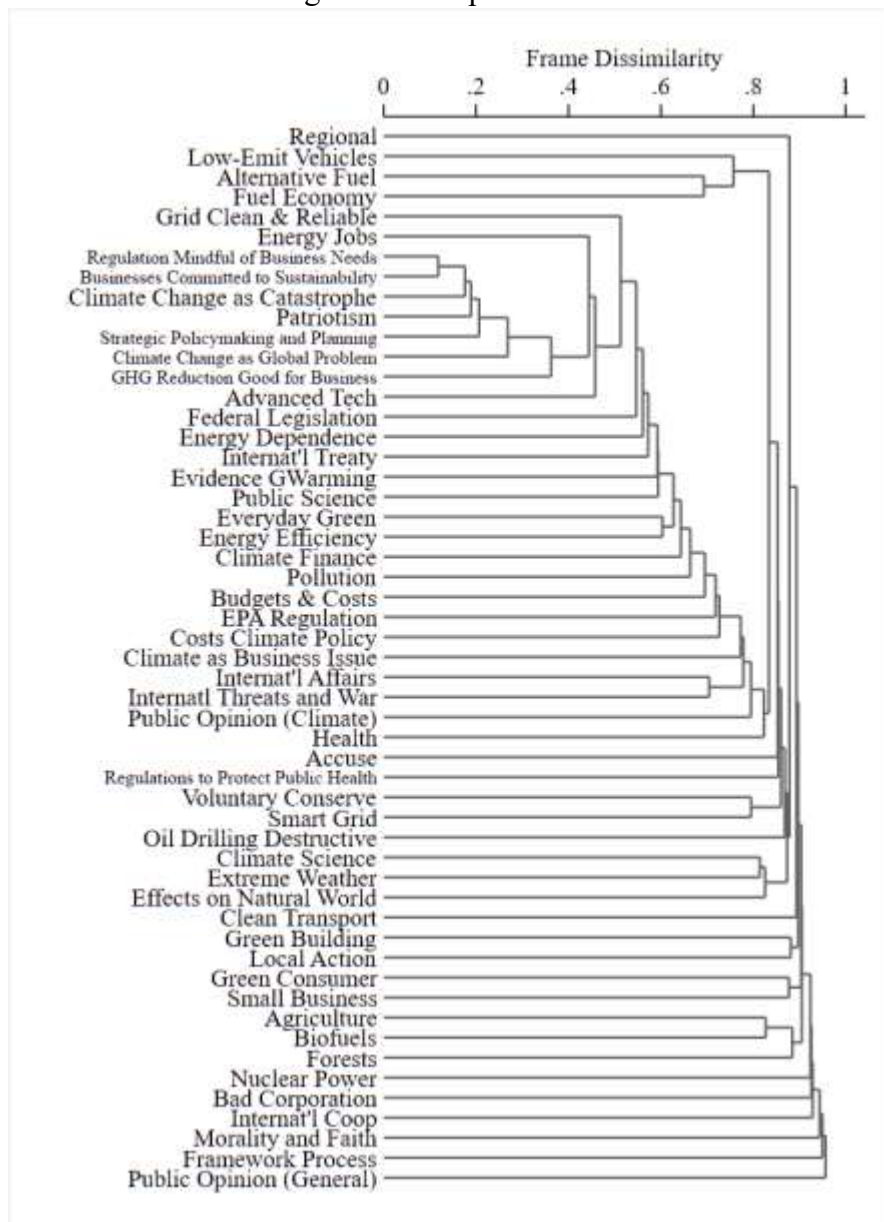
On the other hand, scholars arguing that climate discourse is polarized would predict two clusters of frames corresponding to different sides of the debate, consistent with Hoffman’s

⁴ There are exceptions to this observation. For example, the “Pollution, Toxins, Health, and Clean Water and Air” frame represents a traditional environmental issue that implicates moral concerns, yet falls on the left-hand side of the graph. However, this frame falls near the graph’s center, and strict delineation of left- and right-hand quadrants is somewhat arbitrary.

(2011) description of a “cultural schism.” However, the MDS analysis suggests a different type of contentious discourse; opponents of climate action adopt environmentalist frames with the intent of discrediting them, consistent with McCright and Dunlap’s (2000, 2003) analysis of the conservative movement’s efforts to construct climate change as non-problematic. Evidence of either of these patterns (i.e., either two competing clusters or one dominant cluster composed of contested frames) would suffice to characterize this discourse as contentious.

Figure 2.2 displays the dendrogram produced by an average linkage cluster analysis on the frame co-occurrence matrix. The horizontal axis of the dendrogram represents frame dissimilarity. Frames that co-occur more regularly are connected to one another at lower levels of the x-axis, suggesting greater clustering.

Figure 2.2: Frame Clusters: Dendrogram of frame dissimilarity. Dissimilarity is based on patterns of frame co-occurrence in organizations’ press releases.



The dendrogram indicates only a small number of frames regularly co-occur in organizations' discussions of climate change, and these are the seemingly paradoxical frames stressing the extremity of the problem and urging a deliberate, measured response. Organizations describe climate change as an urgent, catastrophic problem, then call for business-friendly policy solutions and a strategic response involving stakeholders from multiple sectors of the economy. Businesses are framed as committed to environmental protection and as allies in addressing climate change. Climate change is discussed as a global problem, and patriotic language invoked. These frames cluster together with a dissimilarity measure of about .3.

No other frames cluster together at similar levels of cohesion. Instead, the dendrogram suggests that additional frames are added to this "core cluster" rather than constituting competing clusters of frames. Most commonly, market-based or voluntary mitigation methods are added to the core cluster, then concerns about impacts of energy policy on jobs and discussions of advanced technologies. While the topic model identifies contentious frames, they are used relatively independently rather than combined to form larger narratives. Inspection of two cluster stopping rules (Caliński–Harabasz pseudo-F and Duda Je(1)/Je(2) indices) confirms a one-cluster solution best describes patterns of frame co-occurrence.

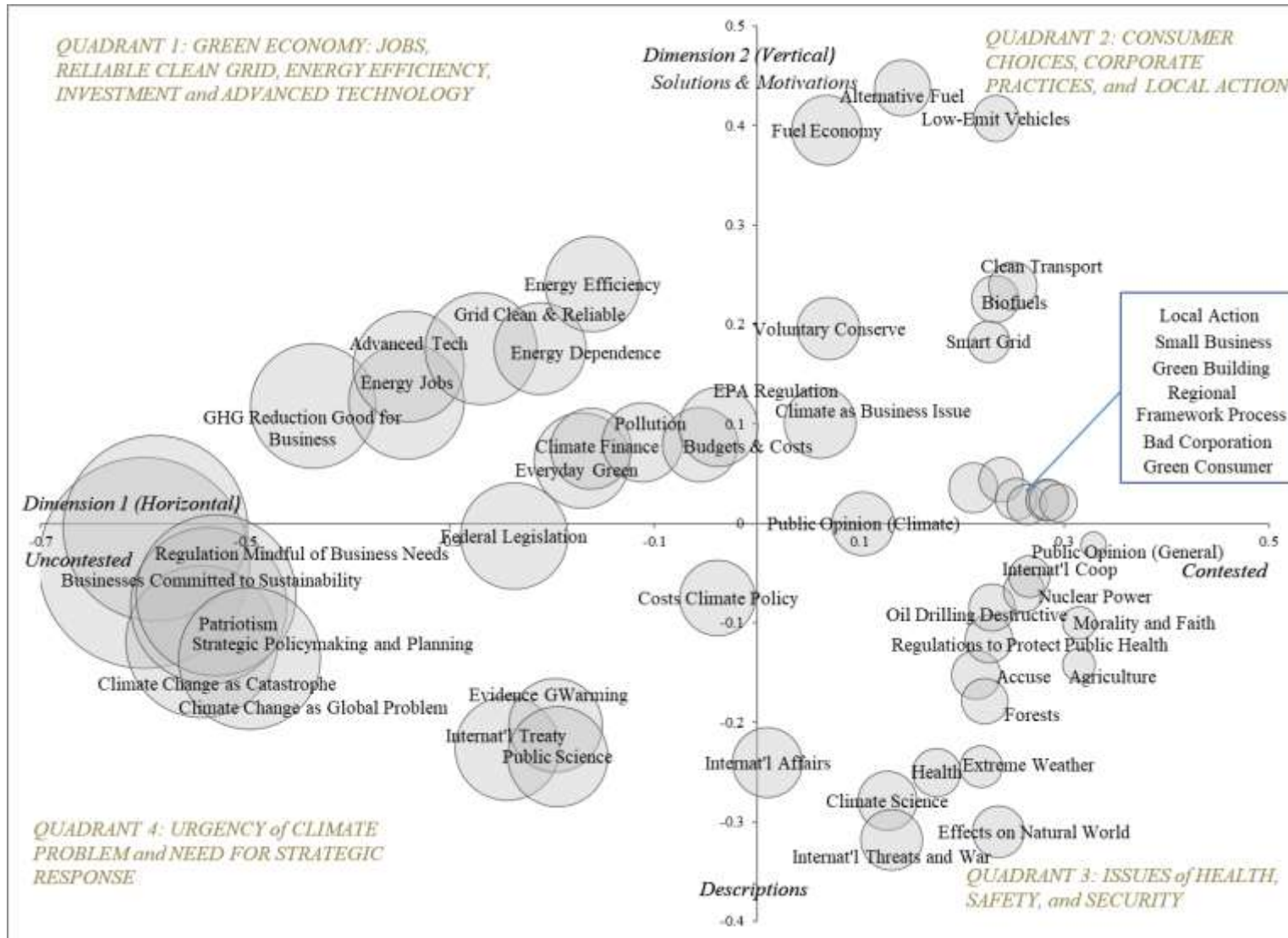
These results suggest organizations' framings of climate change fall into a single cluster, with no other clusters of frames constituting a rival discourse. This core cluster closely matches scholars' descriptions of post-political climate discourse. Next, I examine the degree to which this cluster dominates discourse. Figure 2.3 reproduces the MDS configuration, except topic markers are sized such that their area represents topic prevalence.⁵

Three trends stand out. First, frames in the core cluster are by far the most prevalent frames. Each of these frames occurs in about 40% of press releases on average. The most frequently used frame—the consensus-oriented identity frame casting business as committed to sustainability—appears in 62.1% of releases. For comparison, the average prevalence of frames outside the core cluster is 6.9%.

Second, the prevalence of each frame decreases as we move along the first dimension of the graph. Recalling that this dimension corresponds to the degree to which topics represent politicized framing, organizational spokespeople clearly utilize depoliticized frames more commonly than they employ contentious framings. Finally, contentious frames highlighting concerns of morality and identity are rare. For example, the "Faith, Morality, and Stewardship" frame, which includes claims from faith-based groups and the environmental justice movement, occurs in only 1.6% of press releases.

⁵ Following Tangherlini and Leonard (2013), I employ a 4% threshold for topic occurrence. Robustness analyses varying this cut-off produce substantively similar results.

Figure 2.3: Frame Prevalence: MDS configuration, where marker size represents topic prevalence.



These results provide strong evidence that depoliticized framings dominate organizations' press releases. Yet it is possible that high levels of homogeneity among businesses in promoting depoliticized frames might mask more contentious discourse among civil society organizations. To assess this possibility, I compare the prevalence of selected frames among business, government, and advocacy organizations, focusing on frames in the core cluster of post-political discourse on the one hand, and the identity and morality frames that most clearly represent politicized discourse on the other.

As shown in Table 2.3, depoliticized framing is most common among businesses but remains prevalent across organizational types. For example, the identity frame casting business elites as allies in advancing climate policy is significantly more likely to be used by organizations concerned with production of goods than by other organizations, and is significantly less likely to be used by advocacy organizations. Yet despite this relative drop in usage, it remains the most prevalent frame employed by advocacy organizations, appearing in over half (54.1%) of their press releases. Further, additional analyses reveal that this drop is largely due to conservative organizations' relatively rare use of this frame. Statistically, environmental organizations are no less likely than other organizations to describe businesses as protagonists in addressing climate change (see Supplementary Table A.2).

Similarly, though the "Industry Demands for Regulation Mindful of the Needs of Business" topic tends to be used most by professional organizations and business coalitions, it is also widely used by advocacy organizations, appearing in 44.7% of their releases. In one representative press release, the Environmental Defense Fund enumerates the advantages of market-based approaches to climate change mitigation as compared to traditional "command-and-control" policies. Mirroring the language used by industry groups, advantages they discuss include "compliance cost minimization, technological innovation, adaptability and relief of regulatory burdens" (Environmental Defense Fund 2008).

As another illustration of how civil society organizations employ depoliticized discourse, the most representative press release from the "Need for Strategic, Deliberative Policy-Planning" topic comes from the nonprofit Reform Institute, describing a symposium the Institute convened to invite collaboration between policymakers and business leaders. After describing this meeting of experts, Reform Institute Chairman Paul Bateman argues that symposia like these are critical to addressing climate change because "[c]omprehensive energy reform fueled by collaboration... is the only viable approach" (Reform Institute 2009). The quantitative data show these are not isolated instances of consensus-oriented discourse among civil society organizations.

Table 2.3: Frame Prevalence across Organization Types: Proportion of press releases containing at least 4% of words from selected climate change frames.

Frame	Prevalence by Organization Type							
	Overall Prevalence	Goods, Wholesale Trade, Transportation and Warehousing	Services and Retail Trade	Other Businesses	Social and Political Advocacy	Business, Professional or Trade Associations	Other Civil Society	Government
Core cluster and frequently co-occurring frames.								
Businesses and organizations as committed to sustainability.	62.10	77.99***	59.45	73.13†	54.07^^^	58.10	61.98	61.93
Industry demands for regulation mindful of the needs of business.	47.91	60.06***	35.52^^^	32.84^	44.68‡	73.81***	34.71^^	46.59
Climate change as catastrophe.	32.47	18.55^^^	38.79**	35.82	41.75***	28.57	27.27	25.00^
Need for strategic, deliberative policy planning.	34.22	25.16^^^	43.32***	34.33	31.52	39.05	38.84	28.41‡
Patriotism, hope, and American greatness.	36.03	22.33^^^	38.79	23.88^	44.89***	31.43	44.63*	34.66
Climate change as global problem.	28.45	22.96^	27.71	13.43^^	39.46***	27.62	24.79	19.32^^
Greenhouse gas reduction methods described as good for business goals: Offsets, trading, and pilot programs.	21.95	34.28***	20.40	11.94^	18.58^	26.19	14.05^	16.48‡
Energy policy and jobs.	18.72	15.72	9.82^^^	10.45‡	23.17**	30.48***	28.10**	14.77
Advanced technologies, research and development.	17.36	32.39***	17.63	41.79***	5.64^^^	23.33*	9.92^	10.23^

Contentious identity frames and diagnostic frames citing particular group as responsible.								
Shareholder activism vs. bad corporate actors.	2.04	0.63‡	1.76	2.99	4.18***	1.90	0.83	0
Accusations and calls for accountability.	3.39	0.63^^	2.52	1.49	6.89***	3.81	4.96	0
Oil drilling as destruction of sensitive areas.	3.17	1.89	0.50^^	1.49	7.52***	0.48^	4.96	2.27
Frames describing or implicating moral concerns.								
Faith, morality and stewardship.	1.58	0.94	0.25^	2.99	3.55***	0	2.48	1.14
Climate change as harming public health.	3.39	0.94^	4.03	2.99	5.22*	0.95‡	4.96	3.41
Pollution, toxins, and clean water and air.	8.88	7.55	3.02^^^	13.43	11.90**	5.71‡	9.09	18.18***
Environmental regulation as protecting human health and safety.	3.22	1.26^	2.77	1.49	4.18	3.33	4.13	5.11

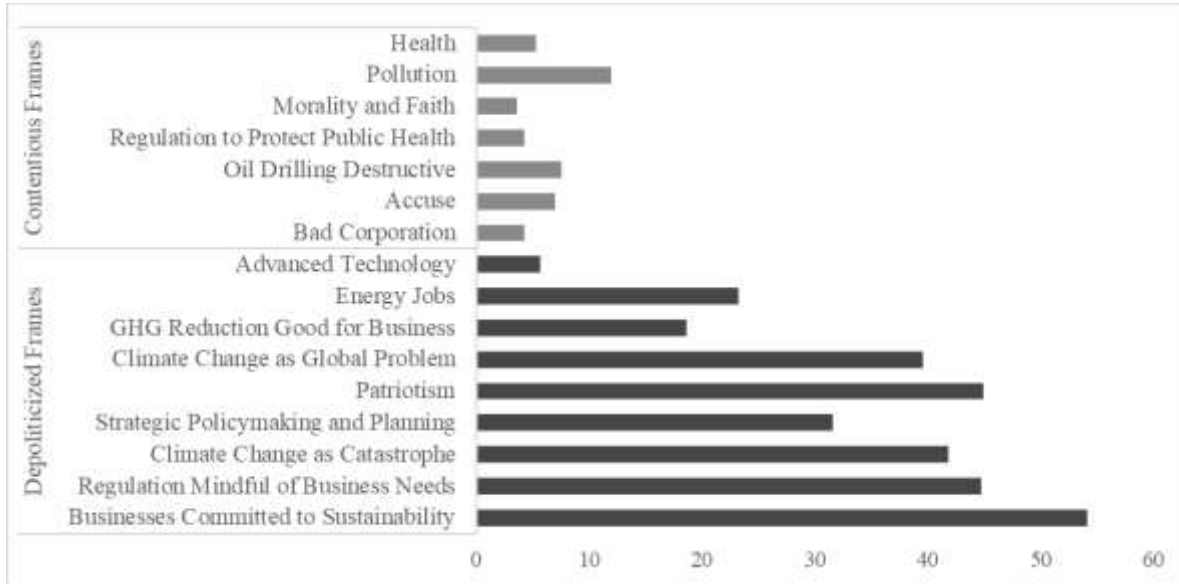
Note: Significance levels indicate if frame is significantly more or less likely to be used by a particular type of organization relative to all other types, and symbols vary according to whether the frame is more or less likely to be used.

*If frame is more likely to be used by organization type, *** $p < .001$, ** $p < .01$, * $p < .05$, and † $p < .10$.*

If frame is less likely to be used by organization type, ^^ $p < .001$, ^ $p < .01$, ^ $p < .05$, and ‡ $p < .10$.

Turning to the identity and morality frames that represent contentious climate discourse, it is clear that these frames are primarily used by social movement organizations, yet remain marginal even here. Nearly all frames citing moral motivations or identifying antagonists are more likely to appear in press releases from advocacy organizations. Nevertheless, these frames remain rare compared to consensus-oriented frames. Figure 2.4 graphically represents the prevalence of contentious and depoliticized frames in advocacy organizations’ press releases.

Figure 2.4: Frame Prevalence among Advocacy Organizations: Proportion of advocacy organizations press releases containing at least 4% of words from selected climate change frames.



The most prevalent contentious frame, where climate change is framed as an issue of pollution, appears in 11.9% of advocacy organizations’ releases, less than half the prevalence of any frame in the core cluster. The frame describing morality-based motivations to address climate change appears in only 3.6%. This suggests that while contentious framings are more common in social movement discourse than in business discourse, these framings remain far less common than post-political presentations of the issue.⁶

Discussion

These results provide compelling evidence that a single, post-political framing dominates American organizations’ official pronouncements about climate change. Organizations describe climate change as a catastrophic problem that nevertheless requires a measured response,

⁶ Additional analyses comparing frame prevalence among advocacy organization types confirm this observation. Contentious frames invoking concerns of morality and identity are most common among environmental and conservative organizations, but none of these frames reaches the prevalence of frames in the core cluster, and most remain rare in absolute terms (see Supplementary Table A.2).

mindful of the needs of the business community and involving their input in the policymaking process. Within this discursive framework, social and political antagonisms are rarely discussed, the socioeconomic order is left unquestioned, and solutions are preferred to the extent that they can be integrated into the economic and political status quo.

Using automated text analysis, I find that organizations use both depoliticized and contentious framings to discuss climate change. However, organizational spokespeople commonly combine post-political frames to form a coherent, depoliticized narrative, and this distinct combination of frames dominates discourse. In contrast, contentious frames are used relatively infrequently and are not combined in predictable ways to form a counter-narrative where issues of morality or justice are discussed, powerful interests are cited as responsible for the problem, or structural reform is called for. Surprisingly, post-political discourse predominates even in advocacy organizations' press releases.

This finding is all the more striking in light of the evidence that climate change marks a tense social cleavage in the United States. The prospect of regulating greenhouse gas emissions challenges the interests of powerful institutions, calls into question the sustainability of growth-oriented capitalism, and has galvanized a concerted and well-organized counter-movement (Blühdorn 2013; Brulle 2014a; Levy and Egan 2003; McCright and Dunlap 2000, 2003; Newell 2006). In addition, public opinion around climate change in the U.S. is strongly polarized, leading some scholars to suggest that the characterization of climate discourse as post-political is inappropriate in the U.S. (e.g., McCarthy 2013). However, the current research suggests that—despite a social reality in which there is intense disagreement and political struggle around climate change—organizations' public statements nonetheless consistently mis-portray this issue as marked by consensus and cooperation.

These results stand in contrast to prior work that highlights the central place of contentious discourses in the climate change debate. These discourses include the climate justice frame on the left (e.g., Hadden 2015), and efforts to cast doubt on mainstream climate science on the right (e.g., Boussalis and Coan 2016; McCright and Dunlap 2000, 2003). To be clear, I am not arguing that either brand of contentious discourse is unimportant. On the contrary, the influence of frames undermining climate science can be seen in trends in public opinion and in the pronouncements and policies of elected officials. However, this analysis highlights the importance and prevalence of a very different kind of discourse—one that is technocratic, expert-oriented, and accommodationist—among the wide variety of organizations represented in my sample.

These findings suggest that both businesses and civil society organizations have responded to mounting evidence of climate change by elaborating new methods of regulation that seek to address environmental crisis, but in a way that expands rather than constricts the operation of neoliberal capitalism. In my analysis of over 1,700 press releases, automated text analysis procedures do not identify a single topic discussing the problem as resulting from characteristics of the socioeconomic order or calling for structural economic change. Few frames identify industry interests as responsible for causing the problem, and those that do are rarely employed. Instead, post-political climate discourse privileges market-based and voluntary solutions that include economic elites as co-producers of climate policy, that are mindful of the needs of the business community, and that address environmental degradation while opening up

market opportunities to include newly privatized biophysical commodities (Castree 2008; Oels 2005; Peck and Tickell 2002). This is consistent with the view that industry elites and their allies have responded to increasing public attention and scientific certainty around climate change with hegemonic incorporation of environmentalist claims, constructing responses to the problem that reinforce rather than challenge existing power relations (Levy and Egan 2003).

More puzzling is why advocacy organizations employ depoliticized discourse. It is possible that adoption of a post-political frame was a strategic decision on the part of movement leaders to increase their perceived legitimacy or gain access to influential decisionmakers (Skocpol 2013). Alternately, economic ties between businesses and environmental organizations might compromise movement leaders' ability to frame the issue in preferred ways (Pfeffer and Salancik 1978). While unexpected, this finding is consistent with previous research on the cooptation of the U.S. environmental movement. In particular, my findings are well-aligned with scholars' claims that the relative ineffectiveness of this movement stems in part from its promotion of technical, problem-solving approaches to environmental issues, which leave unaddressed the larger social causes of environmental degradation (e.g., Blühdorn 2013; Brulle 2010; Shellenberger and Nordhaus 2009).

Such a discursive environment poses challenges for social movements and others wishing to address this problem. Because post-political climate discourse frames environmental and economic goals as complementary rather than conflicting, it may provide policymakers with motivation or cover to pursue environmental objectives (Kim and Thurbon 2015). However, this framing also provides an incomplete depiction of the social dynamics causing the problem and limits the range of policy options under consideration (Brulle and Dunlap 2015; Swyngedouw 2010; Wright and Nyberg 2017). In addition, it may help explain the failure of environmental organizations to achieve major policy goals, as this consensus-oriented discourse distorts a highly contentious political reality and may lead proponents of climate action to underestimate the opposition they are likely to face (Skocpol 2013). Finally, post-political discourse has several features that are likely to discourage engagement around climate issues for many Americans.

First, because morally-charged messages cast political action as a way to symbolically reaffirm strongly held identity and value commitments, these appeals can encourage public interest in political issues (e.g., Sears and Funk 1991). However, post-political discourse tends to neglect moral appeals, centering instead claims to elite authority and technical expertise. Second, theorists of post-politics have argued that climate discourse fails to identify either a "privileged subject of change" or an ideological opponent on which to lay the blame (Swyngedouw 2010; Kenis and Lievens 2014), a claim which my empirical analysis supports. However, prior studies suggest that awareness of shared grievances and formation of adversarial attributions underlie development of oppositional consciousness and politicized collective identity, which in turn facilitate political mobilization (Mansbridge and Morris 2001; Mols 2012; Simon and Klandermans 2001). This suggests that climate frames identifying specific groups as responsible for causing the problem, and other groups as specifically harmed, would be more likely to encourage mobilization than the current, consensus-oriented discourse.

Finally, framing climate change as an issue best handled by technocratic collaboration may discourage interest in the issue among many Americans, particularly those with negative associations toward elite groups. By portraying elites as key protagonists, a post-political frame

implicitly casts most individuals as outside the range of stakeholders authorized to act on climate change (Kenis and Lievens 2014; Swyngedouw 2011). Further, anti-elite and populist tendencies may lead many Americans to distrust the coterie of experts who are framed as leading the struggle against climate change. And with scholars (e.g., Bonikowski and Gidron 2016) and media commentators (e.g., Zakaria 2016) suggesting such sentiments have risen in recent years, we can expect this feature of post-political climate discourse to discourage interest in this issue for many Americans.

Despite these contributions, the current research has shortcomings I hope future research will address. Most notably, I have restricted my analysis to framings of climate change in organizations' press releases. While this relatively limited scope is appropriate for a first empirical test, further research is necessary to understand how the elite-oriented discourse I find across business, government, and advocacy organizations' press releases relates to the larger discursive environment around this issue. In particular, future research should investigate where and how more emotionally-charged and conflict-oriented discourses arise, such as by examining climate framing in more interactive and sensory-rich media environments—including talk radio, TV news, and social media—or in direct actions and protest events through which smaller civil society organizations seek to mobilize adherents. In addition, I end my analysis in 2013, and future research should investigate to what extent contentious framing has become more prevalent in the years since then.

In conclusion, I find that American organizations consistently promote a post-political framing of climate change where the problem is described as real and serious, but appropriate action to address it should be careful, mindful of the needs of business, and inclusive of economic elites as allies in environmental problem-solving. This framing misrepresents or elides fundamental issues of power and conflict inherent in climate change as a social problem. I suggest that post-political discourse may represent an effort to symbolically address environmental crisis while maintaining the perceived legitimacy of the economic and political status quo. To the extent that climate change framing emphasizes elite collaboration at the expense of promoting values-based arguments for action, a substantial portion of Americans may remain disengaged from this vital social issue.

CHAPTER 3

WHOSE MESSAGES MAKE THE NEWS ON CLIMATE? LARGE BUSINESSES AND ADVOCATES AGAINST CLIMATE ACTION RECEIVE HEIGHTENED MEDIA VISIBILITY

In this chapter, I move from describing organizations' framings of climate change to asking how and when those messages become part of mainstream public discourse, investigating whose voices are most likely to receive news coverage in the U.S. debate about climate change.

I use plagiarism-detection software to track a large random sample of business, government, and social advocacy organizations' press releases about climate change, examining which messages receive attention in three large American newspapers. I find that advocates against action to address climate change are about twice as likely to be cited in national newspapers as are advocates for climate action. In addition, business coalitions and very large businesses are more likely than other types of organizations to receive coverage. Surprisingly, scientific and technical organizations are less likely to receive news coverage than are other organizations, suggesting that organizations with presumably greater expertise to speak to the scientific issues around climate change are afforded less media attention. These findings suggest that journalistic norms and organizational power have each shaped the media environment around climate change.

Introduction

Whose voices are most likely to receive news coverage in the public debate about climate change in the United States, and what leads them to receive heightened visibility? Answering these questions is important because media representations of climate change may influence public understanding, public opinion, and willingness to engage personally or politically on this vital social issue (Boykoff and Roberts 2007; Hulme 2009; Lewandowsky, Gignac, and Vaughan 2013). For example, some scholars have suggested that disproportionate coverage of contrarian scientists⁷ in mainstream media has played an important role in the protracted uncertainty around the reality and urgency of climate change among portions of the American public (McCright and Dunlap 2003). Understanding whose perspectives are most likely to be represented in mainstream news coverage of climate change can therefore lead to greater understanding of one important source of public disengagement and stalled national policy around climate change in the U.S.

In what follows, I investigate this question by tracking which organizations' press releases about climate change receive media attention in three national newspapers. I compile a large random sample of business, government, and social advocacy organizations' press releases about climate change from 1985 to 2013 ($N=1,768$). Next, I use plagiarism-detection software to track which of these messages are quoted or paraphrased in all articles about climate change published in *The New York Times*, *The Wall Street Journal*, and *USA Today* from 1985 to 2014 (total $N=34,948$). These techniques allow me to examine how organizations' characteristics and the content of their messages affect which messages receive coverage in mainstream news outlets, as compared to those which do not. As other scholars have noted (Bail 2014; Corrigan-Brown 2016), this ability to compare "successful" messages to those that do not achieve media attention avoids many of the methodological problems, such as selection on the dependent variable, prevalent in framing and communications research.

Previous research has suggested two prominent explanations for why some organizations or individuals are more likely to receive news coverage than are others. First, *journalistic norms* of balance and objectivity can lead journalists to give equal voice to two sides in a debate (Antilla 2005; Boykoff and Boykoff 2004; Painter and Ashe 2012). While ideally this "balance norm" is meant to ensure journalistic neutrality, in the case of climate change—where a large majority of scientists agree that climate change is occurring and is caused by human activity—following this norm means creating a highly distorted representation of the scientific understanding of the issue (Boykoff 2008; Boykoff and Boykoff 2004; Hansen 2011; Oreskes 2004). Accordingly, researchers have found that print and TV news outlets have historically over-represented the extent of disagreement on the scientific basis of climate change, lending increased prominence and legitimacy to a small number of contrarian scientists (Antilla 2005; Boykoff 2008; Boykoff and Boykoff 2004; Carvalho 2007; McCright and Dunlap 2003; Painter and Ashe 2012).

However, empirical support for the continuing relevance of the balance norm in shaping the media environment around climate change is mixed. Some studies suggests that the disproportionate visibility of advocates against climate action has declined or reversed since the

⁷ By "contrarian scientist," I mean one of the small number of natural scientists who disputes the occurrence, seriousness, and/or anthropogenic causes of global warming.

issue rose in national prominence in the mid-2000s (Brüggemann and Engesser 2017; Hiles and Hinnant 2014; Schmid-Petri et al. 2017). In addition, other evidence suggests that the disproportionate visibility of contrarian scientists is concentrated among conservative newspapers and TV outlets (Elsasser and Dunlap 2013; Feldman et al. 2012; Feldman, Hart, and Milosevic 2017). This would suggest that accord with editorial ideology rather than the application of journalistic norms may be responsible for the over-representation of advocates against climate action in mainstream media. On the whole, however, this work would suggest that:

Hypothesis 1: *Journalistic Norms*: Press releases advocating against action to address climate change will receive greater news coverage relative to otherwise comparable messages.⁸

Second, *organizational power* may lead the voices of large and wealthy organizations, and particularly those in extractive and polluting industries, to receive increased prominence in mainstream media. Three different types of power may facilitate media visibility of these organizations (Bell 2006; Fuchs 2007; Hacker and Pierson 2002; Levy and Egan 1998; Perrow and Pulver 2015). First, *instrumental power*, or an organization's access to human and monetary resources, may facilitate visibility by allowing organizations to expend more resources crafting and promoting policy messages, such as through the use of public relations personnel, lobbyists, or advertising agencies (Beder 2002; Domhoff 2014; Lewis, Williams, and Franklin 2008; Miliband 1969; Mills 1956). In addition, these organizations may have leverage over other organizations or individuals which they can use to influence policy debates (Pfeffer and Salancik 1978). For example, large advertisers at news media outlets may be able to influence news coverage through their ability to withhold advertising revenue (Boykoff and Roberts 2007; Corrigan-Brown 2016).

Next, *structural power*, or an organization's real or perceived importance in the functioning of the economy, can lead organizations' actions and perspectives on policy issues to be seen as broadly relevant to public wellbeing (Block 1987; Lindblom 1977; Schnaiberg and Gould 2000). In particular, the views of large employers are likely to be seen as newsworthy, since these organizations could potentially respond to policy changes in ways that could cause economic disruption (e.g., through plant closures, large-scale layoffs, or off-shoring) (Hacker and Pierson 2002; Schnaiberg 1994). Similarly, business coalitions and trade associations—as organizational forms aggregating shared interests within or across economic sectors—may receive heightened visibility to the extent that they are seen as representing not simply one company's perspective but instead a broad swath of the economy (Offe and Wiesenthal 1980; Meckling 2011).

Finally, *discursive power*, or an organization's perceived expertise and legitimacy, can lead some organizations' perspectives to be seen as more relevant and credible than others in policy debates (Fuchs 2005; Hajer 1995; Levy and Egan 1998; Perrow and Pulver 2015). In particular, influential work in environmental sociology suggests that organizations involved in resource extraction and energy production have historically been given authority to define the terms of environmental debates (Freudenburg 2005). Work in this tradition argues that extractive and polluting industries' narratives of the economic necessity of environmental degradation have

⁸ However, it is possible that this effect will disappear after the mid-2000s or will depend on the ideology of the news source, possibilities I assess empirically below.

privileged status in discussions of environmental issues, leading their perspectives to become ingrained as common sense (Davidson 2007; Davidson and Dunlap 2012; Greenberg 2017; Miller Gaither and Gaither 2016). Meanwhile, other work suggests that natural scientists are seen as relevant authorities on environmental problems (Hansen 2011), such that we would expect educational and scientific organizations to receive heightened media visibility.

Relatively little work has directly assessed whether powerful organizations receive increased news coverage in the climate change debate. Instead, scholars have called for more attention to how power dynamics may affect policy framing and discourse, both in the case of climate change and other policy debates (Carragee and Roefs 2004; Hansen 2011; Vliegthart and Van Zoonen 2011). However, the importance of organizational power has been demonstrated empirically for a number of other organizational and political outcomes in a large cross-disciplinary literature (Davis and Cobb 2010; Fligstein 2002; Hacker and Pierson 2002; Haveman and Wetts 2019; Katila, Rosenberger, and Eisenhardt 2008; Pfeffer and Salancik 1978). Therefore, I expect that instrumental, structural, and discursive power will influence whether organizations' messages receive media visibility, such that:

Hypothesis 2: Instrumental Power: Press releases originating from large organizations and organizations with more financial resources will receive greater news coverage relative to otherwise comparable messages;

Hypothesis 3: Structural Power: Press releases originating from large businesses, business coalitions, and professional and trade associations will receive greater news coverage relative to otherwise comparable messages;

Hypothesis 4a: Discursive Power (Polluters): Press releases originating from organizations in extractive and highly polluting industries will receive increased news coverage relative to otherwise comparable messages; and

Hypothesis 4b: Discursive Power (Scientists): Press releases originating from organizations involved in provision of educational and scientific services will receive increased news coverage relative to otherwise comparable messages.

Methods

Overview. I use plagiarism-detection software to track a large random sample of business, government, and social advocacy organizations' press releases about climate change, examining which messages receive attention in three large American newspapers. First, I compile a large random sample of business, government, and social advocacy organizations' press releases about climate change from 1985 to 2013 ($N=1,768$). Next, I use plagiarism-detection software to track which of these messages are quoted or paraphrased in all articles about climate change published in *The New York Times*, *The Wall Street Journal*, and *USA Today* from 1985 to 2014 (total $N=34,948$). Finally, I use multivariate regression analysis to examine how organizations' characteristics and the content of their messages affect which messages receive coverage in mainstream news outlets, as compared to those which do not.

Sample: Press Releases. The sample of press releases has been described in detail in the previous chapter (see Chapter 2, Methods). Here I reproduce those portions of the description most relevant to the current analysis. I use the searchable database of *PR Newswire*, the largest national distributor of press releases, to discover U.S. press releases from 1985 to 2013

containing the words “climate change,” “global warming,” “greenhouse effect,” “greenhouse gas,” or any of their derivations. My search of *PR Newswire* results in a population of 21,599 press releases. I take a 20% systematic sample for most years in the study period, with oversampling of earlier years in the climate change debate, when many fewer press releases were distributed. The resulting sample yields 4,653 press releases. I analyze only press releases that engage in some substantive discussion of climate change. These constitute about forty percent of press releases, for a final sample of 1,768 releases.

Independent Variables: Organization Type, Organizational Resources, and Message Content. To code press releases by *organization type*, I identify the industry of each organization in the sample, using the OneSource and Business Source Complete databases to identify its North American Industry Classification System (NAICS) code. Organizations that could not be found in these databases I coded by hand as business or civil society organizations. Finally, I examine the mission statements of advocacy organizations to identify their main issue areas and ideological orientation. For more information on the distribution of organizational types in my sample, see Chapter 2, Table 2.1.

To describe the *organizational resources* of the creator of each press release in my sample, I use the OneSource and Business Source Complete databases to compile information on the assets, sales/revenue, and number of employees of businesses and government agencies. For civil society organizations, I collect data from the information submitted on the Internal Revenue Service’s 990 forms, accessed through the GuideStar database. If multiple years of records were available, I used the record for the year closest to the year in which the organization released the press release.

Organizations that could not be found in these databases I coded as missing any financial and employee information, and values on all other organizational resources variables were set to zero. An additional 102 press releases were missing information on the number of employees of the sponsor organization; these press releases were removed from analyses that include variables describing organizational resources via listwise deletion. Analyses that include variables for organizations’ assets and revenue use multiple imputation to impute missing values for assets and revenue.⁹

Finally, to code the *message content* of each press release, I read each press release in its entirety to determine if it communicated support or opposition to action to address climate change. Press releases were coded as supportive of action to address climate change if a) the organization stated its support for some form of ameliorative action and b) did not state opposition to another form of ameliorative action (e.g., if a press release a) voiced support for cap-and-trade legislation and also b) did not voice opposition to some alternative, such as EPA regulations). Conversely, press releases were coded as advocating against action to address climate change if a) the organization stated its opposition to some form of ameliorative action and b) did not state support for another form of ameliorative action. Finally, press releases were coded as ambiguous if the organization either a) did not state clear support for or opposition to any form of ameliorative action, or if the organization b) voiced support for one form of action and opposition to another.

⁹ As shown in Supplementary Tables B.1 and B.2, inclusion of these variables does not substantively affect the analysis.

Dependent Variable: News Coverage of Press Release. I code press releases as having received *news coverage* if the press release text was quoted or paraphrased in one or more of three national newspapers. First, I use the LexisNexis and Factiva archives to search for all articles containing the words “climate change,” “global warming,” “greenhouse effect,” “greenhouse gas,” or any of their derivations published in *The New York Times*, *The Wall Street Journal*, and *USA Today* from 1985 to 2014. These newspapers were selected because they are among the highest circulating national newspapers in the United States and because their editorial ideologies span the ideological spectrum from liberal (*The New York Times*) to centrist (*USA Today*) to conservative (*The Wall Street Journal*) (Groseclose and Milyo 2005). As such, these newspapers have been used in previous studies of environmental messaging (e.g., Feinberg and Willer 2013). The resulting search yields a total of 34,948 articles published between the three newspapers, with most articles appearing in either *The New York Times* ($N = 19,391$) or *The Wall Street Journal* ($N = 12,253$).

Next, following Bail (2014), I use the WCopyFind plagiarism-detection software to identify whether press releases were discussed or reproduced in these newspaper articles. The software generates a hypertext document displaying instances where strings of at least eight words closely or exactly match between two sets of documents (in my case, between press releases and newspaper articles), suggesting possible quotation or close paraphrasing of the source material. This software therefore is useful in identifying cases where the newspaper text may have derived from the press releases. However, it also generates many false positives, or instances where press releases and newspaper articles use similar or identical phrases, but the nature of these “matches” does not suggest that the article text in fact derived from the press release. For example, any newspaper article that discusses the “United Nations Framework Convention on Climate Change (UNFCCC)” will match several press releases that similarly use the same eight-word phrase, whether or not anything else about the press release is similar to the newspaper article. I therefore manually inspect each identified match to verify that it represents an instance where the press release text is quoted or paraphrased in the newspaper article.

Using the above procedure, I am able to code each press release for whether its text appears in any of the three newspapers. This binary variable is the primary dependent variable for the analyses I report here. Robustness analysis that instead use a count variable representing the total number of words matched between the press release and all newspaper articles produce substantively similar results. In addition, some analyses testing for effects of editorial ideology instead use a binary variable specifying that the press release was covered in a specific newspaper (e.g., *The Wall Street Journal* versus *The New York Times*).

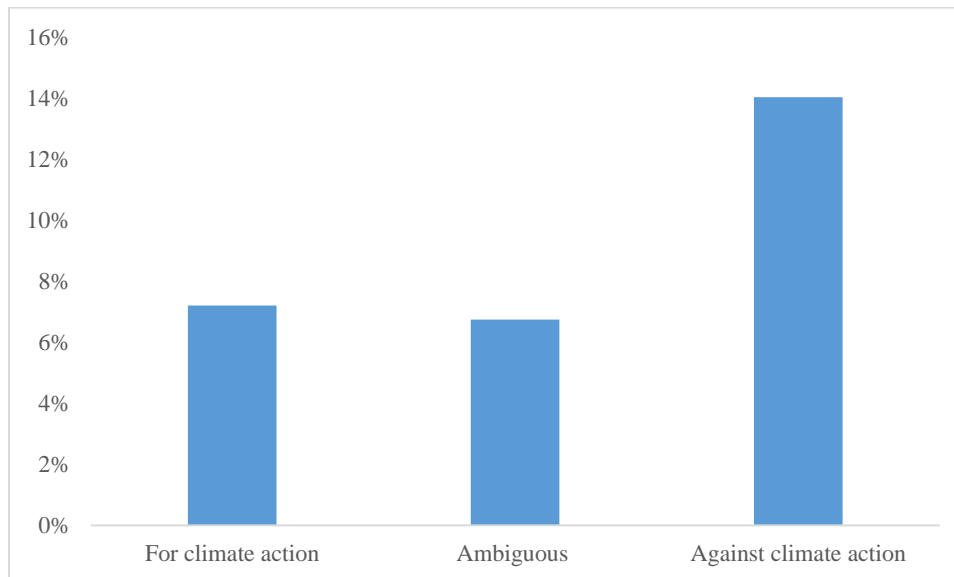
Analytic Strategy. I use logistic regression to examine how organizations’ characteristics and the content of their messages affect which messages receive coverage in mainstream newspapers. For each analysis I generate and report between four and six regression models including variables for (a) organizational type, (b) message content, (c) organizational resources, and (d) interactions between organizational type and organizational resources to allow the effects of resources to vary between businesses and civil society organizations. Additional analyses including control variables for time trends and period effects produce substantively similar results. Supplementary Table B.4 presents descriptive statistics for all variables used in the analyses.

Results

Journalistic Norms: Over-Representation of Advocates Against Climate Action

First, I test whether press releases advocating against action to address climate change receive increased news coverage relative to otherwise comparable messages (Hypothesis 1). Controlling for the industry of an organization and its size, wealth, and revenue, I find that advocates against climate action are significantly more likely to receive media coverage than are advocates for climate action ($\beta = .836, p = .001$; see Supplementary Table B.1, Model 5). Figure 3.1 displays the predicted probabilities that organizations' climate messages will receive newspaper coverage in *The New York Times*, *The Wall Street Journal*, or *USA Today*. While about 7.2% of messages advocating for action to address climate change are picked up by these national newspapers, this is true for almost twice the number of messages advocating against action to address climate change, or about 14.0%.

Figure 3.1: Probability of Newspaper Coverage by Message Content, Controlling for Other Factors

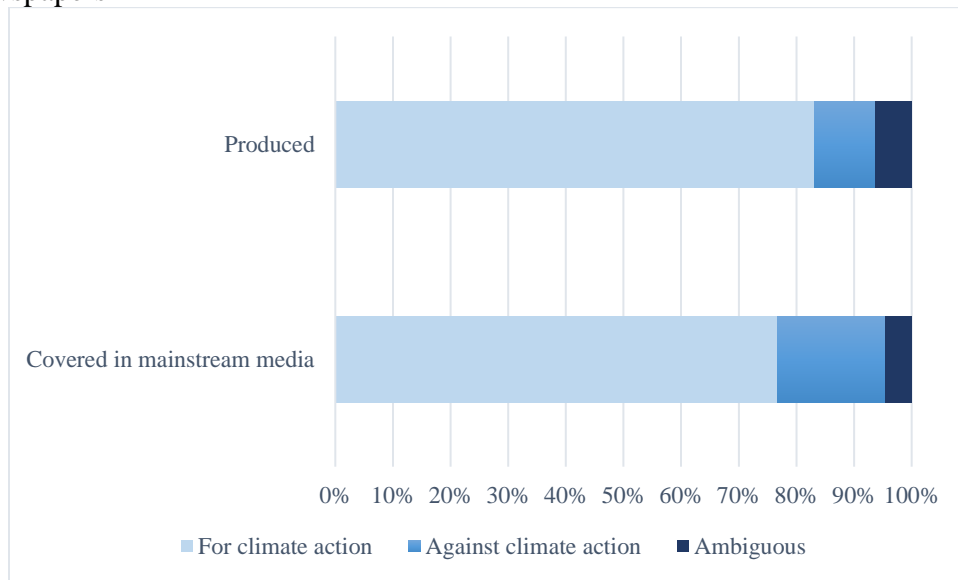


Note: Predicted values from logistic regression predicting newspaper coverage of press releases by specific organizational type, organization resources, and message characteristics. Variables other than those describing message content are held at their means.

It is important to contextualize this finding by noting that messages advocating for climate action are much more prevalent among organizations' press releases than are messages advocating against climate action. Descriptive statistics of all press releases suggest that messages against climate action are relatively rare, constituting only 10.4% of all press releases. As shown in Figure 3.2, however, they are disproportionately likely to be covered in news outlets, such that they constitute about 18.4% of all press releases that receive media attention.

These findings are consistent with the idea that journalistic norms of balance and objectivity lead media outlets to provide heightened visibility to viewpoints outside the mainstream—in this case, to messages that depart from the largely consensual view among business, government, and civil society organizations that climate change is a problem that is real, serious, and requires a societal response.

Figure 3.2: Climate Messages Released by Organizations vs. Climate Messages Covered in Major Newspapers



Contrary to some recent research suggesting that the balance norm has become less relevant to understanding the media environment around climate change, I find no indication that this disproportionate coverage of advocates against climate action has declined or reversed since the mid-2000s. In addition, I find no evidence that this trend is driven primarily by the news coverage of *The Wall Street Journal*, the ideologically conservative news outlet in my analysis. On the contrary, advocates against climate action are given disproportionate coverage even in *The New York Times*, the most liberal newspaper I study. This is consistent with the idea that journalistic norms of balance and objectivity rather than editorial ideology drive the over-representation of advocates against climate action in mainstream media.

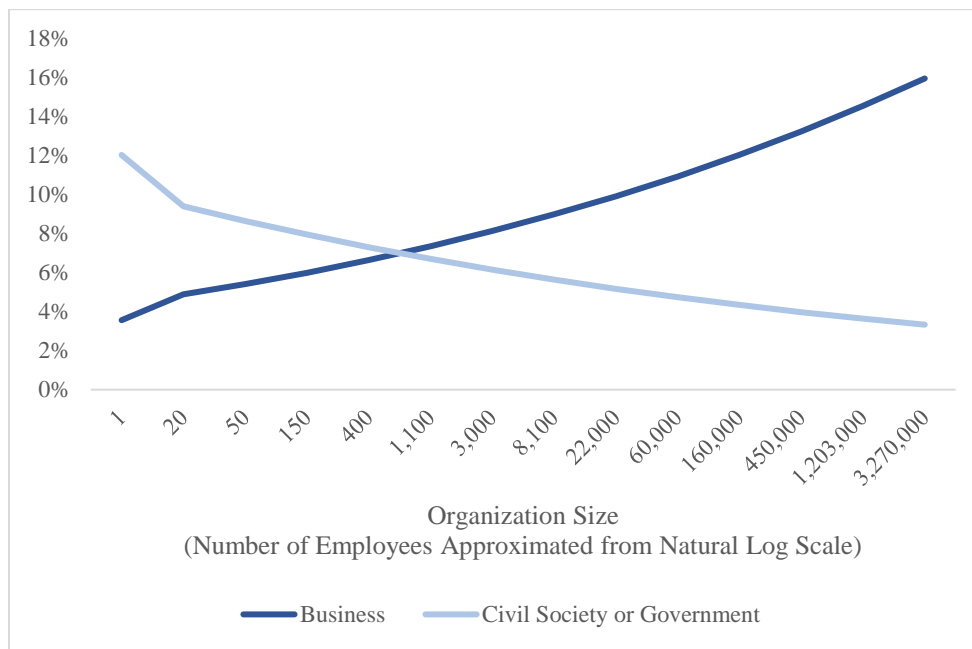
Instrumental Power: No Significant Effects of Organizations’ Financial Resources

Next I test whether press releases originating from large organizations and organizations with more financial resources receive increased news coverage relative to otherwise comparable messages (Hypothesis 2). Looking first at the effects of organizations’ financial resources, I find that organizations’ assets and revenue are not significantly related to whether their messages are covered in national newspapers. In four different models with varying controls and specifications (Supplementary Tables B.1-B.2, Models 5-6), the effects of these variables, while positive, are

small in magnitude and not statistically significant. I therefore find no evidence that organizations with greater instrumental power in the form of access to financial resources receive heightened media visibility in news coverage of climate change.

Turning next to whether organizations with greater access to human resources may receive heightened visibility, I find that larger organizations are more likely to have their messages picked up in national newspapers, but this effect is unique to businesses. In four different models with varying controls and specifications (Supplementary Tables B.1-B.2, Models 4 and 6), significant and positive interactions suggest organizational size is related to media coverage, but the relationship is contingent on organization type. Figure 3.3 displays the predicted probabilities that organizations' climate messages will receive newspaper coverage by organizational size and organization type.

Figure 3.3: Probability of Newspaper Coverage by Organization Size, Controlling for Other Factors



Note: Predicted values from logistic regression predicting newspaper coverage of press releases by general organizational type, organization resources, and message characteristics. Variables other than those describing organizational type and organizational size are held at their means.

As shown in Figure 3.3, larger businesses are more likely to receive media coverage than are smaller business, but the opposite is true for civil society organizations and government agencies. Press releases from the largest businesses in my sample (those with about 3 million employees) have about an 16.0% chance of being cited in national newspaper articles, while those from the smallest businesses (those with fewer than 20 employees) have about a 3.6% chance. Conversely, smaller civil society organizations and government agencies are more likely to receive media coverage than are larger organizations of these types.

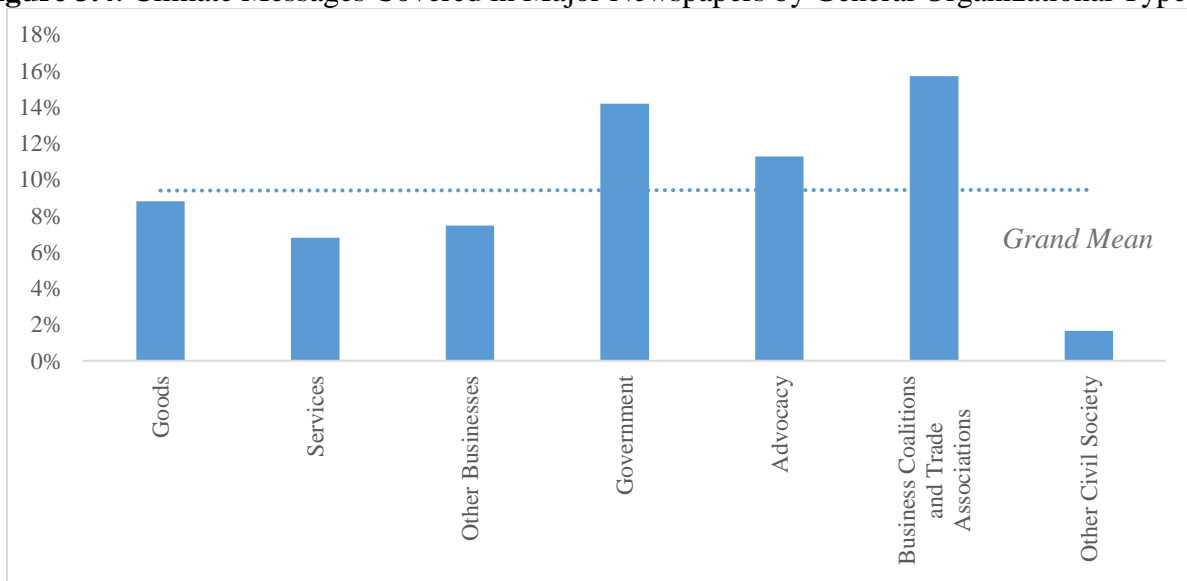
This finding may suggest that organizations can receive heightened news coverage when they have greater human resources to expend promoting their messages. However, that this effect is unique to businesses suggests another mechanism: these largest firms' perspectives may receive heightened visibility because they are regarded as important players in the national economy. I discuss this possibility at greater length below.

Structural Power: Disproportionate Coverage of Large Businesses, Business Coalitions, and Trade Associations

Next I test whether press releases originating from large businesses, business coalitions, and professional and trade associations receive increased news coverage relative to otherwise comparable messages (Hypothesis 3). As discussed above and displayed in Figure 3.3, I find that large businesses are particularly likely to have their messages quoted or paraphrased in national newspapers. In addition, I find that messages from business coalitions and professional and trade associations are more likely to receive media coverage than are messages from other types of organizations.

Figure 3.4 displays descriptive statistics showing the percentage of press releases that are picked up in national newspapers by general organizational type. As shown in Figure 3.4, 15.7% of messages from business coalitions and professional and trade associations are picked up by these national newspapers, as compared to 9.1% of messages from other types of organizations. In eight of twelve different models with varying controls and specifications (Supplementary Tables B.1-B.2, Models 1-6), the proportion of press releases picked up from these types of organizations is significantly greater than the grand mean for organizations as a whole. In the other four models, these effects are marginally significant.

Figure 3.4: Climate Messages Covered in Major Newspapers by General Organizational Type



These findings are consistent with the argument that organizations' structural power, or their perceived importance in macro-economic functioning, gives them disproportionate visibility in policy debates. According to this line of reasoning, large businesses' responses to policy changes have the potential to cause mass economic disruption, and so their perspectives on political issues are more likely to be seen as newsworthy than the views of other types of organizations. Likewise, one important function of business coalitions and professional and associations is to present the shared interests of stakeholders across organizational lines and sometimes across economic sectors. Therefore, each of these organization types may receive disproportionate voice in policy debates because their perspectives are seen as broadly relevant to public wellbeing.

Discursive Power: No Evidence of Polluters'—or Scientists'—“Privileged Accounts”

Next I test whether press releases originating from organizations in extractive and highly polluting industries will receive increased news coverage relative to otherwise comparable messages (Hypothesis 4a). I find that these organizations' messages are no more or less likely to be covered in national newspapers than are the messages of other types of organizations. In four different models with varying controls and specifications (Supplementary Table B.3, Models 1-4), the effects of this variable, while mostly positive, are not statistically significant. I therefore find no evidence for Freudenberg's (2005) influential assertion that organizations which disproportionately benefit from access to natural resources provide “privileged accounts” of environmental issues.

Finally, I test whether press releases originating from organizations involved in provision of educational and scientific services will receive increased news coverage relative to otherwise comparable messages (Hypothesis 4b). I find that messages from educational organizations are no more or less likely to receive news coverage than the messages of other types of organizations. In addition, I find that messages from organizations providing scientific and technical services are significantly *less* likely to be reproduced in national newspapers than are the messages of other organizations. In six different models with varying controls and specifications (Supplementary Table B.2, Models 1-6), the proportion of press releases picked up from these types of organizations is significantly lower than the grand mean for organizations as a whole.

In fact, descriptive statistics suggest that organizations providing professional, scientific, and technical services are among the least likely to be covered in mainstream news. Examples of these organizations include the American Academy of Arts & Sciences, the American Geophysical Union, Ball Aerospace & Technologies Corporation, and Lawrence Livermore National Laboratory. In my sample, only 2.9% of messages from scientific and technical organizations are picked up by national newspapers, as compared to 9.8% of messages from organizations as a whole. This finding is surprising, suggesting that organizations which presumably have greater expertise to speak to the scientific issues around climate change are afforded less media attention than are other organizations.

Discussion

Asking whose voices are most likely to “make the news” in the U.S. debate on climate change, I use plagiarism-detection software to investigate which of a large, random sample of press releases appear in over 30,000 articles about climate change in three national newspapers over an almost thirty-year period. I find that business coalitions and very large businesses are more likely than other types of organizations to receive news coverage. In addition, advocates against climate action are about twice as likely as advocates for climate action to have their views reproduced in mainstream media. These findings are consistent with previous scholars’ claims that the structural power of business interests and journalistic norms of balance and objectivity have distorted the public debate around climate change. Surprisingly, I also find that scientific and technical organizations are less likely to receive news coverage than are other organizations, suggesting that an organization’s perceived scientific expertise may not be a central factor in whether its perspective is granted media visibility in the U.S. climate change debate.

This study makes several advances over the existing literature. Most notably, my use of computational methods allows me to examine a large sample of texts over a long time-scale, allowing for greater representativeness and generalizability than previous studies. In addition, I avoid the selection on the dependent variable problem present in most studies of media framing, where scholars analyze the characteristics of messages and speakers that appear in news media without comparing them to the broader population of messages and speakers that attempted to gain media visibility. Examining press releases that were and were not picked up in mainstream news sources allows me to identify the characteristics of messages that were successful in breaking into mainstream discourse, as compared to those that were not.

Despite these advances, my use of observational data presents challenges in terms of causal inference. Therefore, while the size and representativeness of my sample provides confidence that the trends I present here are robust, the causal interpretations I suggest should be taken as necessarily speculative. For example, I have argued here based on previous scholarship that advocates against climate action are afforded increased media visibility because journalistic norms of balance and objectivity leads journalists to over-represent a minority viewpoint. However, other interpretations of this pattern are possible. For instance, conservative organizations may be more likely to use emotionally charged or culturally resonant language that journalists may deem more likely to engage readers (Bail 2014; Snow et al. 1986). Because my analysis includes limited information on the content of organizations’ messages, I cannot rule out this plausible alternative explanation.

To address this challenge, in the next chapter, I examine more deeply how the public debate around climate change is shaped by both the meanings of climate messages and the power relationships of the organizations that promote them.

CHAPTER 4

MONEY AND MEANING IN THE CLIMATE CHANGE DEBATE: CULTURAL RESONANCE AND ORGANIZATIONAL POWER SHAPE SUCCESS OF AMERICAN ORGANIZATIONS' FRAMINGS OF CLIMATE CHANGE

How have broad-based cultural narratives and the interventions of powerful organizations influenced the American climate change debate? In this chapter, I investigate why some framings of climate change are adopted in mainstream media and others are not, examining organizational power and cultural resonance as two distinct paths through which messages may gain visibility. First, I use automated text analysis to describe a large sample of American organizations' press releases about climate change ($N = 1,768$), coding press releases according to whether they would be expected to (a) resonate with latent American cultural narratives, (b) appeal to audiences' values, emotions, and identities, or (c) speak to audiences' topical concerns. Next, I use plagiarism-detection software to identify which of these messages were publicized in all articles about climate change published in *The New York Times*, *The Wall Street Journal*, or *USA Today* from 1985 to 2014 (total $N = 34,948$). These techniques allow me to perform a rare deductive test of whether cultural resonance—a widely-cited mechanism theorized to promote policy frames' success—influences whether organizations' framings of climate change receive coverage in mainstream media. My results suggest that climate change messages that appeal to audiences' values, emotions, and identities receive heightened media visibility, as do messages that appeal to audiences' topical concerns for economic well-being during periods of economic downturn. In addition, appeals that accord with American cultural models of rational, market-based behavior receive more news coverage than those which do not. At the same time, business coalitions and very large businesses are more likely than other types of organizations to receive news coverage, consistent with the claim that the structural power of business interests leads their perspectives to receive disproportionate visibility. Together, these results suggest that the public debate around climate change is shaped by both the cultural meanings of climate messages and the power relationships of the organizations that promote them.

Introduction

Taxes: a civic duty or a burden in need of relief? Global warming: natural geologic process, potential catastrophe, or scientific bamboozling? By providing a meaningful lens of interpretation, policy frames focus attention and highlight as relevant particular aspects of complex and ambiguous social phenomena (Gamson and Modigliani 1989; Goffman 1974; Snow et al. 1986). While evidence suggests that the frames or terms of a particular policy debate play an important role in the solutions elites and publics craft or endorse (e.g., Cress and Snow 2000; Iyengar 1990; Kinder 1998), we know relatively little about why some frames come to diffuse widely, becoming part of the shared cultural environment, and others do not.

Cultural resonance—or the extent to which a frame accords with its audiences’ “cultural narrations... ‘myths’... and ‘inherent ideology’” (Benford and Snow 2000, pg. 622)—is a central mechanism theorized to promote the success of policy frames, leading resonant frames to be widely adopted and perceived as persuasive (McDonnell, Bail, and Tavory 2017; Schudson 1989). However, several challenges have limited scholars’ attempts to empirically investigate the causal efficacy of cultural resonance. It is often not explicitly theorized what makes a policy frame resonant, resonance is usually not operationalized beforehand but rather extracted from findings post hoc, and the key evidence of resonance that many authors advance is an analysis of frames selected because they are successful. As other scholars have argued (Bail 2012; Benford 1997; Ferree 2003; McDonnell, Bail, and Tavory 2017), these challenges have led the literature on cultural resonance and policy framing to be plagued by circular reasoning.

In addition, despite Gamson and Modigliani’s (1989) emphasis that differences in symbolic and economic capital among frame sponsors influence which frames appear in the news media, few studies investigate how power dynamics among organizations or individuals in a discursive field shape frame success (Carragee and Roefs 2004; Hansen 2011; Vliegthart and Van Zoonen 2011; though see Bail 2012). However, inter-organizational power dynamics may influence frame success by allowing powerful organizations to expend more resources crafting and promoting policy messages, or by leading powerful organizations’ perspectives on policy issues to be seen as “newsworthy” and broadly relevant to public wellbeing (Andrews and Caren 2010; Beder 2002; Block 1987; Domhoff 2014; Lewis, Williams, and Franklin 2008; Lindblom 1977; Miliband 1969; Mills 1956; Schnaiberg 1994; Schnaiberg and Gould 2000). In addition, the importance of organizational power has been demonstrated for a number of other organizational and political outcomes (Davis and Cobb 2010; Fligstein 2002; Hacker and Pierson 2002; Haveman and Wetts 2019; Katila, Rosenberger, and Eisenhardt 2008; Pfeffer and Salancik 1978). Therefore, there is reason to suspect that larger and wealthier organizations may have substantial advantages in setting the terms of policy debates, but again evidence here is inconclusive.

Here, I examine these issues in the context of the important empirical case of the American public debate about climate change. I investigate why some framings of climate change are adopted in mainstream media and others are not, examining organizational power and cultural resonance as two distinct paths through which messages may gain visibility. First, I use automated text analysis to describe a large sample of American business, government, and social advocacy organizations’ press releases about climate change ($N = 1,768$), coding press releases

according to whether they would be expected to (a) resonate with latent American cultural narratives, (b) appeal to audiences' values, emotions, and identities, or (c) speak to audiences' topical concerns. Next, I use plagiarism-detection software to identify which of these messages were quoted or paraphrased in all articles about climate change published in *The New York Times*, *The Wall Street Journal*, or *USA Today* from 1985 to 2014 (total $N = 34,948$). These techniques allow me to perform a rare deductive test of whether cultural resonance influences whether organizations' framings of climate change receive coverage in mainstream media. In addition, I examine whether the organizational power of frame sponsors influences media coverage. The results of this research add insight into how the public debate around climate change has been shaped both the cultural meanings of climate messages and the power relationships of the organizations that promote them.

The Meanings of Messages: How Might Culture Shape Frame Success?

Understanding the factors that influence frame success is important because the policy frames that dominate public debates can be decisive in whether and how critical social problems are addressed. A large literature suggests that policy frames affect how social problems are perceived and acted upon, from guiding public opinion and understanding, to sparking social movement mobilization, to influencing which policy options—if any—are ultimately advanced to address the problem (Benford and Snow 2000; Cress and Snow 2000; Gamson and Meyer 1996; Iyengar 1990; Kinder 1998; Rosamond 2003). Policy frames can be conceptualized as cultural schemas that organize perception, activate networks of association, and facilitate specific interpretations (DiMaggio 1997; Goffman 1974; Steensland 2008). So, while the existence of a frame does not deterministically lead to any one political outcome or policy solution, to the extent that frames succeed in becoming the predominant way in which an issue is conceptualized, these schemas can constrain the possibilities for which policies can be seen as “good” and which as “bad.” For example, as Lakoff (2014) notes of the debate over taxation, both Republicans and Democrats use the “tax relief” frame, and the dominance of this frame makes it difficult for Democrats to cast increased taxes in terms that make these policies attractive. If multiple framings coexist, however, any one frame may have less power in determining outcomes, as actors can strategically situate policy preferences within attractive frameworks (for a similar point regarding cultural schemas more generally, see Harding 2007).

But what might lead particular frames to dominate policy debates in the first place? One central hypothesis is that successful frames resonate with audiences' implicit cultural narratives and worldviews, leading these frames to be adopted more readily because they are intuitively understandable and compatible with preexisting beliefs about how the world works (Benford and Snow 2000; Cerulo and Ruane 2014; Gamson and Modigliani 1989; King 2008; Snow et al. 1986). Traditionally, this perspective has characterized frames as resonating with cultural narratives that are broadly shared throughout a society (e.g., “American individualism”). However, other scholars emphasize the importance of the interaction between cultural materials and specific audiences' concerns, expectations, and traditions (Ferree 2003; Giorgi and Weber 2015; Schudson 1989; Steinberg 1999). This allows for heterogeneity in how resonant cultural materials will be across audiences (Griswold 1987) and over time (Griswold 1986; Wright 1977). For example, Ferree (2003) highlights that audiences' expectations can change in response to

shifts in the institutional environment, and these expectations affect whether audiences perceive messages as “resonant” or “radical.”

In addition, messages may attract attention through displays of emotional energy and appeals to audiences’ values and identities (Aminzade and McAdam 2002; Collins 2001; Polletta 2008; Summers-Effler 2002). These morally-charged and emotion-laden framings are thought to be effective because they generate feelings of group consciousness and solidarity, provide a dramatic structure to social conflicts, and allow audiences to symbolically assert their identities and value commitments (Collins 2012; Gamson 1992; Gusfield 1986; Hunt et al. 1994; Sears and Funk 1991; Shah, Domke, and Wackman 2001). For example, Bail (2012) argues that anti-Muslim organizations were able to attract disproportionate media coverage in the wake of the September 11th attacks through expressions of anger and fear. Other examples of values- and identity-based claims include framings that cast issues as struggles against antagonists who violate cherished values, from “Big Tobacco” to “drunk drivers” to “welfare queens” (Glantz and Balbach 2000; Gusfield 1984; Hancock 2004).

Frames’ cultural content—their meanings—may therefore influence whether they succeed in gaining visibility in at least three different ways. Successful frames might resonate either with (1) the broad-based latent ideologies of a society, or with (2) the concerns and expectations of particular communities at particular times (Benford and Snow 2000; Ferree 2003; Gamson and Modigliani 1989; Griswold 1987; Schudson 1989; Snow et al. 1986; Steinberg 1999). In addition, frames might gain visibility through (3) emotional displays that highlight concerns of morality and group identity (Aminzade and McAdam 2002; Bail 2012; Collins 2001, 2012; Gusfield 1986; Hunt et al. 1994; Polletta 2008; Summers-Effler 2002).

The Money of the Messengers: How Might Organizational Power Shape Frame Success?

However, it is possible that the cultural content of policy frames matters less in determining frames’ success than do the power relationships and material resources of the organizations and individuals that promote those frames. Power-dependence relations between individuals, organizations, and industries can affect how ideas and practices spread and which are widely adopted (Fiss and Zajac 2006; Guler, Guillén, and Macpherson 2002; Haveman and Wetts 2019; Pfeffer and Salancik 1978). For example, Barley, Meyer, and Gash (1988) find that scholars of organizations have over time adopted the conceptual models of the managerial community, on whom they often depend for research funding, rather than academics’ understandings influencing practitioners’ ways of doing business.

Wealthy organizations may similarly be able to leverage their greater access to material resources to influence policy debates and increase the prominence of their preferred policy frames. For example, these organizations might withhold advertising revenue from news sources with whom they differ ideologically, attempting to coerce dependent organizations to frame issues in a manner they prefer (Boykoff and Roberts 2007; Corrigan-Brown 2016). In addition, these organizations may be able to increase the prominence of their preferred policy frames through the use of lobbyists, advertising agencies, and public relations experts and professionals (Beder 2002; Domhoff 2014; Lewis, Williams, and Franklin 2008; Miliband 1969; Mills 1956).

Apart from their greater ability to control material resources, large businesses and collectivities representing business interests may have increased prominence in policy debates

because these groups are seen as important players in the national economy (Andrews and Caren 2010; Block 1987; Lindblom 1977; Schnaiberg and Gould 2000). The actions of major employers can have significant repercussions for large numbers of individuals and communities, and so journalists may therefore perceive their perspectives on policy issues to be of broad public interest (Hacker and Pierson 2002; Schnaiberg 1994). Similarly, business groups representing the perspectives of multiples firms or multiple industries, such as trade associations and business coalitions, may also have increased ability to promote their policy frames because politicians, news professionals, and other gatekeepers perceive their perspectives to be economically significant (Offe and Wiesenthal 1980; Meckling 2011).

The organizational power of frame sponsors might therefore influence frame success in at least two ways. First, frames promoted by wealthy organizations may be more successful because these organizations can use their greater amounts of monetary resources to increase frame prominence, such as by leveraging resource-dependence relations with other organizations or by purchasing the services of professionals who can aid in messaging and influence. Second, frames promoted by large business interests and their collective associations may be more successful because these organizations' views are seen as potentially consequential for macro-economic wellbeing and so are widely publicized regardless of any additional actions these firms take to increase their prominence. These two types of advantages that organizations might have in influencing policy debates correspond to the widely-used distinction in political sociology and political science between instrumental and structural power (Bell 2006; Block 1987; Domhoff 2014; Fuchs 2007; Hacker and Pierson 2002; Levy and Egan 1998; Lindblom 1977; Miliband 1969; Mills 1956; Perrow and Pulver 2015).

Empirical Overview

In what follows, I examine the influence of cultural resonance and resource control on policy frames' success over the course of the American climate change debate. I focus on this debate for two reasons. First, methodologically, the American climate change debate features significant variation in material resources and structural power among the organizations that have participated in framing this issue (Brulle 2018; Perrow and Pulver 2015), and is also an area where the American public's cultural beliefs have been found to influence how they perceive climate messages (Carvalho 2007; Hoffman 2015; Kahan 2012; Leiserowitz 2006). Therefore, to the extent that organizational power and cultural resonance are general mechanisms that influence which framings come to dominate policy debates, we would expect these effects to appear in this case. Second, pragmatically, the challenge of a changing climate is perhaps the gravest threat facing human society, with effects ranging from wide-scale droughts and food shortages to rising sea levels that will eventually render entire island nations and coastal communities uninhabitable (International Energy Agency 2012; National Research Council 2013). My research therefore aims to clarify how broad-based cultural understandings and the interventions of powerful organizations have shaped one of the most consequential policy debates of our time.

To do this, I first use topic modeling techniques to identify the frames of climate change present in a large, random sample of American business, government, and social advocacy organizations' press releases ($N = 1,768$) from 1985 to 2013. I then code the frames that make up

these press releases according to whether they would be expected to (a) resonate with broadly-held American narratives and ideologies, (b) address topical concerns for economic well-being and national security uniquely important during periods of economic downturn or military conflict, or (c) engage audiences with displays of emotional energy and appeals to values and identity. This procedure allows me to describe the degree to which each press release contains emotionally-charged or culturally-resonant language that would be expected to influence whether organizations' policy messages succeed in gaining visibility. Next, I match this dataset with publicly-available data about the size, wealth, and economic sector of all organizations in my sample, and I use plagiarism-detection software to identify which of these messages were quoted or paraphrased in all articles about climate change published in *The New York Times*, *The Wall Street Journal*, or *USA Today* from 1985 to 2014 (total $N = 34,948$). Finally, I use statistical techniques to examine how organizational power and frames' cultural content influence which messages receive coverage in mainstream news outlets, becoming part of the wider public debate about climate change.

This empirical strategy improves upon previous research designs in three ways that address key challenges others have identified as blocking progress in the framing literature. First, I examine both successful and unsuccessful frames to avoid the selection on the dependent variable problem that has limited the explanatory power of many investigations of frames' cultural resonance. Second, I specify beforehand particular cultural narratives that could be expected to make frames more or less resonant with American audiences, either overall or during certain historical periods. Together, these features of the empirical design allow me to avoid the circular reasoning prevalent in framing research, where successful frames are analyzed to discover how their themes resonate with cultural beliefs, and then this resonance—assumed and discovered post-hoc—is advanced as evidence that cultural resonance leads to frame success (Bail 2012, 2014; Benford 1997; Corrigan-Brown 2016; Ferree 2003; McDonnell, Bail, and Tavory 2017). Finally, I examine how frame success may be affected by both organizational power relations and frames' cultural content, answering previous scholars' calls for more attention to how power dynamics affect policy framing and discourse (Carragee and Roefs 2004; Hansen 2011; Vliegthart and Van Zoonen 2011).

Methods

Identifying Frames in Organizations' Press Releases. I use the searchable database of *PR Newswire*, the largest national distributor of press releases, to discover U.S. press releases from 1985 to 2013 containing the words “climate change,” “global warming,” “greenhouse effect,” “greenhouse gas,” or “greenhouse gases.” Because the *PR Newswire* database contains unedited releases directly from organizations that are targeted to media professionals, previous researchers have noted its value in analyzing organizations' framing activities (Fiss and Hirsch 2005; Miller 1997). My search of *PR Newswire* results in a population of 21,599 press releases. I take a 20% systematic sample for most years in the study period, with oversampling of earlier years in the climate change debate, when many fewer press releases were distributed.¹⁰ The resulting sample

¹⁰ Though I am using computational methods, some phases of my analysis require manual processing of press releases (e.g., excluding irrelevant releases). Thus, I take a systematic sample to make the corpus

yields 4,653 press releases. I analyze only press releases that engage in some substantive discussion of climate change. These constitute about forty percent of press releases, for a final sample of 1,768 releases.

Next, I use topic modeling techniques to identify the frames that organizations use to discuss climate change in these press releases. Topic modeling techniques are a set of machine-learning algorithms that aid in the identification of themes running throughout a collection of documents (Blei 2012; Blei, Ng, and Jordan 2003; Mohr and Bogdanov 2013; Roberts et al. 2014). The algorithms identify constellations of words that tend to co-occur within texts, which researchers can then interpret as the topics, themes, or frames that are contained in the documents (DiMaggio, Nag, and Blei 2013; Fligstein, Stuart Brundage, and Schultz 2017; Mohr and Bogdanov 2013; Nelson 2015). I use the MALLET software program to implement Latent Dirichlet Allocation, one of the simplest and most popular topic modeling techniques (McCallum 2002).

I generate and interpret models ranging from 20 to 175 topics, basing my interpretation of topics on words that characterize the topic and close readings of representative press releases (DiMaggio, Nag, and Blei 2013; Mimno et al. 2011). My final model generates eighty-five topics to describe organizational climate discourse. Of these topics, fifty-three represent substantive framing activities, where organizations provide a simplified description of the problem and its causes (diagnostic framing); advocate for a particular type of ameliorative action (prognostic framing); provide justification for engaging in action (motivational framing); or construct groups or individuals as friends or foes of the public good (identity framing) (Gamson 1992; Snow and Benford 1988). For more details about the methods and results of the topic modeling analysis, including a description of all substantive topics, see Chapter 2.

Independent Variables: Coding Cultural Resonance. After identifying the frames of climate change present in organizations' press releases, I code each of the fifty-three substantive frames according to whether they would be expected to (a) resonate with latent American cultural narratives, (b) speak to audiences' topical concerns, or (c) appeal to audiences' values, emotions, and identities. This coding yields a series of binary variables for each of the frames identifying whether or not the frame would be expected to be culturally resonant in one or more of these ways. The topic model, in turn, identifies the proportion of text in each press release that corresponds to each substantive frame. Therefore, at the end of this process, I have constructed a measure identifying the proportion of text in each press release that would be expected to resonate with audiences, allowing for a deductive test of cultural resonance as a mechanism for frame success that has previously been lacking in this literature.

First, I identify cultural narratives and topical concerns with which frames might resonate. However, it is not possible to exhaustively identify the range of cultural narratives or topical concerns that frames might invoke. Therefore, I focus on a limited set of narratives and concerns that have been previously cited by large numbers of scholars as either broadly held narratives in American political culture or as topical concerns that impact political messaging.

manageable for analysis. I sample all press releases in years with fewer than 70 releases and take 50% systematic samples in years with fewer than 175 releases.

Second, I code each substantive frame according to whether it appeals to each of the identified cultural tropes.

Specifically, I focus first on the cultural narrative of *rational individualism* as an implicit model of social action that would be expected to make frames resonate with American audiences' worldviews. Scholars across anthropology, psychology, and sociology have highlighted rational individualism as central to Western culture in general and American culture in particular (Bellah et al. 2007; Collier 1997; Fischer 2010; Shweder 1991; De Tocqueville 2003; Weber 1978). For example, cultural psychologists have suggested that understandings of the self as an independent individual (versus an interdependent member of a collective) underlie many East-West cross-cultural differences, and they cite the individualist-collectivist distinction as one of the most important dimensions separating cultures (Hong et al. 2000; Markus and Kitayama 1991; Morris and Peng 1994; Triandis 1989). In addition, sociologists have argued that shared constructions of modern societies as composed of rational, purposive individuals facilitate the diffusion of ideas and practices (Strang and Meyer 1993; Strang and Soule 1998). Rational individualism has been cited as underlying the emergence and popularity of major cultural forms like the novel (Watt 2001) and as influencing how scholarly works are interpreted (Mizuchi and Fein 1999). In addition, scholars have argued that rational individualism has shaped American public discourse around the issue of climate change in particular (Heyd 2010; Van der Wurff 2009). So, to the extent that the cultural resonance explanation of frame success is accurate, this narrative should be expected to resonate with American actors and to be relevant to discourse on climate change specifically.

Climate change frames may accord with rational individualism in four different ways roughly corresponding to frame type. Diagnostic or identity frames that seek to identify who is responsible for climate change may accord with rational individualism to the degree that they cite *agentic, purposive actors as responsible for the problem* (e.g., profit-seeking oil companies or data-manipulating scientists versus industrialization or natural geologic processes). Similarly, prognostic frames that discuss particular ways of responding to climate change may accord with rational individualism to the degree that they highlight *individual-level behaviors* as appropriate responses (e.g., individual purchasing decisions that reduce emissions versus building of new infrastructure). In addition, prognostic frames that stress *voluntary actions* to address climate change (as compared to state-mandated or otherwise coerced behavior) would be expected to resonate with rational individualism. Finally, motivational frames of why (or why not) action is necessary and proper will accord with narratives of rational individualism insofar as they stress *rational, market-based incentives for action* (e.g., cost savings of reducing energy consumption) rather than altruistic or society-wide benefits (e.g., preserving the planet for future generations).

In addition to resonating with broadly-held American cultural narratives, frames might also resonate with the concerns and expectations of communities at particular times. Accordingly, I also focus on audiences' topical concerns for *economic well-being*, which should be particularly salient during periods of economic recession, and *national security*, which should be particularly salient during periods of military conflict. Again, I choose these topical concerns because economic downturn and international conflict have been cited by multiple analysts as macro-social factors that can influence how political messages are received (Balzacq 2010; Boin, 't Hart, and McConnell 2009; Fletcher 2009; Hart and Tindall 2009; Kangas, Niemelä, and

Varjonen 2014; Kouri and Clarke 2014; Meyer 1995; Reese and Lewis 2009). For example, in Griswold's (1986) analysis of Renaissance revivals, she argues that city comedies—with their themes of pursuit of money and status—resonated in periods where economic conditions heightened the importance of social mobility for theater audiences. In addition, public concern for climate change in the United States has been found to decrease during periods of economic insecurity (Kahn and Kotchen 2011; Scruggs and Benegal 2012; Shum 2012), suggesting that American audiences' economic concerns may influence whether and how they think about climate issues. So, to the extent that appeals to audiences' topical concerns impact frame success, messages highlighting economic and national security concerns (during periods of economic recession and military conflict, respectively) should be expected to resonate with American audiences and to be relevant to discourse on climate change specifically.

Finally, frames might gain visibility through displays of *emotional energy*. As scholars across anthropology, psychology, and sociology have argued (Aminzade and McAdam 2002; Bail 2012; Collins 2001, 2012; Gusfield 1986; Hunt et al. 1994; Polletta 2008; Summers-Effler 2002), policy frames can engage audiences emotionally through highlighting concerns of morality and group identity, creating narrative structures that make political action appear personally meaningful. Again, different types of frames can display emotional energy in different ways. Diagnostic frames might implicate concerns of morality and identity by describing climate change as a threat to living beings, particular social groups, or the sanctity of the natural world. In addition, identity frames display emotional energy when they describe groups or individuals as antagonists responsible for causing the problem (e.g., by describing particular corporations as causing environmental degradation). Finally, motivational frames might explicitly invoke moral values, faith, or group loyalty as reasons to act (or not act) on climate change (e.g., by citing concerns of environmental justice).

At the end of this process, I have coded each frame for 1) the degree to which it resonates with the cultural narrative of rational individualism by (a) attributing responsibility for climate change to purposive individuals, (b) defining appropriate response in terms of individual behaviors or (c) the voluntary efforts of uncoerced actors, and (d) motivating (or de-motivating) action by stressing rational, market-based incentives. In addition, I have coded each frame for 2) invocation of time-specific concerns related to (a) national security and (b) economic well-being. Finally, I have coded frames for 3) displays of emotional energy that invoke concerns of identity and morality. Table 4.1 lists the frames that were coded as displaying each type of cultural resonance and the headlines of press releases that contain large portions of resonant text.

Table 4.1: Coding Press Releases for Cultural Resonance: Types of Resonance, Resonant Topics, and Representative Press Releases

Type of Resonance	Topics	Headlines from Representative Press Releases
<i>Rational Individualism</i>		
Individuals as Cause of Problem	<ol style="list-style-type: none"> 1. Accusations and calls for accountability. 2. Shareholder activism vs. bad corporate actors. 3. Oil drilling as destruction of sensitive areas; government-industry relations responsible. 	<ul style="list-style-type: none"> • Stanford Claims Independence in ExxonMobil Deal, But Pact Details Show Otherwise • 'Carbon Criminal' WANTED Poster Campaign Goes to G-20 Meeting in Pittsburgh • Free Enterprise Action Fund Calls on GE to Justify Lobbying for Global Warming Regulation
Individuals as Solution	<ol style="list-style-type: none"> 1. “Everyday green:” Importance of individual choices, purchases and actions. 2. Consumer choices, recycling, and environmentally friendly products. 3. Low-emissions vehicles. 4. Energy efficiency and economic incentives to conserve. 	<ul style="list-style-type: none"> • New Yorkers Take Little Steps and Save Big; NYSEDA offers residents tips to save energy and the environment • As Electricity Prices Rise... Alliance to Save Energy Challenges Americans to Change '4 for the Planet' • Earth Hour is Coming Up! IKEA and Sustainability Partner WWF Encourages Everyone to Act on Stopping Climate Change
Voluntarism	<ol style="list-style-type: none"> 1. Voluntary conservation efforts of utilities and electric companies. 2. Greenhouse gas reduction methods described as good for business goals: Offsets, trading, and pilot programs. 3. Climate change as business issue: climate risk and investors. 4. Businesses and organizations as committed to sustainability. 5. “Everyday green:” Importance of individual choices, purchases and actions. 6. Forests, deforestation, and tree planting projects. 	<ul style="list-style-type: none"> • Entergy Announces a Second Five-Year Commitment to Reduce Greenhouse Gas Emissions and Signs Memorandum of Understanding With Environmental Defense • AEP Participates In New Industry-Wide Effort To Reduce Global Warming • Resolute Forest Products Now World's Largest Manager of Forest Stewardship Council(R) Certified Forests
Rationality and Markets	<ol style="list-style-type: none"> 1. Clean but also reliable and affordable electricity. 2. Industry demands for regulation mindful of needs of business. (Emphasis on energy efficiency; costs & benefits; lead time to implementation; incentives; economic growth.) 	<ul style="list-style-type: none"> • Consumers Bypass Both Smallest Gas Sippers and Largest 'Gas Guzzlers' • There's a Bounty on Your ACs New York: NYSEDA Offers Consumers Home Energy Tips to Cut Energy Bills, Increase Home Energy Efficiency

	<ol style="list-style-type: none"> 3. Greenhouse gas reduction methods described as good for business goals: Offsets, trading, and pilot programs. 4. Climate change as business issue: climate risk and investors. 5. Climate finance: Need for green investment and implications for financial sector. 6. Fuel efficiency & fuel economy standards. 7. Energy efficiency and economic incentives to conserve. 	<ul style="list-style-type: none"> • Sustainable Insight Capital Management Launches With Joint Study With The Carbon Disclosure Project • Companies Managing Energy Use with Eye on Profits and the Environment
<i>Topical Concerns</i>		
Economic Concerns	<ol style="list-style-type: none"> 1. Clean but also reliable and affordable electricity. 2. Energy policy and jobs. 3. Industry demands for regulation mindful of the needs of business. 4. Oil drilling as destruction of sensitive areas; government-industry relations responsible. 5. Climate change as business issue: climate risk and investors 6. Shareholder activism vs. bad corporate actors. 7. Climate finance: Need for green investment and implications for financial sector. 8. Costs and economic consequences of climate treaties and policies. 9. Need for strategic, deliberative policy-planning, including stakeholders from multiple sectors of economy. 10. Fuel efficiency & fuel economy standards. 11. Taxes, costs, budgets and economic effects. 12. Energy efficiency and economic incentives to conserve. 13. Small business as solution or motivation for action (or inaction). 	<ul style="list-style-type: none"> • United for Jobs Warns That NCEP's Recommendations Create Backdoor Energy Tax; Proposed Strategy Will Cost Jobs, Hurt Consumers • Alliance to Save Energy Urges President-Elect Obama to Fulfill Pledge to Build New, Clean-Energy Economy • 'Energy Efficiency Resource Standard' Would Reduce Energy Costs, Global Warming Pollution, Avoid New Power Plants, Says Alliance • Companies Managing Energy Use With Eye on Profits and the Environment • Energy, Environmental Groups Urge Quick Action by Congress to Use Energy Efficiency Programs to Stimulate Economy, Create Green Jobs
National Security Concerns	<ol style="list-style-type: none"> 1. Patriotism, hope, and American greatness. 2. Energy dependence. 3. International problems and threats, including climate. 4. International affairs and international cooperation. 5. Climate change as catastrophe: Sense of urgency, extremity, and history. 	<ul style="list-style-type: none"> • Noted Communications Consultant Tells Lynn University Symposium U.S. Must Urgently Heal Rift With Allies, Strengthen United Nations • 4 Star USMC General (Ret) To Discuss Energy, Climate and National Security • NARO Resolution Charges: High Price of Cheap Oil Includes American Lives

Emotional Energy

Values,
emotions,
and identity

1. Patriotism, hope, and American greatness.
2. Oil drilling as destruction of sensitive areas; government-industry relations responsible.
3. Climate effects on oceans, wildlife, and habitats.
4. Climate change as harming public health.
5. Pollution, toxins, and clean water and air.
6. Shareholder activism vs. bad corporate actors.
7. Faith, morality and stewardship.
8. International problems and threats, including climate.
9. Climate change as causing increased risk, especially of extreme weather; and need for preparation and adaptation.
10. Climate change as global problem with disproportionate impacts; and calls for action and adaptation.
11. Accusations and calls for accountability.
12. Environmental regulation as protecting human health and safety.
13. Energy dependence.
14. Climate change as catastrophe: Sense of urgency, extremity, and history.

- Groups: Maryland Agency Failing to Address Violations by Major Polluters in Baltimore and Washington, D.C. Areas
- Suit Filed to Rescue Polar Bear Sea From Drilling
- ExxonMobil's 2nd Quarter Earnings: Good for Exxon, Bad for the Nation, Says ExxposeExxon.com
- The Institute of Progressive Christians Commends the National Association of Evangelicals on Their 'Effort to Protect Creation'
- Victory for The Environment, America ... And a Stake in the Heart of the President's Energy Strategy

Independent Variables: Organizational Power. I match this data on frames' cultural content with information about the organizational power of frame sponsors. I expect that wealthy organizations may be able to leverage their access to material resources to increase the prominence of their preferred policy frames. In addition, I expect that large businesses and collectivities representing business interests may have increased prominence in policy debates because these groups are seen as important players in the national economy. Therefore, I operationalize organizational power with publicly-available data on the organizational resources and organization type of all organizations in my sample.

To describe the *organizational resources* of the creator of each press release in my sample, I use the OneSource and Business Source Complete databases to compile information on the assets, sales/revenue, and number of employees of businesses and government agencies. For civil society organizations, I collect this data from the information submitted on the Internal Revenue Service's 990 forms, accessed through the GuideStar database. If multiple years of records were available, I used the record for the year closest to the year in which the organization released the press release. Organizations that could not be found in these databases I coded as missing any financial and employee information, and values on all other organizational resources variables were set to zero.¹¹ Because organizations for which no resource information was available were likely very small and/or very new organizations (Carroll and Swaminathan 2000; Hannan et al. 1998), I also include this variable in my analysis as an indirect indicator of organizational resources.

To code press releases by *organization type*, I identify the industry of each organization in the sample, using the OneSource and Business Source Complete databases to identify its North American Industry Classification System (NAICS) code. Organizations that could not be found in these databases I coded by hand as business or civil society organizations. For details about the composition of organizations in my sample, see Chapter 2.

Dependent Variable: News Coverage of Press Release. I operationalize the success of organizations' messages as whether or not a press release received news coverage in mainstream media outlets, becoming part of the wider public debate about climate change. I code press releases as having received *news coverage* if the press release text was quoted or paraphrased in one or more of three national newspapers. First, I use the LexisNexis and Factiva archives to search for all articles containing the words "climate change," "global warming," "greenhouse effect," "greenhouse gas," or "greenhouse gases" published in *The New York Times*, *The Wall Street Journal*, and *USA Today* from 1985 to 2014. These newspapers were selected because they are among the highest circulating national newspapers in the United States and because their editorial ideologies span the ideological spectrum from liberal (*The New York Times*) to centrist (*USA Today*) to conservative (*The Wall Street Journal*) (Groseclose and Milyo 2005). These newspapers have been used in previous studies of environmental messaging for these reasons (Feinberg and Willer 2013). The resulting search yields a total of 34,948 articles published between the three newspapers, with most articles appearing in either *The New York Times* ($N = 19,391$) or *The Wall Street Journal* ($N = 12,253$).

¹¹ An additional 102 press releases were missing information on the number of employees of the sponsor organization; these press releases were removed from analysis via listwise deletion. Analyses that include variables for organizations' assets and revenue use multiple imputation to impute missing values for assets and revenue.

Next, following Bail (2014), I use the WCopyfind plagiarism-detection software to identify whether press releases were discussed or reproduced in these newspaper articles (<https://plagiarism.bloomfieldmedia.com/software/wcopyfind/>). The software generates a hypertext document displaying instances where strings of at least eight words closely or exactly match between two sets of documents (in my case, between press releases and newspaper articles), suggesting possible quotation or close paraphrasing of the source material. This software therefore is useful in identifying cases where newspaper text may have derived from press releases. However, it also generates many false positives, or instances where press releases and newspaper articles use similar or identical phrases, but the nature of these “matches” does not suggest that the article text in fact derived from the press release. For example, the software will suggest that any newspaper article that discusses the “United Nations Framework Convention on Climate Change (UNFCCC)” may have quoted several press releases that similarly use the same eight-word phrase, whether or not anything else about the press release is similar to the newspaper article. I therefore manually inspect each identified case of possible influence to verify that it represents an instance where the press release text is quoted or paraphrased in the newspaper article.

Using the above procedure, I am able to code each press release for whether its text is quoted or paraphrased in any of the three newspapers. This binary variable is the primary dependent variable for the analyses I report here.¹²

Control Variables: Political Valence of Message, Economic Growth, and Military Conflict.

All models include a control variable for the political valence of the press release. To code *political valence*, I read each press release in its entirety to determine if it communicated support for, or opposition to, action to address climate change. Press releases were coded as supportive of action to address climate change, opposed to climate action, or ambiguous.

In addition, selected models include controls for the national economic and political context around the time of the press release’s publication. *National economic growth* is measured as the annual GDP growth during the year of the press release’s publication, as reported by the U.S. Bureau of Economic Analysis. In addition, these models include a dummy variable indicating whether the United States was engaged in *overseas military conflict* at the time of the press release’s publication.

Analytic Strategy. After constructing this dataset, I use logistic regression to examine how the cultural resonance of organizations’ framings of climate change and the organizational power of frame sponsors influences which messages receive coverage in mainstream newspapers.

I first generate models including variables describing the cultural content of the message, the type of organization releasing the message, and control variables. Cultural content variables describe the proportion of words in each press release that come from frames coded as resonating with rational individualism, appealing to topical concerns, or displaying emotional energy. Next, I add variables describing frame sponsors’ organizational resources as measured by organizations’ assets, sales/revenue, and number of employees as well as the dummy variable indicating whether resource data was available. Because these measures of resources are all highly correlated (see Supplementary Table C.1), I add each variable to the model independently before including all resource variables in the final model. I then include interactions between

¹² Robustness analysis that instead use a count variable representing the total number of words matched between the press release and all newspaper articles produce substantively similar results.

organization type and organizational resources to allow large businesses to receive disproportionate coverage due to their perceived importance in the national economy, in addition to any effects organizational resources might have for all types of organizations. Supplementary Table C.1 presents descriptive statistics and correlations for all variables used in the analyses.

Results

Cultural Resonance: Rational Individualism. First I examine whether resonance with the cultural narrative of rational individualism can affect whether climate messages receive coverage in mainstream news outlets, controlling for the political valence of the message and the type of organization promoting it. Model 1 of Table 4.2 presents the results of the logistic regression model predicting news coverage by these control variables. As shown in Model 1, press releases advocating against climate action are more likely to be quoted or paraphrased in mainstream newspapers as compared to messages advocating for action to address climate change ($\beta=.598$, $p=.008$). While outside the scope of the current research, this finding is noteworthy, suggesting that mainstream media outlets grant disproportionate visibility to advocates against climate action. In addition, I find that business coalitions and business, professional, or trade associations are more likely to receive news coverage than are other types of organizations ($\beta=.634$, $p=.004$). I will return to this point when I examine the role of organizational power in policy frames' success.

Model 2 of Table 4.2 presents the results of the logistic regression model predicting news coverage by the individualistic cultural content of the press release. Specifically, individualistic cultural content is captured in four variables measuring the proportion of each press release that would be expected to resonate with rational individualism by (a) attributing responsibility for climate change to purposive individuals, (b) defining appropriate response in terms of individual behaviors or (c) voluntary efforts, or (d) motivating (or de-motivating) action by stressing rational, market-based incentives.

I find that press releases containing frames that would be expected to resonate with rational individualism are more likely to receive news coverage than are otherwise comparable press releases, but this pattern does not hold for all types of individualistic content. As shown in Model 2, press releases that cast motivations for action in terms of rational, market-based behavior are more likely to receive news coverage than are otherwise comparable press releases ($\beta=1.422$, $p=.01$). However, defining appropriate responses to climate change in terms of individual behaviors or voluntary efforts is not significantly related to whether messages are covered in national newspapers. In fact, the effects of these variables are negative, though not statistically significant (all p 's > .3). In addition, press releases that attribute responsibility for climate change to purposive, rational actors are no more likely to receive news coverage than are otherwise comparable press releases ($p > .15$).

Table 4.2: Logistic Regression of Newspaper Coverage: Effects of Cultural Content

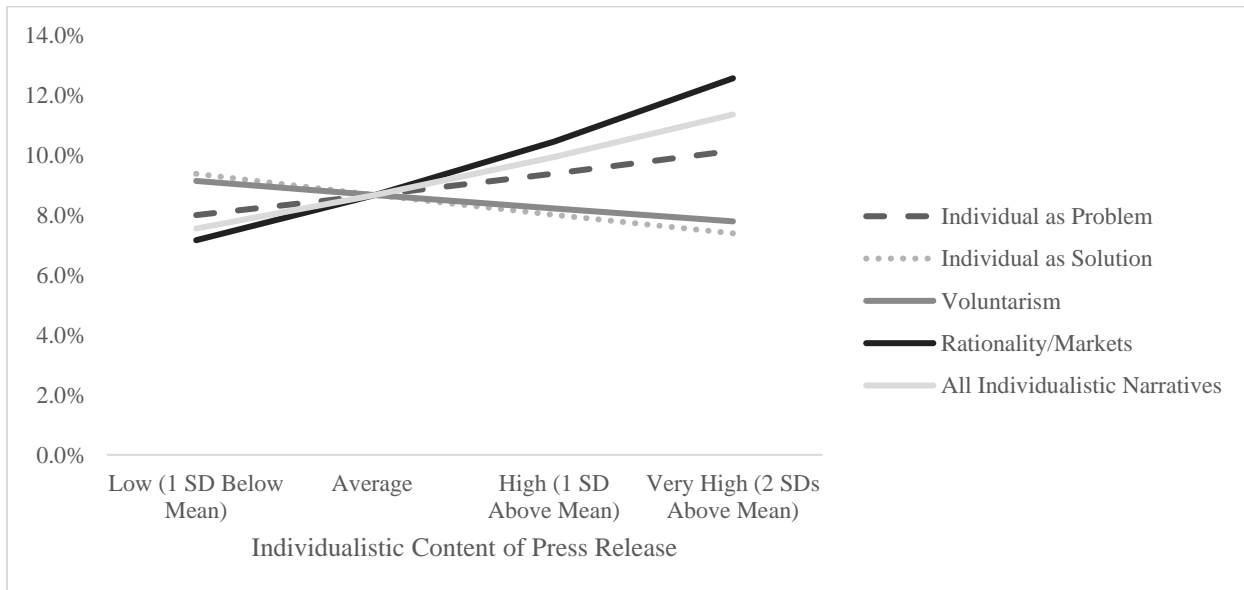
Model Number	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable	Press release picked up in major newspaper					
Goods, Wholesale Trade, Transportation and Warehousing	.111 (.216)	.069 (.228)	.102 (.220)	.122 (.221)	.224 (.220)	.085 (.233)
Services and Retail Trade, Except Advocacy Associations	-.133 (.217)	-.099 (.218)	-.122 (.219)	-.103 (.219)	-.134 (.218)	-.098 (.220)
Other Businesses	-.020 (.417)	.014 (.418)	-.032 (.418)	.014 (.420)	.006 (.418)	.052 (.423)
Social and Political Advocacy Organizations	.336† (.184)	.332† (.189)	.335† (.186)	.353† (.186)	.218 (.189)	.310 (.195)
Business, Professional or Trade Associations and Coalitions	.634** (.218)	.533* (.224)	.683** (.225)	.675** (.226)	.709** (.220)	.699** (.231)
Other Civil Society	-1.622** (.618)	-1.579* (.619)	-1.644** (.620)	-1.701** (.623)	-1.710** (.619)	-1.719** (.628)
Message Against Climate Action	.598** (.226)	.530* (.233)	.407† (.238)	.472* (.238)	.555* (.227)	.514* (.244)
Individualism – Individuals as Cause of Problem		1.580 (1.198)				.030 (1.577)
Individualism – Individuals as Solution		-.883 (.921)				-.635 (.918)
Individualism – Voluntarism		-.450 (.726)				-.027 (.765)
Individualism – Rationality and Markets		1.422* (.567)				2.304* (.937)
Economic Concerns			.841† (.493)	1.853** (.631)		.539 (.931)
GDP Growth			.125** (.046)	.301** (.087)		.296** (.087)
Economic Concerns X GDP Growth				-.576* (.231)		-.570* (.231)
National Security Concerns			1.446† (.809)	-.272 (1.435)		-1.250 (1.597)
Military Conflict			.386* (.175)	.058 (.258)		.041 (.259)
National Security Concerns X Military Conflict				2.725 (1.711)		2.543 (1.718)
Emotional Energy					1.723** (.571)	1.970* (.842)
Intercept	-2.510*** .139	-2.669*** (.195)	-3.275*** (.258)	-3.432*** (.316)	-2.838*** (.182)	-3.729*** (.377)
N	1,768	1,768	1,768	1,768	1,768	1,768

Note: Organizational type variables are effect-coded; omitted category is governmental organizations. “Other Businesses” are those businesses whose NAICS code is ‘Other’ or whose NAICS code I could not locate. “Other Civil Society” organizations include religious grant-making and civic organizations; labor unions; individuals, events, or blogs; and political candidates and campaigns. Table entries are coefficients and standard errors.

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 4.1 displays the predicted probabilities of a press release receiving newspaper coverage by the individualistic content of the press release, with other variables held at their means. This figure displays graphically the pattern discussed above, where press releases are (a) more likely to receive coverage when they discuss rational, market-based motivations for action, but are (b) less likely to receive coverage when they discuss individual and voluntary actions as the solution to the problem. Overall, the figure suggests that individualistic content is associated with increased probability of news coverage. Press releases with relatively small amounts of individualistic content (those containing less than 5% of text from frames expected to resonate with rational individualism) have about a 7.6% chance of being cited in national newspaper articles. Meanwhile, press releases with particularly large amounts of individualistic content (those containing about 40% of text from frames expected to resonate with rational individualism) are about half again as likely to receive newspaper coverage, with about an 11.4% chance of being cited in national newspaper articles.

Figure 4.1: Predicted Probability Press Release Receives Media Coverage, by Individualistic Content of Press Release



Note: Predicted values from logistic regression predicting newspaper coverage of press releases by organization type and individualistic content (Table 4.2, Model 2). Variables other than those describing press releases’ individualistic content are held at their means.

This pattern is generally consistent with the idea that frames that resonate with the broad-based, latent ideologies of a society—in this case, rational individualism in American society—are more likely to succeed in gaining visibility. However, while individualistic framings are overall associated with increased message visibility, this is not true of all framings that are expected to resonate with rational individualism. In particular, solutions to climate change that are framed in individualistic or voluntaristic terms are associated with less newspaper coverage—not more—though these negative effects are not statistically significant. So, while this pattern is overall consistent with the hypothesis that resonance with broad-based cultural

narratives contributes to frame success, it also suggests that this effect is not uniform across all cultural narratives and frame types. Instead, the effects of cultural resonance might be conditioned by other considerations, a point to which I will return in the Discussion.

Cultural Resonance: Topical Concerns. Next I examine whether resonance with audiences' topical concerns for economic well-being or national security during periods of economic downturn or military conflict can affect whether climate messages receive coverage in mainstream news outlets. Model 3 of Table 4.2 presents the results of logistic regression models predicting news coverage by the economic and national security content of the press releases and variables representing the national economic and political context at the time of the press release's publication. As shown in Model 3, the effects of the economic and national security content of press releases are positive, suggesting that overall press releases invoking economic or national security concerns receive greater news coverage. However, these effects are only marginally significant ($\beta=.841, p=.09$ and $\beta=1.446, p=.07$ for economic and national security concerns, respectively). In addition, the effects of annual GDP growth and overseas military conflict are positive and statistically significant, suggesting that on average press releases about climate change receive greater media visibility during times of greater economic growth and periods of international conflict ($\beta=.125, p=.006$ and $\beta=.386, p=.03$ for GDP growth and the military conflict dummy variable, respectively).

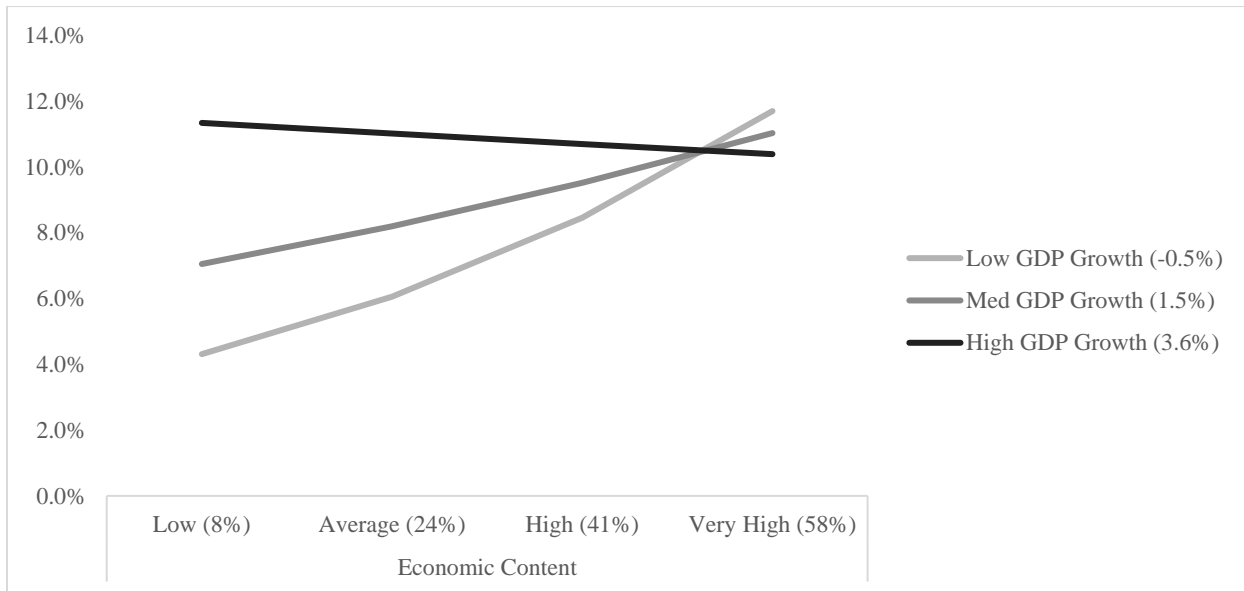
Most importantly for my purposes, if resonance with audience's topical concerns leads messages to receive increased news coverage, we would expect two significant interactions between press release content and national context. First, we would expect a negative, significant interaction between the economic content of the press release and annual GDP growth at the time of the press release's publication, such that press releases describing climate change in economic terms received more news coverage during times of slow economic growth. Second, we would expect a positive, significant interaction between the national security content of press releases and the dummy variable representing whether the United States was engaged in overseas military conflict at the time of the press release's publication, such that press releases citing national security concerns received more news coverage during periods of military conflict.

Model 4 of Table 4.2 adds terms for the interactions between the content of the press release and national context at the time of its publication. Looking first at the effects of resonance with audiences' topical concerns for economic well-being, I find that press releases invoking economic concerns receive greater news coverage than otherwise comparable press releases, and this effect is most pronounced during times of economic downturn. The term for the interaction between the economic content of press releases and annual GDP growth is negative and statistically significant, suggesting that press releases describing climate change in economic terms received more news coverage during periods of slower economic growth ($\beta=-.576, p=.01$).

The interactive pattern between the economic content of press releases and national macro-economic context is displayed in Figure 4.2. As shown in Figure 4.2, during times of strong economic growth, the economic content of press releases is not much related to how likely the press release is to be cited in national newspaper articles. All press releases have about an 11% chance of receiving newspaper coverage, regardless of how much of their text invokes economic concerns. However, during periods of slow economic growth, the relationship between economic framings and media visibility is substantial. Press releases with relatively small amounts of economic content (those containing less than 8% of text from frames expected to

resonate with economic concerns) have about a 4.3% chance of being cited in national newspaper articles. Meanwhile, press releases with particularly large amounts of economic content (those containing about 58% of text from frames expected to resonate with economic concerns) are almost three times as likely to receive newspaper coverage, with about an 11.7% chance of being cited in national newspaper articles.

Figure 4.2: Predicted Probability Press Release Receives Media Coverage, by Annual GDP Growth and Economic Content of Press Release



Note: Predicted values from logistic regression predicting newspaper coverage of press releases by organization type and economic content (Table 4.2, Model 4). Variables other than those describing macro-economic conditions and press releases’ economic content are held at their means.

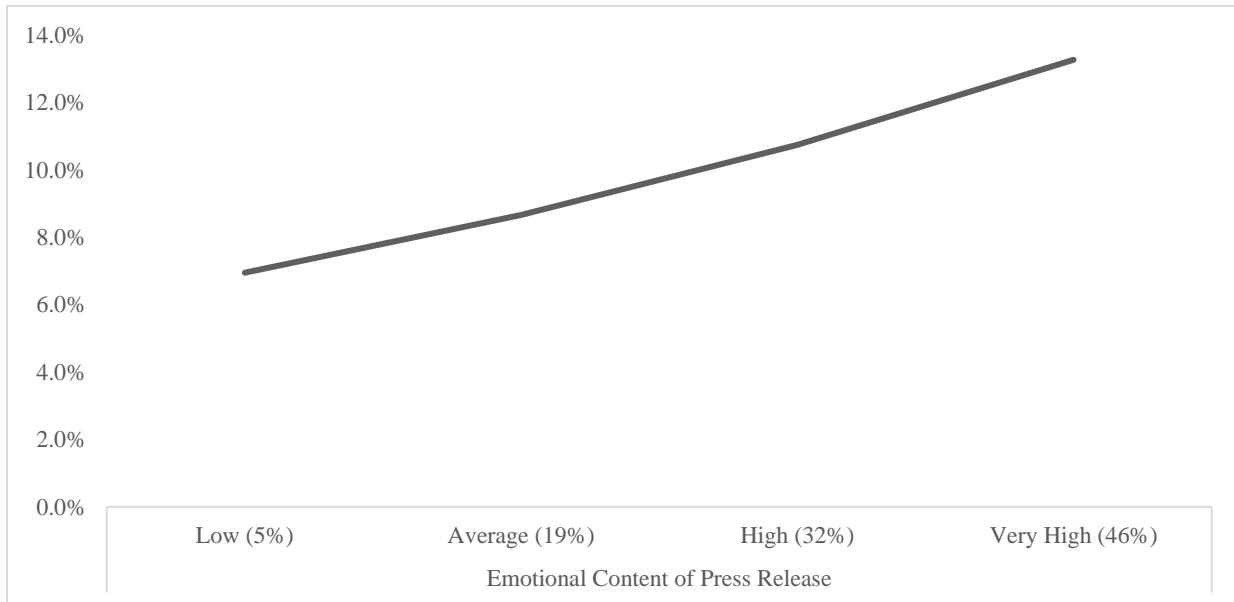
Looking next at the effects of resonance with audiences’ topical concerns for national security issues, I do not find evidence that press releases invoking issues of national security receive greater news coverage during periods of overseas military conflict. As shown in Model 4 of Table 4.2, the interaction between the national security content of press releases and the military conflict dummy variable is positive and relatively large in magnitude, but does not reach conventional levels of statistical significance ($\beta=2.725, p=.11$). Therefore, while I expected that resonance with audiences’ topical concerns for national security during periods of military conflict would lead climate messages to receive heightened visibility, I do not find support for this in the data.

Overall, this pattern provides evidence for the idea that policy frames can gain visibility by resonating with audiences’ concerns as they change over time and evolve in response to new circumstances. In particular, I find evidence that climate change frames receive greater visibility when they resonate with economic concerns during times of heightened economic anxiety. However, I do not find evidence that climate change frames receive greater visibility when they resonate with concerns for national security during times of military conflict. Similar to above,

this pattern suggests that resonance with audiences' topical concerns can contribute to frame success, but this effect is likely conditioned by other considerations.

Cultural Resonance: Emotional Energy. Next I examine whether displays of emotional energy that appeal to concerns of identity and morality can affect whether climate messages receive coverage in mainstream news outlets. Model 5 of Table 4.2 presents the results of the logistic regression model predicting news coverage by the emotional content of the press release. As shown in Model 5, press releases containing frames that would be expected to appeal to audiences' values, emotions, and identities are more likely to receive news coverage than are otherwise comparable press releases ($\beta=1.723, p=.003$).

Figure 4.3: Predicted Probability Press Release Receives Media Coverage, by Emotional Content of Press Release



Note: Predicted values from logistic regression predicting newspaper coverage of press releases by organization type and emotional content (Table 4.2, Model 5). Variables other than those describing press releases' emotional content are held at their means.

Figure 4.3 displays the predicted probabilities of a press release receiving newspaper coverage by the emotional content of the press release, with other variables held at their means. As shown in Figure 4.3, appeals to emotion, identity, and morality are associated with increased probability of news coverage. Press releases with relatively small amounts of emotional content (those containing less than 5% of text from frames expected to appeal to emotions, identity, and morality) have about a 7.0% chance of being cited in national newspaper articles. Meanwhile, press releases with particularly large amounts of emotional content (those containing about 46% of text from frames expected to appeal to emotions, identity, and morality) are almost twice as likely to receive newspaper coverage, with about a 13.3% chance of being cited in national

newspaper articles. These findings are consistent with the claim that policy frames may gain visibility through displays of emotional energy and appeals to audiences' values and identities.

Cultural Resonance: Combined Model. Finally, I examine the effects of frames' cultural resonance on whether climate messages receive media visibility, with all cultural content variables included in the model. Model 6 of Table 4.2 presents the results of the logistic regression model predicting news coverage by variables representing resonance with rational individualism, topical concerns for national security and economic well-being, and emotional energy. As shown in Model 6, the results from the previous analyses remain largely unchanged when all cultural content variables are included in the model. Press releases that cast motivations for action in terms of rational, market-based behavior remain more likely to receive news coverage than otherwise comparable press releases ($\beta=2.304, p=.01$). However, climate messages that might resonate with the cultural narrative of rational individualism in other ways—such as by attributing responsibility for climate change to purposive actors or suggesting that individual-level behaviors can solve the problem—are no more likely to receive news coverage than are otherwise comparable press releases ($p's>.4$).

In addition, press releases that appeal to audiences' topical concerns for economic well-being during periods of economic downturn continue to receive heightened media visibility, as indicated by the negative and significant interactions between the economic content of press releases and annual GDP growth ($\beta=-.570, p=.01$). Again, however, the corresponding interaction between the national security content of press releases and the military conflict dummy variable does not reach conventional levels of statistical significance ($p=.13$). This suggests that climate messages that appeal to audiences' topical concerns for national security during times of overseas conflict are no more likely to receive media coverage than are otherwise comparable press releases.

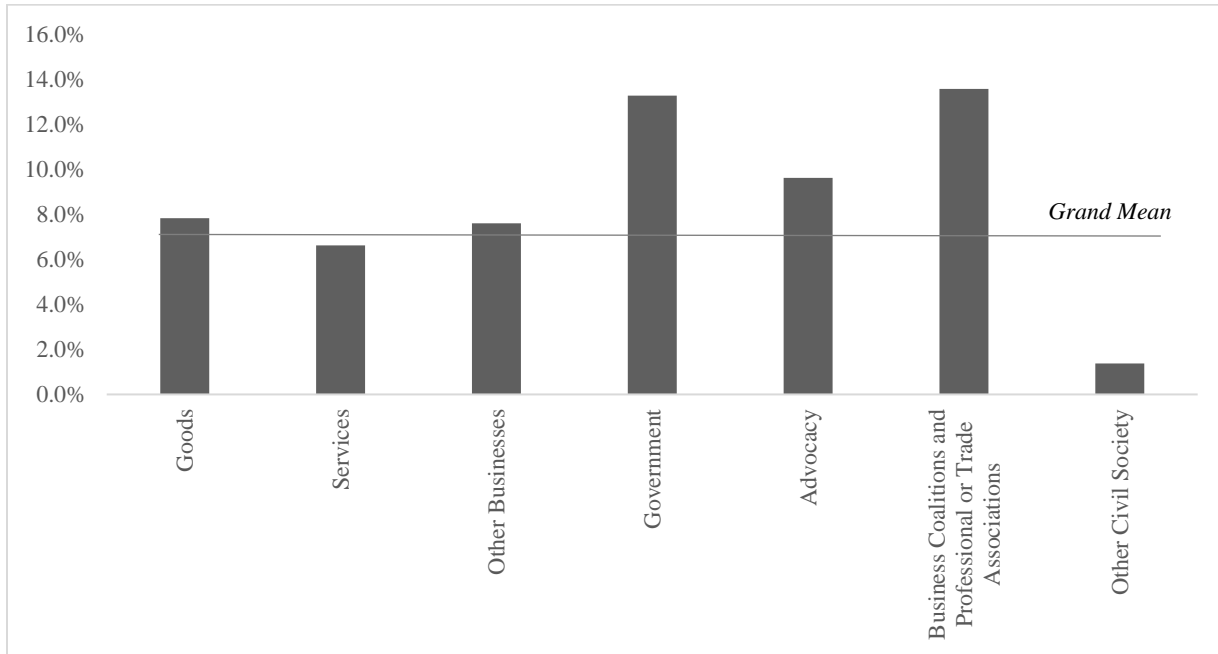
Finally, press releases that engage audiences' emotions, values, and identities also continue to receive heightened media visibility ($\beta=1.970, p=.02$). This suggests that, overall, emotionally-charged and culturally-resonant frames have received heightened media visibility in the American climate change debate, but not all sources of resonance are associated with frame success.

Organizational Power. Next, I turn to examine the effects of organizational power on whether climate messages receive coverage in mainstream news outlets. Looking first at the effects of organization type, I find that press releases produced by business coalitions and professional or trade associations are more likely to receive news coverage than are press releases produced by other types of organizations. Re-examining Model 6 of Table 4.2, I find that—after controlling for the political valence of the message and the cultural content of press releases—the probability that press releases from business coalitions and professional or trade associations will receive newspaper coverage is significantly greater than the grand mean for organizations as a whole ($\beta=.699, p=.003$). In addition, the magnitude of the effect is substantial. Figure 4.4 displays the predicted probabilities that press releases will receive coverage in mainstream news outlets by the type of organization that published the press release, controlling for the political valence and cultural content of the message.

As shown in Figure 4.4, business coalitions and professional or trade associations are more likely than any other type of organization to have their messages receive media visibility. Press releases from these organizations have a 13.6% probability of receiving news coverage, as

compared to 7.2% among organizations as a whole. Only press releases from government agencies, such as NASA and the EPA, receive similar levels of news coverage.

Figure 4.4: Predicted Probability Press Release Receives Media Coverage, by Organization Type



Note: Predicted values from logistic regression predicting newspaper coverage of press releases by organization type and cultural content (Table 4.2, Model 6). Variables other than those describing organization type are held at their means.

These findings are consistent with the claim that the structural power of business interests has led their preferred policy frames to receive disproportionate visibility in the American climate change debate. According to this perspective, the policy statements of business coalitions and professional, business, or trade associations are more likely to be publicized than those of other types of organizations because these groups are seen to represent the interests of a broad cross-section of the national economy. In addition, this relationship holds even after controlling for several measures of frames’ cultural content, such as whether they motivate action in terms of rational, market-based incentives or cite economic concerns.

Next, I examine whether organizations’ resources can affect whether their climate messages receive coverage in mainstream news outlets. Models 1-5 of Table 4.3 present the results of logistic regression model predicting news coverage by organizational resources, controlling for organization type, political valence, and cultural content of the message. Specifically, organizational resources are measured with four variables representing (a) whether any resource data was available, (b) organizations’ assets, (c) sales/revenue, and (d) number of employees.

Table 4.3: Logistic Regression of Newspaper Coverage: Effects of Organization Type, Organization Resources, and Cultural Content

Model Number	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable	Press release picked up in major newspaper					
Goods, Wholesale Trade, Transportation and Warehousing	-.028 (.236)	.048 (.241)	.045 (.246)	-.083 (.283)	-.129 (.287)	-.849* (.425)
Services and Retail Trade, Except Advocacy Associations	-.198 (.223)	-.106 (.221)	-.101 (.220)	-.106 (.252)	-.174 (.253)	-.822* (.364)
Other Businesses	.308 (.437)	.040 (.425)	.062 (.424)	.426 (.447)	.617 (.463)	.011 (.628)
Social and Political Advocacy Organizations	.271 (.196)	.351† (.206)	.329† (.199)	.432† (.224)	.385† (.234)	.837** (.295)
Business, Professional or Trade Associations and Coalitions	.650** (.233)	.727** (.236)	.718** (.234)	.576* (.284)	.518† (.290)	.919** (.338)
Other Civil Society	-1.599* (.628)	-1.706** (.628)	-1.724** (.628)	-2.078* (.871)	-1.995* (.871)	-1.506† (.895)
Message Against Climate Action	.530* (.246)	.515* (.244)	.523* (.245)	.732** (.268)	.771** (.270)	.732** (.272)
Individualism – Individuals as Cause of Problem	-.028 (1.588)	.034 (1.578)	.048 (1.579)	.990 (1.649)	1.031 (1.658)	1.367 (1.664)
Individualism – Individuals as Solution	-.642 (.917)	-.614 (.920)	-.626 (.919)	-.834 (.929)	-.824 (.934)	-.707 (.938)
Individualism – Voluntarism	-.017 (.765)	-.056 (.766)	-.054 (.766)	.082 (.785)	.175 (.790)	-.117 (.805)
Individualism – Rationality and Markets	2.140* (.948)	2.307* (.938)	2.305* (.938)	1.990* (.978)	1.807† (.986)	1.973* (1.001)
Economic Concerns	.747 (.941)	.515 (.933)	.521 (.933)	.983 (.960)	1.170 (.970)	1.022 (.978)
GDP Growth	.296** (.087)	.297** (.087)	.297** (.087)	.283** (.090)	.280** (.091)	.284** (.091)
Economic Concerns X GDP Growth	-.567* (.234)	-.576* (.231)	-.573* (.231)	-.534* (.238)	-.512* (.242)	-.537* (.243)
National Security Concerns	-.961 (1.604)	-1.266 (1.601)	-1.293 (1.602)	-1.847 (1.773)	-1.660 (1.778)	-1.772 (1.806)
Military Conflict	.055 (.260)	.040 (.259)	.036 (.259)	.126 (.272)	.138 (.273)	.142 (.274)
National Security Concerns X Military Conflict	2.324 (1.728)	2.549 (1.721)	2.592 (1.723)	2.624 (1.939)	2.332 (1.954)	1.994 (1.981)
Emotional Energy	1.948* (.849)	1.960* (.843)	1.973* (.842)	1.810* (.868)	1.824* (.877)	1.814* (.887)
Organizational Resources Data Unavailable	-.735* (.332)				-.785† (.444)	-1.229* (.527)
Assets (in millions) (ln)		.014 (.022)			.012 (.025)	.008 (.038)
Revenue (in millions) (ln)			.014 (.026)		.002 (.041)	.015 (.051)

Employees (ln)	.051 (.032)	.013 (.049)				-.099 (.065)
Business X Organizational Data Unavailable						1.413 (1.107)
Business X Assets						.012 (.060)
Business X Revenue						-.105 (.110)
Business X Employees						.284* (.124)
Intercept	-3.654*** (.380)	-3.797*** (.393)	-3.775*** (.388)	-4.053*** (.428)	-3.878*** (.447)	-3.865*** (.458)
N	1,768	1,768	1,768	1,666	1,666	1,666

Note: Organizational type variables are effect-coded; omitted category is governmental organizations. “Other Businesses” are those businesses whose NAICS code is ‘Other’ or whose NAICS code I could not locate. “Other Civil Society” organizations include religious grant-making and civic organizations; labor unions; individuals, events, or blogs; and political candidates and campaigns. Models 2, 3, 5 and 6 use multiple imputation to impute missing values for assets and revenue. Table entries are coefficients and standard errors.

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

I find some limited evidence that press releases that originate from organizations with greater access to resources are more likely to receive news coverage than are otherwise comparable press releases. As shown in Model 1, press releases that originate from organizations for which no resource information was available are significantly less likely to receive news coverage than are otherwise comparable press releases ($\beta = -.735$, $p = .03$). Because these organizations are likely very small and/or very new organizations (Carroll and Swaminathan 2000; Hannan et al. 1998), this pattern indicates that climate messages from organizations with the fewest resources also receive the least media visibility.

However, this pattern does not hold for other measures of organizational resources. I find that organizations’ assets, sales/revenue, and number of employees are not significantly related to whether their messages are covered in national newspapers. As shown in Models 2-4, the effects of these variables, while positive, are mostly small in magnitude and are not statistically significant ($\beta = .014$, $p = .53$; $\beta = .014$, $p = .61$; and $\beta = .051$, $p = .11$ for assets, sales/revenue, and number of employees, respectively). In addition, as shown in Model 5, the effect of the dummy variable indicating whether any resource information was available is only marginally significant when all measures of organizational resources are included in the model ($\beta = -.785$, $p = .08$). Therefore, while I expected that frames promoted by organizations with greater access to resources would be more successful because these organizations can use these resources to increase frame prominence, I do not find consistent support for this in the data.

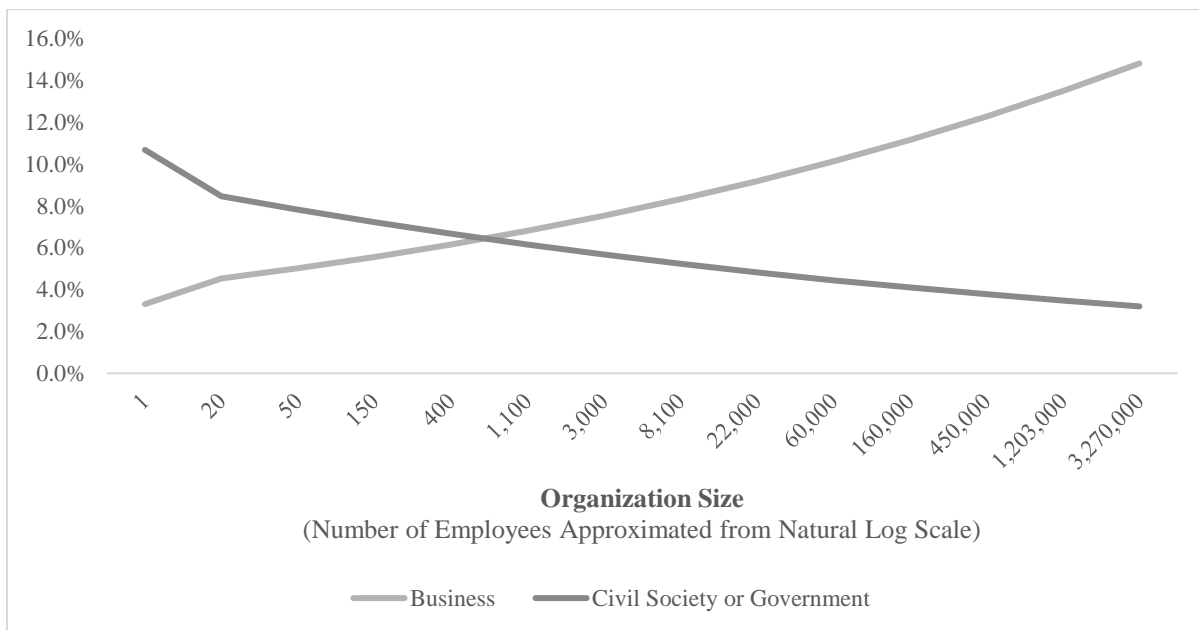
Finally, I examine whether the effects of organizational resources are contingent on organizational type. Specifically, greater access to material resources might lead the policy statements of businesses in particular to receive heightened media visibility due to the perceived importance of large businesses in the functioning of the national economy. If this reasoning is correct, we would expect positive and significant interactions between organizational resources and organizational type such that the climate messages of businesses with greater access to resources receive disproportionate news coverage.

Model 6 of Table 4.3 adds terms for the interactions between organizational resources and a dummy variable indicating whether or not the press release was issued by a business or by

some other type of organization. As shown in Model 6, the interaction between organization type and number of employees is positive and significant ($\beta=.284, p=.02$), suggesting that the effect of organization size is conditioned by the type of organization issuing the press release.

The interactive pattern between organizational size and organization type is displayed in Figure 4.5. As shown in Figure 4.5, press releases produced by larger businesses are more likely to receive media coverage than those produced by smaller businesses. Press releases from the smallest businesses in my sample (those with fewer than 20 employees) have about a 3.3% chance of being cited in national newspaper articles. Meanwhile, press releases from the largest businesses in my sample (those with about 3 million employees) are more than four times as likely to receive media coverage, with about a 14.8% chance of being cited in national newspaper articles. However, the opposite is true for civil society organizations and government agencies, where press releases produced by smaller organizations are more likely to receive media coverage than press releases produced by larger organizations of these types.

Figure 4.5: Predicted Probability Press Release Receives Media Coverage, by Organization Size and Organization Type



Note: Predicted values from logistic regression predicting newspaper coverage of press releases by organization type, organizational resources, and cultural content (Table 4.3, Model 6). Variables other than those describing organization type and organizational size are held at their means.

This interactive pattern does not hold for other measures of organizational resources, where the corresponding interactions are not statistically significant (all p 's > .20). However, combined with the finding that business coalitions and professional or trade associations are more likely than any other type of organization to have their messages receive media visibility, these results overall suggest that frames promoted by large business interests have received heightened media visibility in the American climate change debate. Further, this relationship is

not spuriously driven by the cultural content of these organizations' framings of climate change, at least not the types of content I have measured here.

Similarly, cultural resonance of the climate change frames used in organizations' press releases remains associated with increased news coverage, even after controlling for organization type, organizational resources, and their interactions. As shown in Model 6 of Table 4.3, press releases that cast motivations for action in terms of rational, market-based behavior remain more likely to receive news coverage than otherwise comparable press releases ($\beta=1.973, p=.05$). In addition, press releases that appeal to audiences' topical concerns for economic well-being during periods of economic downturn continue to receive heightened media visibility, as indicated by the negative and significant interactions between the economic content of press releases and annual GDP growth ($\beta=-.537, p=.03$). Finally, press releases that engage with audiences' emotions, values, and identities also continue to receive heightened media visibility ($\beta=1.814, p=.04$). This suggests that emotionally-charged and culturally-resonant frames have received heightened media visibility in the American climate change debate, and this relationship cannot be accounted for by the structural power and resource control of frame sponsors. Instead, organizational power and cultural resonance appear as two distinct paths through which organizations' framings of climate change gain disproportionate visibility.

Discussion

I began this investigation motivated by the question: Why do some framings of social issues succeed, becoming part of the larger cultural environment, while others do not? This question is important because the frames that dominate policy debates can influence how policymakers and the public think about, talk about, and respond to important public problems. While scholars have advanced theoretical arguments for the importance of (1) frames' resonance with latent cultural narratives and (2) power relationship between frame sponsors in driving frame success, a rigorous empirical test of these mechanisms has been lacking.

I aimed to address this gap in the literature by testing whether expected resonance with well-established cultural narratives and concerns, as well as the structural and instrumental power relations of frame sponsors, predict which messages have received media visibility over the course of the American climate change debate. My results suggest both organizational power and frames' cultural meanings have shaped the public debate around climate change. Messages that engage audiences emotionally through appeals to values and identity receive heightened visibility, as do messages that appeal to audiences' topical concerns for economic well-being during periods of economic downturn. In addition, appeals that accord with American cultural models of rational, market-based behavior receive more news coverage than those which do not. At the same time, business coalitions and very large businesses are more likely than other types of organizations to receive news coverage, consistent with the claim that the structural power of business interests leads their perspectives to receive disproportionate visibility. These findings implicate both organizational power and cultural resonance as viable paths through which policy frames may gain prominence in the public sphere.

However, I do not find unconditional support for each mechanism, but instead find that both matter in specific and partial ways. For example, I find that organizational power matters insofar as the policy frames promoted by large businesses and business interests receive disproportionate news coverage relative to otherwise comparable messages. However, I do not find evidence that organizations' wealth in terms of assets and revenue influence their preferred

frames' success. This is contrary to the expectation that frames promoted by wealthy organizations might be expected to be more successful because these organizations can leverage their material resources and resource-dependence relationships to increase frame prominence. Similarly, I find that the cultural content of policy frames is associated with frame success, but only when frames resonate with specific cultural narratives and tropes. For example, while invoking economic concerns during times of economic stagnation is associated with increased news coverage, invoking national security concerns during times of military conflict is not. In addition, while frames that resonate with American cultural models of rational, market-based behavior see heightened media visibility, those that emphasize individualistic and voluntary solutions to the climate change problem do not.

The current research cannot directly answer why only some types of organizational power and cultural resonance are associated with frame success, but I offer here speculative explanations that future research might pursue. First, the apparent unimportance of organizations' material resources in increasing frame prominence could be the result of the specific political dynamics of climate change, where a handful of very wealthy corporations are highly visible as interested parties with financial stakes in the outcome of the debate (e.g., ExxonMobil, Koch Industries). So, while these companies could potentially use vast material resources to promote their preferred policy frames, they are also likely seen as biased and untrustworthy sources of information in the climate change debate. Therefore, these companies might face a credibility problem that could offset any advantage they might otherwise receive.

In addition, it is possible that the effects of resonance with broad cultural narratives on frame success are tempered by pragmatic and institutional considerations specific to the different organizational fields in which framing activities occur (e.g., journalism, social movement contestation, political lobbying, etc.). So, in the case of the current research, the specific processes and norms of journalistic practice—such as the emphasis on novelty, controversy, and conflict in making a story appear “newsworthy”—might lead journalists to systematically neglect some types of otherwise-resonant messages. For example, individualistic and voluntaristic solutions to climate change may resonate with the broad cultural schema of American individualism, but these individual-level behaviors are also likely to be seen as the uncontroversial decisions of private citizens rather than matters of public conflict and debate. Therefore, the cultural resonance of these messages may be offset by their lack of fit with journalistic standards of newsworthiness, leading these messages to be less successful than one might otherwise expect. More generally, this would suggest that the broad cultural norms of audiences (in this case, the newspaper-reading American public) and the local institutional norms of messaging professionals (in this case, journalists) interact to shape frame success, such that successful frames are those that both resonate with the cultural narratives of audiences and that are seen as appropriate for the particular institutional context in which the frame is being reproduced.

These explanations are purely speculative, so I hope that future research will examine more deeply how and why specific types of cultural and organizational power appear to contribute to frame success, while others do not. In addition, the current research has limitations I hope future research will address. First, it uses only the case of American climate change discourse to test general theories of the mechanisms influencing frame success. However, this case presents its own unique political, cultural, economic, and physical dynamics which may affect the results of the current research. In addition, my analysis only takes into account the economic power that organizations may have, without considering how symbolic power (such as

might be held by Nobel-winning scientists) or social capital (such as might be held by resource-poor but well-connected social movement organizations) determine frames' success. Finally, in its test of whether cultural resonance predicts frame success, it analyzes only a limited number of American cultural narratives and topical concerns that could be expected to lead policy frames to resonate, while neglecting others. Much work remains to be done.

In conclusion, I find evidence that the American climate change debate has been shaped both by the organizational power of participants in the debate and the cultural content of their messages. Climate frames advanced by business interests are disproportionately likely to receive media visibility, as are frames that would be expected to resonate with audiences' latent ideologies and topical concerns. These include economic concerns during times of economic distress and individualistic models of rational, market-based action. Broadly, this research suggests that both material and cultural forms of power shape the terms of policy debates.

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APPENDIX A

APPENDIX TO CHAPTER 2: MODELS AND MORALS

Supplementary Table A.1: Detailed Topic Model: Interpretation of topics, characteristic words, and headlines and excerpts from representative press releases.

Topic Interpretation	Characterizing Words	Headlines and Excerpts from Most Representative Press Releases
Diagnostic Frames		
Contested descriptions of climate change.		
1. Climate change as business issue: sustainability, climate risk, and investors.	companies business corporate company disclosure management global climate risks sustainability investors risk corporations change cdp company's performance report financial social opportunities index leadership practices products largest strategic project environmental sectors strategy ceres services responses responsibility information ceo johnson s&p regulatory survey including sec assets employees trillion strategies operations top scores list bottom corporation supply fair issues sap governance citizenship institutional related reputation ceos reporting controls officer chief operating profitability respondents improve climate-related score understanding filings	1) Johnson Controls Recognized by Carbon Disclosure Project for Climate Change Disclosure. Johnson Controls (NYSE: JCI), a global diversified company in the building and automotive industries, has been recognized by the Carbon Disclosure Project (CDP) for its approach to the disclosure of climate change information. 2) DTE Energy Commended for Climate-Change Disclosure. 3) Studies Show Global Companies Still Failing to Report Strategies and Potential Impacts From Climate Change. Investors Call on SEC to Take Steps to Improve Company Disclosure. 4) Boeing Recognized as a Leader in Climate Change Disclosure. 5) Air Products Ranked Leading Chemical Company in Carbon Disclosure Project's Climate Leadership Index.
2. Climate effects on oceans, wildlife, and habitats.	ocean arctic sea polar wildlife species alaska ice refuge coral bears marine birds north oceans fish whales endangered habitat reef bear melting conservation threats whale lake whaling bird change island animal world's reefs life people count food nwr miles protect commercial save animals fishing protection refuges populations audubon system critical threatened effects waters impacts coastal acidification fisheries glacier pollution worldwide islands loss home areas defenders mendenhall photo glaciers service advance mammals ecosystems creatures wild audubon's	1) Spread Holiday Cheer to Endangered Animals Worldwide -- The Vermont Teddy Bear You Buy Today Can Help Save the Life of a Real Bear Tomorrow; New line of Vermont Teddy Bears will help to fund IFAW's international rescue and rehabilitation programs. 2) Arctic National Wildlife Refuge and Kenai National Wildlife Refuge Make Nation's Most Endangered Refuges List; Dire Threat of Global Warming Jeopardizes Refuge's Future. Wildlife habitat is literally melting away in the Arctic National Wildlife Refuge, according a new report released by Defenders of Wildlife. 3) Hawaiian Islands National Wildlife Refuge Makes Nation's Most Endangered Refuges List; Dire Threat of Global Warming Jeopardizes Refuge's Future. 4) Marine Mammal Alliance Urges Action to Help Protect Polar Bears.

		5) New Legislation Reasserts U.S. Leadership for Whale Protection Worldwide.
3. Climate change and emissions as harming public health.	health public disease diseases care children deaths aids healthy human association death american risk calls impacts food west prevention healthcare hospitals impact national medical nile virus infectious education conditions asthma kaiser physicians heart risks threats facilities consequences medicine related respiratory exposure people apha spread plague pollution chronic lung professionals systems illnesses urban social blood malaria statements suffer release permanente hazards control director obesity centers executive deadly diabetes illness elderly hughes hopkins cases monitor epidemic cities	1) Physicians for Social Responsibility to Release Major Report on Coal and Human Health. 2) National Public Health Week Shines Spotlight on 'What Is Public Health' as U.S. Faces Mounting Public Health Challenges; Public Health Students Nationwide Participate in Campaign to Drive Awareness of Public Health's Significance in Interconnected World. 3) Human Plague Cases Increasing in Southwest; Likely Cause: Global Climate. 4) Researchers at the University of Denver Find That Headway Being Made Fighting Communicable Diseases Globally – Global chronic disease burdens are increasing rapidly. 5) West Nile Virus Could Be 'Bigger Than Sars' in 2003, Certain Portions of U.S. Poised for Return of Disease. Global Warming Seen as Major Contributing Factor That Can Be Addressed.
4. Pollution, toxins, health, and clean water and air.	air pollution environmental clean environment quality health epa waste pollutants standards public problems plants protect acid act sources power water rain toxic hazardous industrial control protection cleaner nrdc agency sites effects smog ozone limits nox risk director nitrogen chemicals shutdown job days epa's lung monoxide nation's areas high mercury oxides sulfur breathe disposal nrdc's source proposal amount communities emission dirty work cleaning point dangerous municipal district heart treatment regional land burn defense harmful don't resources	1) EPA Ranks Environmental Risks To Aid Setting Of Priorities. The Region 2 Office of the U.S. Environmental Protection Agency (EPA) has ranked 27 environmental problems in terms of risk to human health and welfare, and to the environment. 2) New Poll Shows Americans Strongly Opposed EPA Shutdown, Look Unfavorably on Those Who Put Our Health and Environment at Risk. Message for future budget battles: Americans want EPA cleaning up air, water, toxic sites and power plant carbon pollution. 3) American Lung Association Report Outlines Critical Next Steps for Healthy Air. American Lung Association's "Healthy Air Agenda" Calls on the Obama Administration to Protect the Air We Breathe. 4) Air Hugger Blog to Focus on Publicizing Air Pollution from Industrial Sources and Naming Corporate 'Villains.' 5) America Makes Significant Improvements in Overall Environmental Quality Index of Leading Environmental Indicators, Dispels Myths on Asthma & Mercury Levels.
5. International problems and threats, including climate.	world iraq war people military time united peace states global rights human power troops threats afghanistan security middle international east africa generation moment freedom leader terrorism civil man history humanity violence nations brown conflict political union weapons	1) Noted Communications Consultant Tells Lynn University Symposium U.S. Must Urgently Heal Rift With Allies, Strengthen United Nations. 2) Time For a Change at the World Bank: Nancy Birdsall, President, Center for Global Development. Poverty, climate change, terrorism, cross-national money laundering, drug and sex trafficking, avian flu and more... We are in a new and dangerous global century.

	<p>poverty continent problems destruction fight threat religious debt wealth leadership iran politics respect vietnam opinion korea liberty desire attorney common mass mission jonathan allies hussein veterans personal tonight nomination saddam spread dangerous birthday labor korean judgment convention proliferation</p>	<p>3) Kirk Douglas Editorial for His 90th Birthday. Generation Y, you are on the cusp. You are the group facing many problems: abject poverty, global warming, genocide, AIDS, and suicide bombers to name a few. These problems exist, and the world is silent. We have done very little to solve these problems. Now, we leave it to you. You have to fix it because the situation is intolerable.</p> <p>4) 2008 Democratic National Convention: Remarks as Prepared for Delivery by James Clyburn, Member of the US House of Representatives, South Carolina. This generation lives in a time when threats no longer come from nations with borders, but range from terrorist groups to the rising tide of global warming.</p> <p>5) 2008 Democratic National Convention: Remarks as prepared for delivery by Jim Leach, Former Republican Member of the U.S. House of Representatives, 1st District, Iowa</p>
<p>6. Climate change as catastrophe: Sense of urgency and threat, extremity, and history.</p>	<p>today effect crisis warming time recent fact current years high lead long set large past deal state experts senior response problem times group early effects system concerns attention biggest number rising move small recently shows point problems needed noted force news consequences entire experience david released clear present future questions reasons place free difficult reality points huge life week return evidence shift case taking question due decades history growing threat added pressure situation caused highest</p>	<p>1) Climatic Cataclysm: The Foreign Policy and National Security Implications of Climate Change. New Brookings Press Book Measures Risks to Global Peace and Security. This new Brookings book provides a primer on how climate change may undermine the security of the planet and create new challenges -- pandemics, large-scale migration, resource scarcity -- that could dwarf the issues of today.</p> <p>2) The Road To 2015: Are We Driving Blindly Into The Millennium?</p> <p>3) MacArthur Fellow Peter Gleick Discusses 'Peak Water,' China's Water Crisis, Climate Change Impacts at Wilson Center</p> <p>4) Professor Responds To USA Today On Global Warming.</p> <p>5) Kasten Targets Japanese Plan To Fund 'Infamous' Amazon Road.</p>
<p>Contested descriptions of climate change paired with sources of authority.</p>		
<p>7. Climate science and climate effects on oceans, glaciers and ice.</p>	<p>ice climate nasa ocean sea data space models atmospheric earth scientists arctic team satellite nasa's earth's mission surface atmosphere antarctica change study understanding measurements temperature antarctic logo singer science noaa researchers goddard greenland glaciers conditions observations national level predict loss research understand scientist land phytoplankton geological laboratory usgs weather trends past flight carbon extent cycle</p>	<p>1) Joint NASA-French Satellite to Track Trends in Sea Level, Climate.</p> <p>2) Arctic Sea Ice Continues Decline, Hits Second-Lowest Level. Last month the extent of sea ice covering the Arctic Ocean declined to the second-lowest extent on record.</p> <p>3) NASA Aircraft Examine Impact of Forest Fires on Arctic Climate.</p> <p>4) Boulder-built and Operated QuikSCAT Provides 10 Years of Data on Earth's Climate.</p> <p>5) Ice Sheet Loss At Both Poles Increasing, Major Study Finds.</p>

	<p>snow oceanic melting miles decade ipcc sheet indian system rise hansen cores regions center radar oxygen clouds lead record improve</p>	
<p>8. Scientific and quasi-scientific evidence of global warming: Certainty and negative effects of increased temperatures.</p>	<p>global warming temperatures temperature years greenhouse degrees weather atmosphere heat scientists effect gases earth's summer caused dioxide fossil earth effects increase human natural levels rise warmer winter past level century record water average changing evidence threat plants produced fuels year world show warm recent sea burning trend planet cold patterns called period long-term scientific drought increased increases earlier continue risk conditions rapid causing increasing due ago man- made current begin hot oceans droughts center snow humans</p>	<p>1) [No headline] As the current heat wave makes this the hottest summer on record, there is much speculation on the link between the heat and both the "greenhouse effect" and the erosion of the ozone layer in the stratosphere. A Drexel professor said while it would be nice to know for sure if man-made pollutants are causing the heat, it's impossible to pinpoint the blame -- yet -- on the greenhouse effect. 2) Global Warming May Be Beneficial. "The costs of global warming are being exaggerated and the benefits are being ignored," said the study's author, Kent Jeffreys, who is Director of Environmental Studies at the Competitive Enterprise Institute in Washington D.C. Drawing on scientific evidence which Jeffreys says has been overlooked in the global warming policy debate... 3) News Advisory. Residents of Norfolk, Va., might have been pleased with their February weather this year, since it was the city's warmest on record. But few were talking about the mild weather, since it was also Norfolk's snowiest February ever, with 21 inches, seven times the norm. 4) NASA Finds 2012 Sustained Long-term Climate Warming Trend. 5) Current Drought May Be Part Of Global Warming, Walgren Suggests.</p>
<p>Contested descriptions of climate change paired with prognostic framing.</p>		
<p>9. Climate change as global problem with disproportionate impacts and differentiated responsibilities; and calls for action and adaptation.</p>	<p>climate change action global address issue president world impacts leaders addressing reduce u.s international solutions impact today governments call actions effects foundation ceo emissions statement key plans taking council leading world's resbponse combat include includes potential challenge crisis engage clear steps increasing united urgent pew dangerous measures joint panel ipcc general intergovernmental face vulnerable meaningful released framework experts prevent regions short scientific release events changing advisor planet calling mitigate act speak diverse consequences adaptation leadership</p>	<p>1) Rockefeller Foundation President Discusses Solutions to Interconnected Challenges of Global Poverty and the Climate Crisis. 2) Joint Center's Commission to Engage African Americans on Climate Change Announces New Project at the Clinton Global Initiative. 3) Statement on IPCC Global Warming Report. "The U.S. emits more greenhouse gasses than any other nation on earth -- fully 25 percent -- yet we Americans are just 4 percent of the global population. The United States cannot sit on the sidelines any longer. It must take immediate action to establish meaningful and binding limits on CO2 emissions and rejoin international negotiations to secure a long-term solution." 4) 'Global Adaptation Institute' Launches in Washington, as Issue of Adaptation to Climate Change Hits Cover of the Economist and Tops the Cancun Agenda. The new cover story of the Economist is on "Adaptation to climate change" - the central mission of the Global Adaptation Institute -</p>

		<p>declaring "Global action is not going to stop climate change. The world needs to look harder at how to live with it." 5) AEP Gives Reasons for Joining Pew Center on Global Climate Change.</p>
Uncontested descriptions of climate change.		
<p>10. Climate change as causing increased risk, especially of extreme weather, and need for preparation and adaptation.</p>	<p>risk insurance disaster weather hurricane coast risks extreme disasters gulf planning natural northwest resilient coastal katrina swiss communities catastrophe events expeditions expedition rms insurers resilience management orleans regions adaptation storm explore lindblad passage damage america providers hurricanes reinsurance florida travel losses recovery preparedness affected waves frequency east network activity wildfires manage vulnerable property catastrophic failures vulnerability perspective flooding watch tourism staff loss intensity severe models orbitz frequent nick disruptions irish australia eddie americas heavily view</p>	<p>1) VPIsystems Offers OnePlan(TM) Disaster Planning Solution for Core Communications Networks; Specialized Planning System Enables Service Providers to Maintain Business Continuity During Natural and Man-Made Disasters. 2) New RMS View of U.S. Hurricane Activity Rates Increases Losses by 40% in Florida and Gulf Coast; Elevated Storm Frequency and Intensity Expected To Persist For At Least Five Years. 3) New Research on Adaptation to Climate Change in the U.S. and Australia. 4) Ocean Conservation Expedition Funded by Rockefeller Family and Tiffany Foundation Heads Into The Northwest Passage - A Melting Frontier; Around the Americas project demonstrates global warming and climate change impacts on the environments and ecosystems. 5) USAID, Swiss Re Partnership Targets Hunger, Natural Disasters. USAID and Swiss Re today announced a three-year partnership to help vulnerable communities fight hunger, build resilience to climate change, and reduce the costs of natural disasters in the Americas, Africa and Asia.</p>
<p>11. Oil drilling as destruction of sensitive areas; identity sub-frame of government-industry relations vs taxpayers and environment.</p>	<p>club sierra oil environmental national bryan warming drilling bill administration plan director environment arctic wildlife efficiency rare bush public refuge global leasing offshore calls planet kasten drill strategy gas dangerous sensitive environmentally nuclear destructive pope spill johnston endorse industries wetlands environmentalists illinois bennett bad wilderness chapter richard executive action teshekpuk missouri president's destruction plans areas tom's reject bond spills club's johnston-wallop gulf leases wolfe betsy opposition subsidies controversial ohio damage disaster group lease taxpayers environmentalist</p>	<p>1) Johnston Bill Unsafe On Any Planet, Sierra Club Associate Executive Director Says. The Johnston bill is unsafe on any planet. It is an environmentally destructive bill that would increase nuclear waste, air pollution, the risk of global warming and the destruction of America's public lands, rivers and coastlines. It is a gift to the oil, nuclear, auto and utility industries made at the expense of consumers' pocketbooks and the Earth's environment. It seeks the destruction of America's last pristine arctic ecosystem, the Arctic National Wildlife Refuge and gives automakers an easy way out of increasing the fuel efficiency of their cars. 2) Ohio - Sierra Club Denounces Bush Energy Plan, Vows Fight In Ohio. 3) Victory For The Environment America ... And A Stake In The Heart Of The President's Energy Strategy, Says Sierra Club. 4) Interior Department Defers Controversial Leasing at Teshekpuk Lake. 5) Largest Green Group in U.S. May Not Endorse Al Gore, Says Air/Water Pollution Report.</p>
Prognostic Frames		

Goals, criteria or standards for appropriate action.

1. Clean but also reliable and affordable electricity.

energy power renewable electricity coal wind generation solar plants clean sources electric technologies coal-fired source gas resources cleaner state today fossil natural supply generating largest meet geothermal transmission construction demand utility large companies reliable customers resource production projects hydropower nation's generate fuels chief utilities price grid added investments reliability market biomass affordable ccs efficient generators capacity association storage supplies reliance generated pjw executive makes electrical prices megawatt corporation purchase

1) PJM Launches Dashboard on Renewable Energy. Amid the debates on Capitol Hill regarding climate change and the growing interest in renewable energy, PJM Interconnection is launching a one-stop resource to better understand renewable energy resources on the PJM power grid.
 2) Westar Launches Kansas' Largest Wind Energy Program.
 3) Hydropower Industry Supports Administration's Efforts On Emissions Reductions.
 4) Community Energy - Leading D.C. Area Institutions Announce Wind Energy Purchases From Newly Operating 44 Wind Turbines. "As these businesses and institutions step forward to lead the effort to improve our environment, WGES is pleased to be able to provide them with locally-generated, competitively-priced clean wind energy," said Harry Warren.
 5) Wind: 50% of EU Electricity in 2050. Topping the agenda at the opening day of the European Wind Energy Conference and Exhibition (EWEC 2010) in Warsaw was Europe's long-term energy supply.

2. Industry demands for regulation mindful of the needs of business.

industry emissions plan reduce policy greenhouse meet environmental proposed standards goals efficiency approach national ensure continue make cost programs control today program support strategy reducing result provide government important costs benefits including time increase public process improve significant goal environment reduction regulatory encourage resources economic federal existing policies gases made actions gas set achieve address noted meeting increasing economy implementation information competitive efforts quality increased incentives effective growth regulations part additional groups develop standard major

1) Clean Power Group Comments on Report of The National Energy Policy Development Group. "The Clean Power Group believes that we should not try to reform NSR if we cannot put something better for the environment in its place," said Bluestein. "Consequently, the group's proposal marries what industry needs, which is technological flexibility, economic certainty, and predictability with guarantees for environmental progress that current regulations hoped to get but don't quite deliver."
 2) MVMA President Addresses Subcommittee On Energy And Commerce. MVMA encourages legislative adjustments to the Clean Air Act which will assure continued air quality improvement without causing undue economic disruption or compromises in the fuel economy, safety, function and/or utility of vehicles.
 3) ICCP Comments on Result of Climate Negotiations. ICCP urged that a successful Climate Change agreement must contain the following: -- a comprehensive approach addressing all gases, sources, and sinks; -- a long-term objective; -- developing country commitments; -- a flexible, market-based approach; and -- the maintenance of national flexibility.
 4) ATA Supports Fuel Economy Standards as Preferred Method of Reducing Carbon Emissions.
 5) Statement By PSEG Chairman And CEO Ralph Izzo. "[T]oday's action by EPA takes an important first step in establishing standards for new

		<p>electric power plants that will provide certainty for the industry and the framework for Agency action on existing plants." "As the process moves ahead we will provide feedback to EPA on the proposed regulations and look forward to working with the Agency to evaluate and inform the development of cost effective regulations for existing plants that build on efforts already taken across the nation to reduce greenhouse gas emissions."</p>
<p>3. Need for strategic, deliberative policy planning, including stakeholders from multiple sectors of economy.</p>	<p>issues future environmental policy challenges economic energy change role public resources development key policies sector including focus business based significant executive problems important critical current developing social access facing major private government understanding areas opportunity local strategies greater common play order concern planning ways options changing decisions concerns century level view annual top sectors natural systems number focused report recommendations understand includes face range implications forum identify communications comprehensive needed high finding transport capacity knowledge</p>	<p>1) Comprehensive Energy Reform Needed Now. Reform Institute Initiates Public-Private Sector Dialogue at National Energy Symposium. "A reliable, sustainable and reasonably priced energy supply is critical to the competitiveness of the U.S. economy and our global standing," said Reform Institute Chairman Paul Bateman. "This symposium highlighted that cost-effective, energy efficient and climate friendly technologies being developed by the private sector will play a major role in enhancing U.S. energy resilience." 2) AWRA Releases Conclusions of Fourth National Water Resources Policy Dialogue; Urges New Administration & Incoming Congress to Address Growing Challenges 3) New Shell Scenarios Sharpen Focus on Future for Society, Energy. "They highlight the need for business and government to find new ways to collaborate, fostering policies that promote the development and use of cleaner energy, and improve energy efficiency." 4) Chancellor Angela Merkel to Address the International Transport Forum on Climate Change and Transport. 5) Business Takes The Lead On Environmental Issues.</p>
<p>4. Principles, frameworks, assessments, and effective processes for policies and agreements.</p>	<p>uscap process iccp quebec alcan partnership parties ecd convention hydro-quebec human fay principles assessment members business responsible chemical dow dupont agreement s.d.e ovshinsky scientific development acc berlin technological canadian technical montreal makers o'leary joint gas framework outlined hydroelectricity rights effective relationship uscap's holliday minatom pakistan blueprint coalition sound chemistry gases nrg eu-us deere patent sovlux russian membership reactor mecklenburg-vorpommern xerox weyerhaeuser negotiation mechanism wave expertise</p>	<p>1) Eminent Quebec Environmentalists Urge Massachusetts Legislators Not To Limit Hydroelectricity Imports. 2) Rentech Awarded 20th US Patent Related to Its Fischer-Tropsch Process; Enhances Environmental Efficiencies for Controlling Greenhouse Gases. 3) ICCP Commends Results Of International Climate Talks; Urges Business Leadership On Technology Assessment. "The parties met the criteria for success from our perspective," said ICCP Executive Director Kevin Fay. "While we remain concerned that the timing of future negotiations may be too rapid, the parties agreed to a process grounded in scientific, technical and economic assessment."</p>

	negotiations required evergreen rentech ngos inhofe nimh aulisio patents hydro	4) ECD Announces Agreement With Russian Ministry Of Atomic Energy To Expand Russian Joint Venture In Solar Products And Ovonic Nickel Metal Hydride Batteries. 5) ICCP Outlines Criteria For Success In Berlin Climate Change Talks.
Contested solutions.		
5. Smart grid and electricity transmission.	smart grid energy electricity transmission demand consumers system utilities response feedback electric data whirlpool renewable technologies midwest meters cooling infrastructure efficient ibm geothermal peak metering consumer control grids appliances indie households goals drsg copenhagen electrification savings pricing information electrical load advanced network electronics smarter silicon devices distributed army security understand midwestern illinois meter appliance usage consumption manage valley connection create marvell sgg delurey c-neutral real-time friedman hess delegation providing syracuse yeager hours practices itc server	1) eMeter Urges Global Smart Grid Policy Movement. 2) ACEEE Study Finds 'Smart Meters' Not Smart Enough to Slash Residential Power Use and Significantly Reduce Consumer Electric Bills. Demand Could be Cut by About a Tenth, Resulting in Tens of Billions in Pocketbook Savings for Consumers and a Significant Decline in CO2 Gases. 3) GE, Amplex, Energy Curtailment Specialists, and Enfora Join Demand Response and Smart Grid Coalition. 4) US Home Appliance Industry Issues Principles & Requirements for Achieving a Widely Accepted Smart Grid at Climate Change Conference. Smart Grid Enabled Home Appliances Will Reduce Greenhouse Gas Emissions and Increase Energy Efficiency. 5) GE, Whirlpool and Others Launch Smart Green Grid Initiative Aimed at Including Smart Grid in Copenhagen Meetings.
6. Nuclear power.	nuclear power energy plants reactors weapons safety uranium progress atomic reactor site potential bas board industry united constellation exelon tsep clock commission nrc construction safe edf energy's society licensing midnight decision hand pond regulatory materials carbon-free nonproliferation bulletin radioactive build proliferation risks areva plutonium doomsday balanced nobel option decades statement plant harris expansion secure minutes meet accident fukushima shut france hintz bowman shoreham cooling dangers venture arjun jbl browns carolinas unistar ferry enriched tides tennessee	1) Nuclear Control Institute Calls on Nuclear Industry to Abandon Use Of Plutonium, Highly Enriched Uranium. 2) Constellation Energy and EDF Form Joint Venture for Developing Next-Generation Nuclear Facilities in the United States and Canada. 3) 'Doomsday Clock' Moves Two Minutes Closer to Midnight; Bulletin of the Atomic Scientists Adjusts Clock From 7 to 5 Minutes Before Midnight; 'Deteriorating' Global Situation Cited on Nuclear Weapons and New Factor: Climate Change. 4) UPDATE: Is Nuclear Power The Solution to Climate Change & Future Energy Demand? 5) 'Doomsday Clock' Moves One Minute Away From Midnight Bulletin of the Atomic Scientists Adjusts Clock From 5 to 6 Minutes Before Midnight; Encouraging Progress Seen Around Globe in Both Key Threat Areas: Nuclear Weapons and Climate Change.
7. Biofuels.	ethanol biofuels renewable fuels fuel gasoline production corn gallons agricultural farmers agriculture biofuel biomass farm sugarcane crops association food land advanced brazilian	1) Twenty-Two Farm Organizations Call On Senators To Support EPA Rule On Renewable Oxygenates In Gasoline; Agricultural Benefits 'Significant.' Twenty-two national agricultural groups, ranging from

	<p>alternative crop national soybeans grain flex-fuel plants rfs iowa solix cellulosic sugar lands biotechnology standard producers waste biodiesel biotech consumers lifecycle soybean brazil working algae security lcfs growers soil benefits yields products produced tariff unica mtbe prairie grown generation iluc feedstocks seed derived rural profits michigan jank bioenergy switchgrass corn-based nelson indirect pilot</p>	<p>soybean and sugarbeet growers to cattlemen and cotton farmers, are calling upon the U.S. Senate to reject an oil industry-backed amendment that would repeal a new program by the U.S. Environmental Protection Agency to use more renewable fuels in gasoline.</p> <p>2) EPA Reaffirms Sugarcane Biofuel is Advanced Renewable Fuel with 61% Less Emissions than Gasoline; Brazilian Sugarcane Industry Welcomes U.S. EPA's Renewable Fuels Rules.</p> <p>3) Biotech Soybean Seed Helps Growers Produce Safe and Profitable Crops.</p> <p>4) Tilling for Energy Could Increase Farm Profits by \$5 Billion Studies Indicate.</p> <p>5) NCGA Applauds Energy Bill Conference Report; Corn Growers Anticipates Swift Passage of Report Containing RFS.</p>
<p>8. Regional and state-based climate initiatives.</p>	<p>state wind cape massachusetts rggi colorado states residents regional york project minnesota england governor boston clean island ohio maine governors auction islands gov allowances rhode initiative oregon statewide offshore public made statement dakota officials delaware abu region state's added proceeds connecticut jersey ensure nantucket hampshire brown law brayton cape/islands bluewater northeastern ohio's clf region's coast dhabi auctions cod vermont babcock pataki arguments denver northeast widely leader masdar cape/the sound park congressman released jaber oberstar daystar</p>	<p>1) World Energy Solutions Administers Nation's First Carbon Emissions Allowances Auction for the Regional Greenhouse Gas Initiative.</p> <p>2) Support for Cape Wind Rises Ahead of Public Hearings, Boosted by Draft Federal Report Showing No Major Environmental Harms. In Wake of Report, Residents Statewide and on Cape/Islands More Inclined to Support Cape Wind; Strong Desire for New 'Massachusetts Miracle' With MA as National Clean Energy Leader.</p> <p>3) Bluewater Wind Joins Wind Energy Leader Babcock & Brown... "Bluewater's new partnership with Babcock & Brown provides us with the commitment, strength, reliability and financial backing to successfully develop the Delaware Offshore Wind Park, helping to ensure it will provide stable-priced, affordable, and clean, renewable power to Delmarva Power's customers for many years to come," Mandelstam said.</p> <p>4) TheClean.Org and Clean Power Now: Rep. Oberstar Interference With Cape Wind Process in Direct Conflict With His Stated Renewable Energy Policy.</p> <p>5) Survey: Cape Wind Project Backed By 61 Percent of Cape Cod and Island Residents.</p>
<p>9. Federal legislation.</p>	<p>bill congress legislation house senate act committee u.s energy senator today warming senators global statement chairman speaker security pelosi bipartisan administration members representatives american rep sen commerce action congressional passed forward vote capitol introduced law congressman nancy passage</p>	<p>1) Pelosi: Steering Committee Recommends Doris Matsui to Serve on House Energy and Commerce Committee.</p> <p>2) Representative John Dingell will Update the Detroit Economic Club on Environmental Concerns and Congress.</p> <p>3) Pelosi Statement on Legislation Addressing Energy Independence and Global Warming.</p>

	<p>support legislative provisions independence leadership step america's states week hearing released pass urge direction member protect nation's critical markey efforts majority john protecting important fund democrats move hill coalition families month package administration's h.r policy reid comprehensive</p>	<p>4) EC: An Energy Bill That Does Not Include Electrification Will Not Improve Energy Security. 5) Statement from the Alliance for Climate Protection Chairman Al Gore on Passage of the American Clean Energy Security (ACES) Act by the House of Representatives.</p>
<p>10. EPA and environmental regulations.</p>	<p>u.s epa program protection department national agency greenhouse federal environmental gas administration doe states american agencies administrator association international officials regulations council secretary government epa's decision state rule air aiame president's assistant including office <i>pepsico</i> interior division rules record government's agency's tremendous harmful expected departments waiver equipment link commerce april midwest request gases npra stanton ghg browner lisa superior rulemaking patchwork jackson reilly realize igps epact announcement vermont laws estimated west charles emissions zotos pallets</p>	<p>1) New iGPS Tool Enables Shippers to Calculate Fuel Savings and Greenhouse Gas Reductions From iGPS Plastic Pallets. 2) West Virginia's Chemistry Industry Welcomes Senators Rockefeller and Manchin's Efforts to Suspend U.S. EPA Rules That Threaten State's Economy, Jobs. 3) AIAM Comment on CAFE and GHG Regulations. "AIAM welcomes the new regulations on CAFE and greenhouse gas emissions through model year 2016. These goals are ambitious, and will present a challenge for the industry to meet. We have long supported a single, national program that provides clear guidance for AIAM members to meet these important program goals, and these regulations harmonize the efforts of EPA and the Department of Transportation to do just that." 4) AIAM Applauds Newly Released GHG and CAFE Regulations. 5) NPRA Statement on Senate GHG Amendments. Charles T. Drevna, president of NPRA, the National Petrochemical & Refiners Association, issued the following statement today after the Senate failed to approve an amendment by Senate Minority Leader Mitch McConnell (R-Ky.) to bar the Environmental Protection Agency from regulating greenhouse gas emissions from stationary sources under the Clean Air Act.</p>
<p>11. Environmental law and regulation as protecting human health and safety.</p>	<p>environmental court act federal law state safety health supreme legal public maryland review regulation judge safe justice filed groups agency agencies citizens ruling laws illegal authority icc flynn lawsuit fire stop country alternatives bangladesh breyer nepa decision regulatory rights approval incinerator cases enforcement mercury attorney chesapeake permit bay permits regulations courts matter impacts local restrict children process voters academy standards walmart court's honorable tobacco rules violations atvm responders sue ferc failed attempt unfair risks ruled</p>	<p>1) Big Tobacco Claims Initiative Protects Its Lies About the Health Effects of Smoking in Case Pending Before CA Supreme Court, says Foundation for Taxpayer and Consumer Rights. 2) Groups: Maryland Agency Failing to Address Violations by Major Polluters in Baltimore and Washington, D.C. Areas. Over 1,000 Violations Reported To Agency and Not Addressed; Legal Action Initiated to Force Action on Wheelabrator Incinerator in Baltimore and Mirant Chalk Point Power Plant Outside D.C. 3) Walmart Donates \$1.6 million to the Institute for Sustainable Communities to Launch Environmental Health and Safety Academy in Bangladesh.</p>

		<p>4) PA. Senator Brightbill Issues Review On U.S. Supreme Court Nominee's Book 'Breaking The Vicious Circle: Toward Effective Risk Regulation'</p> <p>5) ACCCE Statement Regarding the Arkansas Court of Appeals Ruling on the John W. Turk Power Plant.</p>
<p>12. Investing in cleaner transportation: Public transit, infrastructure, vehicles and fuels.</p>	<p>transportation transit rail transport airlines public fuel aviation road traffic system bus industry air association nation's ata infrastructure buses congestion highway high-speed aircraft urban cars trucking roads agencies options systems vehicles alternative construction bike airline america railcar freight grants goods passenger cities mass mile defense alternatives metro commuters highways service civil miles savings efficient regional http://photos.prnewswire.com/prnh bridges riders jet improve population segway lahood nextgen pratt ports trains employee travel dmu whitney billions federal bicycle mcnichol</p>	<p>1) House-Passed Stimulus Conference Report Praised for Transit, High-Speed Rail, and Flexible Transportation Funding. Senate Expected to Pass Conference Report As Soon As Tonight. "When it comes to job creation and reducing air and global warming pollution, investments in transit, rail, and fixing roads and bridges trump building new roads and bridges."</p> <p>2) Pratt & Whitney Vice President Alan Epstein Testifies to Benefits of Sustainable Biojet Fuels. "Simply put, drop-in, sustainable aviation biojet fuels are an excellent idea," Epstein told subcommittee members on March 26. "They will reduce aviation's CO2, while diversifying our fuel supply and promoting energy independence."</p> <p>3) Rail Transit a Poor Choice for Reducing Greenhouse Gases; Cato Study Recommends Transit Alternatives for Reducing CO2. "Only a handful of rail systems are more environmentally friendly than a Toyota Prius, and most use more energy per passenger mile than the average automobile," O'Toole notes. He suggests that technological solutions to emissions are more promising and more cost-effective than expensive rail projects.</p> <p>4) US Railcar to Resume Production of Former Colorado Railcar.</p> <p>5) Airlines for America (A4A) Commends International Civil Aviation Organization Committee on Aircraft Emissions Work.</p>
<p>13. Fuel efficiency & fuel economy standards.</p>	<p>fuel vehicles economy cars standards vehicle ford auto car consumers cafe percent manufacturers trucks safety sales year automakers mpg light consumer motors pct gallon u.s standard motor automotive automobile president efficient miles efficiency average cid gasoline passenger top transportation gas fleet global truck model fuel-efficient nhtsa sold american savings product higher companies market today national larger today's air source small ten don't domestic highway increases make manufacturer vice chevrolet toyota administration size suvs dealers requirements</p>	<p>1) Consumers Bypass Both Smallest Gas Sippers and Largest 'Gas Guzzlers.'</p> <p>2) Consumers Balk at Vehicles on EPA's Fuel Economy 'Winners' List.</p> <p>3) Environmental/Consumer Groups Push Auto Fuel Economy Measures As President Bush Speaks On Same Subject To Detroit Economic Club.</p> <p>4) General Motors Environmental Director Urges... Klimisch's remarks were directed to the proposed rulemaking question of whether NHTSA should reduce the passenger car Corporate Average Fuel Economy (CAFE) standards for model years 1989 and 1990.</p> <p>5) Ford Vice President Testifies On CAFE Standards.</p>

<p>14. International action and treaties on environment.</p>	<p>international countries nations global united world developing states conference summit economic development agreement environment meeting economies world's copenhagen developed government cop cooperation japan european strong negotiations rio measures convention efforts protocol growth kyoto governments earth sustainable china minister organization india council framework political parties europe targets brazil worldwide talks commission december technologies progress industrialized event agreed emerging commitments financial open delegation prime successful treaty foreign activities participation made held deforestation called aim commitment domestic declaration</p>	<p>1) Statement By Japan Foreign Minister Kabun Muto. The Embassy of Japan issued the following statement by Foreign Minister Kabun Muto on the conclusion of the "United Nations Framework Convention on Climate Change" and the "Convention on Biological Diversity." 2) Maurice Strong Announces Earth Council's Monitoring Role. To support effective implementation and follow-up governments, international agencies and non-governmental organizations, Strong announced today the initial step in the formation of the Earth Council, a global network which would evaluate and report on public and private sector activities to advance the goal of sustainable development. 3) Brazil Calls for Engagement of Developed Countries in International Biodiversity Negotiations. 4) GGGI Marks Its One-year Anniversary as an International Organization. 5) International Watchdog Agency Says Majority Of Greenhouse Gases To Come From Developing Countries. The Global Climate Coalition (GCC) today reaffirmed its call to increase pressure on less-developed nations that have refused to commit to reduce emissions under the Rio Climate Treaty.</p>
<p>Uncontested solutions.</p>		
<p>15. Consumer choices, recycling, and environmentally friendly products.</p>	<p>consumers recycling products environmental recycled plastic paper brands bags materials waste environment important recycle businesses buying consumer product fashion bag generation containers millennials evans material novelis ecogear lithium toshiba responsibility associates packaging beverage sold produce ten responsible reusable raw bottle bottles ceramics grocery aluminum glass groups concern mindclick silicate retailers clothing trash wide environmentally anheuser-busch line dupont renewably brewery sourced vacuum ingredients incredible replaced central spend cost participants collection made rscg cste euro boomers clothes</p>	<p>1) Incredible EcoGear Introduces First 100% Recycled Material Apparel. Fashion and eco-consciousness have merged, and the result is the most earth-friendly apparel on the market. 2) American Progressive Bag Alliance Launches California Campaign Correcting The Record On Plastic Bags. 3) Toshiba Group Continues Progress in Promising Method of CO2 Absorption. 4) Californians Reap Financial and Environmental Benefits as Beverage Container Recycling Rate Jumps in 2007; Higher California Refund Value Leads to Record Recycling Volume. "By recycling a remarkable number of containers in 2007, it's clear that Californians are doing more than ever to conserve natural resources, provide valuable raw materials for new products, and reduce energy use and greenhouse gas emissions." 5) Corporate Relations Group Shelves Contract With Evans Environmental.</p>
<p>16. International affairs and</p>	<p>u.s security president national trade secretary leaders council chairman states board international union united policy cooperation soviet meeting group defense relations foreign</p>	<p>1) Former Top Officials Set Agenda for Clinton-Lavrov Meeting. Prominent Democrats and Republicans Outline Roadmap for U.S.-Russia Relations. "The Obama Administration should take advantage of this window of opportunity to move ahead on a series of steps that will rebuild</p>

international cooperation.	state vice statement american region price meetings issue general joint member japanese served committee directors affairs major importance military robert russia members bilateral navy cooperative indonesia reserve pacific past position secure management co-chair doha competitiveness civilian advisor distinguished force agreement declaration dan asia deputy arms howard strategic domestic president's advisory discuss connaughton jeffrey	trust and confidence between our countries, and make future cooperation possible." 2) 4 Star USMC General (Ret) To Discuss Energy, Climate and National Security; Town Hall Meeting on Parris Island. 3) Top National Security Leaders Call for Bipartisan Cooperation on Climate Action Sen. Lieberman to Speak at Forum Today to Release Statement. 4) ACGNC Expands Membership; USEC and EnergySolutions CEOs Join Nuclear Council. 5) Council on Competitiveness Paves the Way to Copenhagen. Unveils Global Call to Action for Public-Private Sector Collaboration in Low Carbon World.
17. International cooperation, in the public and private sector, especially with China.	china duke world secretary china's clinton hillary rogers forum chu carbon greentech chinese clean chairman cgi google challenges energy enn beijing peabody cooperation futuregen international revolution skoll sir group huaneng leeb platform us-china pratt initiative world's collaboration jucce clean-energy ngos steven tank carnegie solutions earthhack piasecki amcham-china virgin greengen wang philips jim ccemc hangout maldives low-carbon tackling tanks laureate ten branson unca cement catalyst kendall ideas starting expert ninesigma waheed novacem u.s.-china kulczyk ikea backgrounds	1) Awarding of the Hillary Institute's 2010 Laureate. The Institute's current (2008-12) focus is on Climate Change Solutions. JUCCE (Joint US-China Collaboration on Clean Energy) is a leading non-profit organization dedicated to accelerating the greening of China. 2) Global Business Leaders, Policy Makers, and NGOs Convene to Catalyze Partnerships and Kick Start Plans to Drive China's Greentech Market; Landmark Two-day Conference Highlights the Power of Collaboration to Advance Sustainable Solutions in China. 3) ENN Affirms Commitment to Tackling Global Climate Issues through Transnational Cooperation. ENN Joins Global Partners at COP17 to Announce Clean-Energy Cooperation Initiatives. 4) President Mohamed Waheed Endorses The WHOLE WORLD Water Campaign Maldives Aims to Become the First Country to Eliminate Plastic Bottled Water. 5) Mantl: "Hillary Clinton's Outstanding Personality is a Good Prospect for a New American Foreign Policy" Initiative."
18. Green building and urban planning.	building green buildings sustainable design leed urban housing construction cool development tower city water project office certification roof sustainability materials architecture property council heat square projects silver architects achieve cities consumption roofs designs district business yujiapu architect campus competition designed performance built areas space sears model existing waste certified gold feet affordable low asphalt apartment architectural	1) The Tower Companies Leads With Six LEED Projects. 2) On Earth Day Securian Announces LEED Certification for Existing Building. 3) Midwest Research Institute Receives LEED Certification for Renovations to Kansas City Headquarters. 4) 9900 Wilshire in Beverly Hills Honored With Prestigious 2006 Los Angeles Architectural Award; Project Team Recognized for Innovative Development Enhancing the Urban Fabric of Los Angeles; Buildings Will Achieve U.S., Green Building Council's LEED Gold Rating.

	<p>developers headquarters set area merced wilshire rating principles initiatives paul upgrades laboratory strategies concept city's system renovation residential designing</p>	<p>5) Environmentally Advanced Roofing System Tops Rohm and Haas Headquarters.</p>
<p>19. Local action and cities' adaptation and greenhouse gas reduction efforts.</p>	<p>cities mayor city mayors bloomberg york conference local uscm urban grant <i>clinton</i> board chair protection palmer leadership block plan actions tools seattle climate funding task force michael foundation strong advisory agreement hastings philanthropies live trenton pickens city's greg point mark committee america nickels transportation states microsoft agenda winter meeting togethergreen trustee douglas greater towns daley rio signed iclei arbor minneapolis organization's mayor's co-chair infrastructure appeal curb president paes ncbm bloomberg's sanders stockholm janeiro jay edward</p>	<p>1) 38 Mayors Gather in Trenton to Discuss Infrastructure, Climate Protection, Crime. 2) U.S. Conference of Mayors President Palmer Commends Mayor Bloomberg for Leadership on Climate Protection; 500 American Mayors Now Pledge to Reduce Carbon Emissions in Cities. 3) Burnsville, MN Mayor Elizabeth Kautz Represents U.S. Mayors at EUROCITIES Meeting; U.S. and European Cities Present Joint Appeal on Climate Protection Urging COP 15 to Recognize Cities. 4) C40 Announces New Milestones in Leadership and Funding. Rio de Janeiro Mayor Eduardo Paes begins tenure as C40 Chair; Former Chair New York City Mayor Michael R. Bloomberg named President of C40 Board. Today the C40 Cities Climate Leadership Group (C40) announced several key milestones in both leadership and funding for the organization that will help accelerate the impact cities are having in taking climate actions locally that will reduce greenhouse gas emissions globally. 5) U.S. Conference of Mayors President Available for Reaction on President Bush's Proposal on Global Warming/Climate Change.</p>
<p>20. Low-emissions vehicles.</p>	<p>vehicles hybrid vehicle electric plug-in cars automotive miles battery charging prius future fuel driving toyota car transportation hybrids stations program fleet show nissan auto sales supercar zero-emission highway bat batteries road drive consumers ford motor test gasoline gallon clunkers mph testing all-electric rental vans typical results mpg engine charge automakers cash volt lithium-ion audi pilot mobility speed incentive packs ltc drivers zev driven buyers standard pevs calcars lithium motorists tests uaw affordable partnership wright's maritz</p>	<p>1) Mayor Newsom Announces Partnership With Toyota to Test New Plug-in Hybrid Vehicles, Upgraded Charging Systems. 2) Toyota Prius Delays Test; `Duel of SuperCars' Will Continue. 3) Electro Energy Advanced Technology to Power Hybrid Electric Vehicles for CalCars' PRIUS+ Program. 4) Miles Automotive Announces, 'No Gas Required' Partnership With College Student Groups; Yale, Stanford, University of California, Cal Poly Already on Board With Miles 100% All-Electric, Zero-Emissions Vehicles. Miles Automotive Group announced today a nationwide program to partner with college student organizations to jointly promote existing 100% all-electric vehicle technology as a critical means of reducing carbon emissions in the fight against global warming. 5) BAT Achieves 80 Miles Per Gallon at 55 mph on California Freeway. Further Testing Needed to Certify Results and Confirm Fuel Economy.</p>
<p>21. Advanced technologies,</p>	<p>technology technologies industry advanced research production development hydrogen products systems fuel commercial market world</p>	<p>1) Energy Conversion Devices Chosen by CNN Headline News To Illustrate the Hydrogen Economy. Pioneers of Hydrogen Solutions</p>

<p>research and development.</p>	<p>company cell infrastructure develop solutions efficient potential innovation applications design companies worldwide solution energy environmentally developing industrial cells technological storage deployment performance key existing manufacturing materials corporation innovations capture generation product demonstration industries viable united engineering system integrated lower conventional department include power heat scale provide technical energy's produce process conversion transportation high commercially devices highly large leading industry's breakthrough water</p>	<p>Demonstrate Enabling Alternative Energy Technology that Addresses President Bush's Hydrogen Fuel Initiative. 2) ENER1's President's Letter to Shareholders. Using science and technology to solve society's energy problems by providing environmentally friendly and commercially profitable solutions is fundamental and central to the Company's mission. This exciting phase is going to witness commercial products rolling out in the commerce stream. 3) Asemblon Receives Energy Innovator Award. "Accelerating clean energy innovations into the marketplace is a key way to increase our energy security and mitigate climate change." 4) LP Amina and Gemeng International Energy Sign MOU to Build the World's First Plant with Innovative Coal-to-Chemical technology - a Breakthrough in Energy and Emissions Efficiencies. 5) GM, Hydrogenics Demonstrate No-emission, No-compromise Hydrogen-powered Forklift.</p>
<p>22. Alternative fuels, particularly clean diesel/biodiesel.</p>	<p>diesel fuel vehicles clean emissions fuels trucks biodiesel alternative gas engines engine natural air gasoline vehicle propane technology fleet combustion u.s equipment powered autogas fleets buses cleaner percent ups truck greenhouse sulfur quality cng fueling run compressed stations refueling particulate public station meet road dodge nitrogen heavy-duty schaeffer drivers reduced today tier methanol delivery dependence emission state manufacturers europe private dera bosch p-series duty low foreign matter oil long california westport lpp benefits gases level</p>	<p>1) DaimlerChrysler Approves Use of B20 in 2007 Dodge Ram Pickup Trucks; National Biodiesel Board Applauds Automaker's Expanded Support for 20 Percent Biodiesel... "Biofuels represent a huge opportunity to reduce fuel consumption and our dependence on foreign oil, while also offering a significant environmental benefit," said LaSorda. "Biodiesel is proof that at least part of the solution to these national challenges can be homegrown." 2) Automakers Call for Strong, Speedy 'Clean Diesel' Rule. 3) California Air Quality Benefiting From Clean Diesel Advancements. 4) DaimlerChrysler Expands Use of Biodiesel Fuel in Dodge Ram Pickup Trucks; * B20 Biodiesel Approved for Government, Military and Commercial Fleets * Next Step Toward Making Clean, Renewable Biofuels An Option for All Diesel Owners * Extending the Environmental Benefits of Modern Clean Diesel Technology. 5) Autogas for America Launches to Unite Propane Autogas Industry, Drive Energy Independence.</p>
<p>23. Voluntary conservation efforts of utilities and electric companies.</p>	<p>electric company customers utilities power utility aep southern energy service program efficiency edison customer gas commitment companies u.s challenge chairman company's dte greenhouse generation nyse programs earley institute entergy aep's part michigan task management voluntary sector demand information nation's regulatory</p>	<p>1) American Electric Power Endorses Clinton Climate Change Action Plan. "This plan will help all of us reduce greenhouse gases on a voluntary basis. It will improve the global environment through energy efficiency, conservation and forestry management and will help us reduce emissions to 1990 levels by the year 2000," Draper said. 2) AEP's Ohio Operating Unit Issues RFP for Renewable Energy Resources.</p>

	<p>american force ohio plan portfolio services operating department industry o'leary georgia anderson long-term plants pilot integrated eei indiana avoid chief projects morris seeking rfp transmission doe president wisconsin early tva geothermal selected serve virginia officer</p>	<p>3) Energy Department Signs Actions With Power Sector To Reduce Local Health And Environmental Impacts Of Pollutants And Global Emissions. The Department of Energy (DOE), 38 investor-owned electric utilities and the Tennessee Valley Authority signed voluntary accords today to reduce greenhouse gas emissions by 41 million metric tons of carbon. 4) AEP Utility Appalachian Power Issues RFP for Renewable Energy Resources. 5) Southern Company Signs 'Climate Challenge' Agreement.</p>
<p>24. Greenhouse gas reduction methods described as good for business goals: Offsets, trading, and pilot programs.</p>	<p>carbon emissions greenhouse gas reduce dioxide reduction emission reducing reductions gases tons ghg levels environmental percent credits projects offset management trading footprint significant natural offsets metric consumption program created equivalent sequestration targets system low voluntary sector atmosphere commitments step sources leading markets reduced warming achieve approach energy amount cut effective responsible implemented market direct market-based emit reduces initiatives works term key produced ton cutting fleet resulting pilot opportunities methane generated cdm mitigation net participating measure</p>	<p>1) PHH Arval, Environmental Defense Launch PHH GreenFleet(SM) Pilot Program; First North American fleet management program designed to reduce fleet costs and emissions. 2) Carbon Management in Emerging Economies: New Mechanisms for Managing Carbon Dioxide Emissions. 3) Boston Carbon Corporation to Donate 27,000 Tons of Greenhouse Gas Credits to the DNC. Credits will offset emissions from travel to and from Boston. 4) Fintura Corporation Introduces the GreenPay(SM) MasterCard(R) Credit Card; New Eco-Conscious Credit Card Designed Exclusively to Reduce Harmful CO2 Emissions. 5) Entergy Announces a Second Five-Year Commitment to Reduce Greenhouse Gas Emissions and Signs Memorandum of Understanding With Environmental Defense.</p>
<p>25. Climate finance: Need for green investment and implications of climate for financial sector.</p>	<p>investment market financial markets investments capital bank investors fund sector private global development companies projects industry business management finance opportunities investing equity investor billion sustainable financing portfolio clean banks funds asset green invest firms group llc leading assets funding risk firm economy remain top growth cleantech services creating industries carbon return credit demand businesses stock responsible point treasury strategy interest institutions alternative venture scale strong outlook generate access city returns emerging board research attractive York</p>	<p>1) Pa. Treasurer Launches New \$90 Million Keystone Green Investment Strategy. Pennsylvania State Treasurer Robert P. Casey, Jr. today announced a new investment strategy for the Commonwealth that will promote greater public and private investments in clean technologies, such as alternative and renewable energy sources, and provide superior returns for taxpayers. 2) Calvert Launches Global Alternative Energy Fund; Survey Shows 'Disconnect' Between Individuals' Views on Climate, Alternative Energy Investing and Their Portfolios. 3) Al Gore Opens First-Ever SIF National Conference In D.C. as Organization Changes Name to "US SIF: The Forum for Sustainable and Responsible Investment." 4) Capital-Intensive Cleantech Innovations May Lose out in Battle to Secure Funding.</p>

		<p>5) Sustainable Insight Capital Management Launches With Joint Study With The Carbon Disclosure Project (CDP). Report Demonstrates Leadership On Climate Engagement Benefits Environment And Investors.</p>
<p>26. “Everyday green”: Importance of individual choices, purchases and actions</p>	<p>green earth campaign day global company people planet environment make warming impact environmental online marketing part year site awareness power purchase environmentally footprint information change customers mountain world individuals hour consumers water activities action everyday choices annual learn drive pounds fight brand lifestyle purchasing difference taking launched carbon certified simple april positive stores top neutral daily personal phone real efforts company's set live goal visit conscious web solution individual greenest promotion buy making products offers</p>	<p>1) EarthLab Launches First Online Climate Crisis Community; EarthLab's Personalized Carbon and Lifestyle Calculator Served as Live Earth Concert's Call to Action Saturday With More Than 300,000 Responses. "Greener living is not just about hybrid cars or light bulbs," said Duane Dahl, creator of EarthLab. "There are a multitude of baby-steps that all of us can take to make a difference, but it starts with a heightened awareness, by all of us understanding the climate crisis in everyday terms and how our daily actions affect the environment. From there we can start being smart about the choices we make for the future."</p> <p>2) Green Mountain Energy Company Partners With Whole Foods Market(R) in National Whole Earth Weigh-In(TM) Initiative; Earth Day Initiative Puts Consumers on a 'LOW CARBON' Diet for 30 Days in April.</p> <p>3) Kids Tackle Climate Change by Learning How to 'Act Green' at http://www.scholastic.com/actgreen ; Multi-Media Educational Website Helps Kids Create Custom Green Plans, Earn Green Points, and Take Action to be GREEN.</p> <p>4) Green Mountain Energy Company Wins Green Power Leadership Award for Innovative Marketing Award Announced at the 8th Annual Green Power Marketing Conference In Chicago, IL. "Creative marketing and outreach strategies such as these enable consumers to understand that they can make a difference through the development of new renewable energy facilities, and advance the green power industry."</p> <p>5) Green Seal Stretches Roots Back to Earth Day 1970 - The Day That Launched the Modern Environmental Movement.</p>
<p>27. Energy efficiency and economic incentives to conserve.</p>	<p>energy efficiency home save reduce savings star efficient homes light lighting percent bulbs costs energy-efficient buildings consumption building consumers million bills heating saving appliances electricity air money cut alliance consumer programs reducing household utility gas residential insulation program year energy-efficiency fluorescent products power improvements lights facilities equipment cost homeowners helping conservation make cooling compact cfls electric heat saved commercial cars</p>	<p>1) Blackouts Can Be Prevented in New York! NYSERDA Offers Home Energy Tips, Web Resources To Head Off Power Blackouts/Brownouts, Cut Energy Bills, Pollution.</p> <p>2) There's a Bounty on Your ACs New York: NYSERDA Offers Consumers Home Energy Tips to Cut Energy Bills, Increase Home Energy Efficiency.</p> <p>3) New Yorkers Take Little Steps and Save Big; NYSERDA offers residents tips to save energy and the environment.</p> <p>4) Save Money and Energy With the Twist of Energy Efficient Bulbs.</p> <p>5) TCP, Inc. Responds to Adoption of Federal Energy Bill with Third Boost to Production of Energy Saving Light Bulbs.</p>

	waste equivalent room bulb led appliance steps ways turn measures incentives annually house aceee bill	
Topics representing prognostic frames, but flaws in topic prevent further categorization.		
28. Agriculture, animals, and food.	organic livestock waste food omega animal farms nitrogen milk process animals dairy soil humane researchers farming conventional drugs farm bees chemicals cancer found produce drug foods pesticides products vegetables eat natural xltg fatty feed studies synthetic bee agricultural exposure genome acid biogas cow showed protein methane upstream meat disease published pressure addition production amounts gallo slurry manure zone corn fed dna dead compounds megabee(tm fruit craig store pilot crops biotechnology nutrition raised genes eating bacteria	1) New Food Enhances Honeybee Health, Expert Says. 2) New WSPA iPhone App Puts Humane Food Options in the Hands of Consumers. Studies have shown that products from animals who were humanely treated – not given hormones or unnecessary antibiotics, not continuously confined and allowed to engage in natural behaviors – are better for human health and the environment. In fact, the Food and Agriculture Organization of the United Nations has said that factory-farmed livestock account for 18% of all greenhouse gas emissions, which is more than all transport combined. 3) Resolve to go organic in 2014 – The Organic Center's 10 New Year's Resolutions to last a lifetime. What is a New Year's Resolution you can make today that can last a lifetime--and beyond? Going organic--which is good for you, your family and the planet. 4) Stonyfield Farm Takes on Cow Burps with First North American Program Simultaneously Increases Nutritional Value of the Milk & Fights Global Warming. 5) Waste-To-Oil Company Selling Oil Commercially.
29. Forests, deforestation, and tree planting projects.	forest trees forests tree million project planting wood acres year plant land forestry england planted timber species products conservation georgia logging deforestation tropical hectares belize volunteers area forestethics illegal amendment endangered private boreal landowners nature habitat state fire utilitree service reforestation protection von freeman fall fsc sugar region wildlife resolute fiber conservancy forever stewardship properties maple kaster pests acre bravo soil pacific certified rica neighborhoods pine certification oregon season atlanta production sauda sacha dera halter	1) An Endeavor for Earth's Salvage. Dera Sacha Sauda targets to plant 70 lac saplings on the occasion of the Birthday of Saint Gurmeet Ram Rahim Singh Ji Insan. 2) Forever Cheese Sets the Bar for Carbonfund.org's Earth Day 2012 Promotion. The Carbonfund.org Foundation is proud to announce Forever Cheese as the launch partner for our Earth Day 2012 Promotion. With Carbonfund.org's plant two-get one free tree planting promotion, 7,500 trees have already been planted. 3) Exotic Insects And Diseases The Biggest Threat To Northeastern And Midwestern Forest Health. 4) Kimberly-Clark Sets the Bar Higher for Tissue Products With Stronger Global Forest Policy. Greenpeace Ends Its 'Kleercut' Campaign and Applauds the Company's Sustainability Efforts. 4) Landscape Restoration Movement Approaches 50 Million Hectares With El Salvador and Costa Rica Commitments 5) Exemplary Sustainable Forestation Project Launched in Colombia

Motivational Frames		
1. Energy policy and jobs.	energy jobs clean economy economic green create national president american renewable america's america efficiency alliance u.s states policies policy growth job leaders building investment future ceo investments support state workers businesses federal country legislation security obama strong stimulus thousands congress recovery nation technologies nation's good technology industry director members labor benefits innovation business coalition pollution infrastructure local manufacturing opportunity creating action industries united incentives lead council independence creation carbon time needed comprehensive reduce smart competitive	<p>1) Repower America Ads Highlight Benefits of Clean Energy Jobs Plan in Congress. Radio spots say solution to climate change and economic downturn are the same.</p> <p>2) Report: 38,600 Clean Energy, Transportation Jobs Announced In Q2; New Web Site Tracks Job Growth By State, Sector Top 10 States for Clean Energy Job Announcements in Q2 2013</p> <p>3) Alliance for Climate Protection to Congress: Passing Strong Climate and Energy Legislation Will Spur Economic Growth. New TV Ad Aimed at Explaining Economic Benefits of Cap on Carbon Pollution, Driving Support to Repower America.</p> <p>4) Leaders for a Clean Economy Announce United Front.</p> <p>5) President Obama Makes Bold Call to Repower America. "President Obama's message to a joint session of Congress made absolutely clear that the fate of our future economy will be determined by our ability to repower America with clean, renewable energy that will stimulate green jobs for the 21st century."</p>
2. Costs and economic consequences of climate treaties and policies.	u.s coalition climate treaty policy economic global consumers kyoto american economy administration shlaes costs president trade policies director group cost emissions cap-and-trade executive proposals protocol united price clinton environmental current jobs prices allowances consumer taxes states cap tax gcc trading members impact free industries nations analysis vice business debate countries association scientific john limit loss businesses proposed kerrigan committee voluntary mandates gasoline industry scheme administration's science told impose costly white ets flawed negotiating resolution pay	<p>1) Signing of Kyoto Accord A Sell-Out Says Small Business Group. "In plain language, President Clinton just sold-out the country in exchange for a treaty that is unfair to Americans and will do nothing to help the environment. His consistent disregard for the hardship that this treaty will impose on American workers, consumers and small businesses is tragic. This lopsided and grossly unworkable treaty is a bad deal for America," said Kerrigan.</p> <p>2) Texas Citizens for a Sound Economy: Global Warming Treaty Spells Economic Disaster; Environmental Treaty Isn't Supported by Science.</p> <p>3) Small Business Group to Clinton Administration: Don't Sacrifice Millions of American Jobs for Uncertain Benefits.</p> <p>4) As Global Warming Debate Heats Up Again, SBSC Report Labels Emissions Trading a Shell Game.</p> <p>5) Fast-Growing Coalition Opposing Cap-and-Trade Goes National.</p>
3. Taxes, costs, budgets and economic effects.	tax federal budget billion government president credit congress funding programs million spending security increase money health year costs dollars state administration cuts taxpayers income insurance americans support fiscal cut rates priorities taxes president's spent pay current clinton loan assistance cost card rate week	<p>1) Up for Debate This Week: Tax Assistance and Tax Delinquency - Cost Information on Global Warming Legislation.</p> <p>2) Campaign for America's Future: 'State of the Union 2007: By the Numbers.' President Bush is expected to hail the state of the union as strong tonight, but for Americans worrying about how to make ends meet, the country is headed in the wrong direction, according to numbers compiled today by the Campaign for America's Future.</p>

	affordable services paid average credits housing bush family taxpayer jan reform provide office dollar revenues priority bush's funds education proposal increases care house secure union capital coverage bills revenue calls private guarantees	3) Tubbs Jones Supports Democratic Budget. 4) Bush FY '08 Budget Continues Trend of Short-Changing Energy Efficiency Programs, Says Alliance to Save Energy. 5) President's Budget Shortchanges America's Natural Heritage.
4. Energy dependence.	energy oil fuels fuel gas alternative foreign prices sources fossil production dependence supply price world demand petroleum industry reduce gasoline security renewable transportation independence imports american consumption imported domestic crude nation's source barrels growing billion cars day dependent trade supplies country's reliance increased alternatives producing coal dependency pollution world's exploration barrel cleaner reducing ethanol produce saudi east import greater today opec produced buy reserves moving liquid markets reach extraction gulf incentives noting abundant middle directly	1) John W. Rich, Jr.: Saudi Resistance for the Global Environmental Regulation Exposes OPEC Vulnerability to Creative U.S. Energy Alternatives. Saudi concern that limits on greenhouse gas emissions will drive down demand for crude oil shows dramatically that Americans can break the grip of the OPEC cartel on our economy, according to domestic energy developer, John W. Rich Jr. 2) New Oil Study Finds Lower Prices For Rest Of Decade. "Forecasts that are not supported by such fundamentals can cripple an industry facing chronic excess supplies, skyrocketing technological innovation and an increasingly ineffectual cartel." 3) 'A Declaration Of Energy Independence,' By Eric Vaughn. 4) The Fundamentals of the Spike in Oil Prices. 5) NARO Resolution Charges: High Price of Cheap Oil Includes American Lives.
5. Patriotism, hope, and American greatness.	people make america american time it's country years americans good great work issue future nation made put making washington day home national back today don't end stop millions change problem call real big find citizens that's year children give money meet hope economy things makes sense can't life plan america's thing long families called run hard start protect we're lives care ago means raise doesn't opportunity stand matter pay issues working interest part beginning special	1) Remarks of Senator Barack Obama: "The American Promise." 2) 2008 Democratic National Convention: Remarks as prepared for delivery by Mark Warner, Governor of Virginia. And I believe from the bottom of my heart with the right vision, the right leadership, and the energy and creativity of the American people, there is no nation that we can't out-hustle or out-compete, and no American need be left out or left behind. 3) Teresa Heinz Kerry Democratic National Convention Tuesday, July 27, 2004. 4) Kirk Douglas Editorial for His 90th Birthday, Saturday, December 9 th . 5) Remarks by President Bush on Energy Initiatives; Ford Motor Company, Kansas City Assembly Plant.
6. Public opinion specific to climate and energy.	percent survey americans support poll conducted respondents public republicans national warming majority research u.s agree global democrats findings sources results found including opinion oppose asked strongly adults independents	1) 2008 Election Survey: Dramatic Jump Seen in Number of Americans Who View Political Leaders as Weak on Energy/Climate Issues. Strong, Bipartisan Majorities Want Action on "Clean Power Agenda;" But 72% Now See Leaders As Weak on Energy/Climate Matters ... Compared to Just 57% Before 2004 Election.

	<p>residents sample shows important united margin president error civil polling concerns view institute society political half aware age surveys october major states government level surveyed favor key federal two-thirds voters issue concerned strong compared action percentage clear fracking nuclear csi latinos views priority points living problem february</p>	<p>2) Massachusetts Survey: 90 Percent Want State to Be U.S. Leader in Alternative Energy, Including Offshore Wind; Poll: Three Out of Five Residents of the Cape/the Islands Now Back Cape Wind Project; Strong Backing Seen for More Wind, Solar and Conservation ... Before Resorting to Nuclear. 3) Survey: Water Pollution From Natural Gas 'Fracking' a Concern for Four Out of Five Pennsylvanians Aware of the Process. 4) Survey: Americans Not Warming Up to Nuclear Power One Year After Fukushima – Contrary to Industry Predictions, Reactor Disaster Seen As Having a "Lasting Chill" on Perceptions. 5) Survey: Bipartisan 78% of U.S. Voters Reject Go-Ahead-Slow Approach to Federal Mile-Per-Gallon Car Standards, Strong Support Seen for '40 mpg by 2010.'</p>
<p>7. Public opinion, with emphasis on international public opinion and lifestyle/marketing issues.</p>	<p>cent concerned adults irving oil u.s vending spill refinery machines saint error british germany france environmental net issues john germans table americans half concern peak benefits base french harris britain shift italy media countries spain sampling great online knowledgeable aware risks spanish increase agree italians disagree note eider interactive percentages gulf add probability due rbc rounding influence coca-cola outweigh cost ten rock general mexico aged japan issue northeastern region living weighting daytime sample threats usa</p>	<p>1) Concern Varies on Environmental Issues in the U.S., Great Britain, France, Italy, Spain, and Germany Since the Gulf of Mexico Oil Spill. 2) Americans and British See Terrorism as the Greatest Challenge the Planet Is Facing Today; Other European Countries Are More Concerned About Global Warming and Religious Fanaticism. 3) U.S. Adults Less Likely Than Europeans to Think Humans Are Contributing to the Increase in Global Temperatures. 4) Most Americans Improving Energy Efficiency at Home; Fewer are knowledgeable about energy issues and sources of electrical power. 5) Innovative New Vending Machines That Shift Power Use for Cooling Purposes from Daytime to Nighttime; Coca-Cola Japan Announces Market Introduction of "Peak Shift Vending Machines" – Historic Innovation Marking 50th Year Since Vending Machines Were Introduced.</p>
<p>8. Faith, morality and stewardship.</p>	<p>religious faith warming rev church global creation leaders council repower churches god's episcopal catholic stewardship campaign redford evangelicals grace care ohio congregations moral based interfaith voices christian prayer cleveland declaration wall voice life esperanza evangelical reverend poor messages pastor stewards cathedral leipzig moore father sister obligation florida bingham meteorologists god sally jackson ads retrospective byrum catholics hispanic baptist religion rabbi clergy justice inconvenient groups mayor earth cizik ipc unity jewish scripture congregants sisters webster btu</p>	<p>1) The Institute of Progressive Christians Commends the National Association of Evangelicals on Their 'Effort to Protect Creation,' Challenges the Opposition of Extreme Conservative Leaders. 2) Religions Unite Over Global Warming; 4,000 Congregations Across The Country To View Hard-Hitting Documentaries. 3) Episcopal Power and Light Program to Sign Up First Churches in San Diego to Use Cleaner Electricity from Green Mountain Energy Company Program Promotes Church's Role in Addressing Global Warming. 4) Religious Leaders Announce New Interfaith Council for Environmental Stewardship New Jersey Rabbi Among Those in DC to Take the Environmental Movement to Task for Misguided View of God, Man, Nature.</p>

		5) DNC: McCain 'Sucking Up to Everybody,' But Will He Denounce Falwell's Claims that 'Naive' Christians Are Being 'Duped' on Global Warming?
Identity Frames		
1. Shareholder activism vs. bad corporate actors.	company shareholders resolutions shareholder board letter warming proxy regulation global milloy dominion resolution action members corporate free investment risks annual lobbying ceo filed iccr support fund financial vote information illinois governance campaign call directors groups proposals proposal ge's borelli rotman season social announced co-op concerned responsibility ameren feaox sec lehman asset enterprise full general immelt nam sisters brothers misleading targets record votes political meeting junkscience.com withdrawn irrc tom corporation price member center earnings voting boards	1) SEC Denies Lehman Brothers Bid to Block Global Warming Shareholder Proposal; Lehman Climate Policy Based on Erroneous Information Says Free Enterprise Action Fund. 2) GE's Board of Directors Should Dismiss CEO Jeff Immelt, Says the Free Enterprise Action Fund (Ticker: FEAOX); Immelt's Failed Leadership Hurts Shareholders. 3) 'Carbon Criminal' WANTED Poster Campaign Goes to G-20 Meeting in Pittsburgh. 4) GE Loses Bid to Block Global Warming Shareholder Proposal; Free Enterprise Action Fund (Ticker: FEAOX) Calls On GE to Justify Lobbying for Global Warming Regulation. 5) 2003 Proxy Season 'Scorecard' to be Available on Web From IRRC. Tracks 3 Key Issues: Global Warming, CEO Compensation and Classified Boards
2. Science and the public.	research university science institute center professor scientists scientific national environmental studies policy director sciences school public program society scientist state human international ph.d engineering engineers journal york fellow john sound management department member academy robert space panel project information experts associate book authors author harvard researchers college foundation paper workshop knowledge expert michael computer columbia wilson published fields questions institutions committee james emeritus geophysical biology physical physics systems biological universities laboratory living smith fred applied	1) Scholars at the University of Chicago to Discuss Global Warming Wednesday, May 27. 2) 'Managing Our Planet' Series to Begin January 19. The Woodrow Wilson International Center for Scholars and George Mason University announce a year-long series of dialogues on issues such as climate change, ecosystem change, energy demands and demographic trends. 3) 'Global Climate Change and National Security: The Science and the Impact.' 4) NASA Climate Scientist Honored by American Meteorological Society. Longtime director of the NASA Goddard Institute of Space Studies (GISS) in New York, Hansen earned the Rossby Medal for "outstanding contributions to climate modeling, understanding climate change forcings and sensitivity, and for clear communication of climate science in the public arena." 5) News Advisory. George C. Marshall Institute Holds News Conference On Greenhouse Problem. Subject: Should the government act now on the greenhouse threat? Scientists of the George C. Marshall Institute have conducted a technical assessment of the greenhouse problem, focusing on

		<p>the questions: -- Is the greenhouse effect already here? -- What should the government be doing?</p>
<p>3. Accusations and calls for accountability.</p>	<p>obama president barack obama's exxonmobil plan oil keystone ads campaign pipeline president's exxon public stanford claims shell profits rights sen false greenpeace coal union billion radio surge control website advertising calling ftrc speech agreement weec liuna o'sullivan simpson reap exxonmobil's consumer york founder warming halliburton nextgen jerusalem accountability mobil image http://photos.prnewswire.com/prnh israel renaissance read criticism shifting sponsors employer spill wrote promises membership workers mandate sandy exxon's wages tactics pdf mention valdez asked facts campaigns full</p>	<p>1) Stanford Claims Independence in ExxonMobil Deal, But Pact Details Show Otherwise; Key Part of Research Agreement Remains. 2) N.Y. State Consumer Protection Board Labels Oil-Heat Advertising 'Deceptive And Misleading,' Orders Radio Ads Off The Air. 3) RNC: Obama Continues Breaking Pledges and Shifting Stances in Search of the Most Politically Expedient Position. 4) FTCR: UC Berkeley Must Avoid Stanford Mistake That Allowed Big Oil 'Greenwashing,' Stanford Should Make its Research Public Immediately. 5) Greenpeace: U.S. Anti-Climate Lobby Group Further Discredited As Shell Renounces Its Membership. Greenpeace International welcomed Shell's announcement today that the multinational oil company would be withdrawing its membership from the Global Climate Coalition (GCC), the U.S. industry lobby group which attempts to undermine government action to combat climate change, and which is increasingly discredited for its aggressive anti-climate change stance.</p>
<p>4. Businesses and organizations as committed to sustainability.</p>	<p>environmental president work sustainable support initiative environment program group commitment today global partnership solutions leadership efforts world announced part executive organizations development including community ceo communities important year years provide business million largest director public working innovative organization members sustainability effort committed promote leader leading addition develop partner government helping major america leaders impact include forward opportunity create programs logo role protection join http://www.newscom.com/cgi-bin/prnh vice joined providing make initiatives u.s network pleased partners world's center</p>	<p>1) Leaders for a Clean Economy Announce United Front; Alliance between CEN and REBN brings together 10,000+ cleantech and green business, academic, public policy, and community leaders from 50 states to boost clean economy growth and job creation. 2) Johnson Controls Joins the Pew Center Environmental Leadership Council. "As partners with the other members of the BELC and the Pew Center, we are committed to making the world more comfortable, safe and sustainable by helping our customers around the world address global climate change." 3) EyeWonder Donates Portion of Online Video Ad Services to The Alliance for Climate Protection; In Advance of Earth Day, the Largest EyeWonder-Powered Environmental Campaign Yet is a Great Example of Promoting Green. 4) Greenhouse Gas Management Institute (GHGMI) Launches New Membership Program Designed to Create the World's Largest Community of Greenhouse Gas Professionals. 5) Keep America Beautiful Awards Novelis 2009 Vision for America Award. National Nonprofit Organization Recognizes World's Largest Aluminum Can Recycler for Corporate Social Responsibility, Environmental Efforts.</p>

Uncategorized Frames		
<p>1. Small business as solution or motivation for action (or inaction).</p>	<p>small business businesses employees chamber companies commerce deficit trade firms mail nyse jobs council hispanic entrepreneurship snowe gains postal stock abce junk kerry whitewave employers hurt shopping corporations wal-mart latino owners lines ago huge entrepreneurial black accounting front trcs blog margins prc profit greenwald analyst calling equivalent zacks marbella hoover's database revenue apt printing seattle manufacturing section sale loans resources year exclusion mba harness penny christopher olympia jewish raymond wraps stuff workforce becker bottom entrepreneurs</p>	<p>1) Kerry, Snowe Call for Increased Investment in Small Business. "Entrepreneurship is what keeps America on the cutting-edge of technological innovation," said Kerry. "Today, small businesses can repeat the role they played at the vanguard of the computer revolution by leading the nation in developing technologies to reduce carbon emissions and curb global climate change. America's entrepreneurs are already are at the forefront of these industries, and we need to do everything we can to encourage investment in small businesses."</p> <p>2) Kerry, Snowe Secure Small Businesses Energy Efficiency Provisions in Energy Bill.</p> <p>3) Kerry, Snowe Bill Helps Small Businesses Increase Energy Efficiency.</p> <p>4) Zacks Analyst Blog Highlights: Union Pacific, Eli Lilly, Wal-Mart, Chevron and Apache.</p> <p>5) Broad Alliance of Business and Consumer Groups Dismayed by California Assembly's Passage of Grocery Tax – Groups Say Assembly Bill 1998 (Brownley) Is Anti-Consumer, Anti-Job, and Anti-Environment.</p>
Descriptive or Background Topics		
<p>1. Various green/climate initiatives: Mostly solar power systems and projects, but also adaptation and efficiency initiatives.</p>	<p>solar adaptation panels system installation institute systems photovoltaic gain daboub giants renewable silicon installed panel installations at&t park install photovoltaics amorphous modules juan jose chronar enigin managing scholars navigation seawest helping recently tariff module offers enterprise powered week skid portfolio applaud completion raise sun times sunpower resch scam sunlight technology government logo[http://photos.prnewswire.com/prnh/nyc/scoreboard/shi/zhengrong/suntech/delegate/automation/distributors/gsa/ramp/alloy/ussc/poised/thin/readiness/prioritize/tom/scheme/trust/showcase/institute's/gac/wef]</p>	<p>1) San Francisco Giants and PG&E Cut Ribbon on AT&T Park Solar Energy Installation.</p> <p>2) Giants and PG&E Bring Solar Power to AT&T Park; The First MLB Ballpark to Install a Solar System Will Generate Green Energy for PG&E Customers in the City and County of San Francisco.</p> <p>3) U.S. Leads With New World Record In Photovoltaic Technology.</p> <p>4) European Parliamentarians Welcome Development of the Global Adaptation Index.™ Dr. Daboub described the Institute's development of the Global Adaptation Index™ (GaIn™), a tool for decision makers in the private and public sectors to prioritize investments in adaptation to climate change and other global forces.</p> <p>5) Enigin Scam Busters Look to Save the Future. Enigin have announced their determination to promote energy efficiency and expose unscrupulous opportunists looking to take advantage of the uninformed consumer.</p>
<p>2. Schools and education.</p>	<p>students education school college science schools teachers kids young youth training challenge community student learning prize competition colleges university campus foundation high carnegie project educational graduate discovery service mellon skills degree grant children ideas</p>	<p>1) 11 Year-old Is 'America's Top Young Scientist.' Preteen is Youngest Student Ever to Win the Discovery Channel Young Scientist Challenge.</p> <p>2) Jobs for the Future Brings NASA Resources to Community College. Green Curricula Degree programs at three colleges to include NASA data and tools.</p>

	<p>learn curriculum universities contest stem created winners middle parents gift ages bayer awarded talent engaging bright faculty hamden teach classroom united school's hands-on innovators career tools won academic challenges knowledge states online train grants winning teacher year's win share electrical educators</p>	<p>3) Unity College Announces \$10 Million Gift. 4) New Bayer, United Nations Partnership Brings International Environment and Art Competition to Kansas City Area Elementary and Middle Schools. 5) Environmental Contest Rewards America's Greenest College Campuses; University of Maryland and Rio Salado College Named Winners; 20,000 Students and 460 Colleges Compete in Largest & Most Successful Contest Ever Involving College Students.</p>
<p>3. California.</p>	<p>california san california's pg&e state francisco commission gas governor diego pacific public million today state's standards warming californians valley board air registry southern sacramento arb nation schwarzenegger prop panel berkeley resources proposition leadership carb county pg&e's northern climatesmart district coast historic santa law models incentive cut solutions arnold governor's western fine jose landmark gang helped market-based modeling scoping calif statewide south joseph carb's protocols valuable bay central implementing peter scientist james energysmart cpuc diego's staff</p>	<p>1) FlexEnergy's Clean Power Solutions Qualify for California's Newly Expanded Self-Generation Incentive Program (SGIP). 2) California Climate Action Registry Announces New Board and President; New Board of Directors include industry, government and environmental leaders. 3) CARB Economic Models Limited in Ability to Capture AB 32 Economic Benefits. Study Rebutts Critics' Call for Further Analysis before Adopting AB32 Scoping Plan. 4) Governor Brown Celebrates the Deployment of 100 Zero-Emission, California-made Delivery Vehicles. 5) California Will Create Green Economic Stimulus Package By Implementing Global Warming Solutions Act, New Study Says. Report Released Just Days before CARB Votes on Plan to Implement Law.</p>
<p>4. Museums, exhibits and cultural events.</p>	<p>museum art exhibit heinz world project visitors environment women natural cultural bay director exhibition history nature richard pacific special sport chicago aquarium globes hot peace francisco exhibits honorary globe san artists john dance city love photography programs field ceremony awareness attention ema stories asian arts features olympic winner founded design artist lab celebration celebrities environments photographers missing unique young audience presenter lens activism inspire traveling culture spirit independent academy animals environmental altemus listings lin memorial</p>	<p>1) Aquarium of the Bay Taps Jon Altemus as Director of Exhibits and Special Projects; Altemus Will Play Key Role in Design of Three New Exhibits. 2) Global Leaders from the Worlds of Art, Conservation, Design, Policy, and Technology Ignite New Perspectives Through a Symposium on Creative Approaches to Climate Change; Symposium to Coincide with the Opening of Art Exhibit Melting Ice - A Hot Topic: Envisioning Change in Brussels on 5 October 2007. 3) PBS to Offer Special Programming for Asian Pacific American Heritage Month, May 1-May 31, 2007. 4) Women Saving the Earth Exhibition Showcases Bold Eco Warriors and Green Pioneers in June. 5) New BART Passengers: Blue Tongued Skinks, Chinchillas and Hedgehogs Aquarium of the Bay Unveils New Campaign Created by Academy of Art University's School of Advertising.</p>

<p>5. Policy analysis and reports.</p>	<p>report study percent u.s year years billion increase analysis higher research states growth data total million increased levels average impact results released major potential impacts shows found half growing economic reports including findings result number based studies annual cost include lower increasing rate regional benefits assessment prices due large future costs information united expected decade making region rates low projected population additional estimated compared finds decline notes lead end provide estimates published full model reduced</p>	<p>1) U.S. Study Projects 54 Percent Increase In Carbon Emissions Throughout World By Year 2015, Growing At 2 Percent Yearly; Petroleum Products To Account For Nearly Half Of Increase. 2) Regional Carbon Market Generates Economic Growth in 10 States. In three years, the Regional Greenhouse Gas Initiative (RGGI) added economic value worth more than \$1.6 billion (or nearly \$33 per person) to the 10 member states, according to a first-of-its-kind report released today at the National Association of Regulatory Utility Commissioners (NARUC) conference by the independent economic consulting firm Analysis Group. 3) Report: U.S. Electrical Grid Could Be Reliable With Much Higher Level Of Renewables. Scenario for 2050 With Total End of Coal, Reduced Nuclear and Natural Gas Seen as Realistic; Lights Would Stay On Even "When the Wind Doesn't Blow ... And the Sun Doesn't Shine." 4) Entergy Study Finds Environmental Risks Could Cost Gulf Coast \$700 Billion; Mitigation and adaptation measures critical to avoiding economic, human suffering. 5) Pennsylvania DEP Releases Climate Change Assessment Report; Examines How Potential Climate Changes Could Impact Pennsylvania.</p>
<p>6. Hunger and food, world poverty, and development.</p>	<p>food world countries africa poverty farmers agriculture poor african development developing trade agricultural aid people security hunger rural international family resources oxfam sustainability social women logo production land fao sustainable access usaid water hungry vision million worldwide farming crop prices http://photos.prnewswire.com/prnh guinea palm forum acp maize humanitarian children world's barilla mdgs poorest nutrition farm bank system genetic america ensure ghana offenheiser vulnerable crops productivity rights september eating increase africa's tank special nations panel ifc bcfn</p>	<p>1) Food Tank and FAO Indicate Family Farming Is Key to Alleviating Worldwide Hunger. 2) Feeding Boston, Changing the World – Tanzanian Farmer Joins Local Activists and Entrepreneurs to Celebrate International Women's Day 2012. 3) Oxfam Urges Congressional Response to Rising Food Prices. 4) The EU Ranks as the World's Biggest Net Importer of Agricultural Produce While Neglecting Critical Investment in Agricultural Research. 5) Durban's Mission: Food Security First Former President of the Republic of Ghana Writes How Palm Oil is Critical to Africa's Food Security, Raises Concerns About Efforts to Stop Palm Oil Development in Africa.</p>
<p>7. Political candidates and campaigns.</p>	<p>mc Cain john political presidential campaign senator election candidates president carolina voters bush candidate vote republican democratic party south politics giuliani republicans duke government agenda voted times north elections mcCain's clinton specter washington texas</p>	<p>1) Richard Viguerie: 'Axis of Graft' Must Not Be Allowed to Hold Onto Stolen Alaska Senate Seat. The theft of the 2008 U.S. Senate election in Alaska by corrupt Justice Department bureaucrats "must not be allowed to stand," Richard A. Viguerie said. 2) Dean: Judging From McCain's Judges, He's the Wrong Choice for America's Future</p>

	<p>conservative care race big favor positions contributions governor tom influence foreign chicago democrats hillary case dick hampshire top reported senate pace staff rhetoric moderate ohio joseph kucinich tribune officials judges march judicial votes politicians carolinas gun lawyer voting elect won abortion elected</p>	<p>3) UPDATE: More McCain Double Talk in CPAC Speech. Either John McCain's shameless pandering knows no bounds or the Double Talk Express runs on ethanol. 4) New Poll: 18-30-Year-Olds to Play Major Role in 2008 Elections Driven by Concerns Over Iraq and Health Care. Young Voters' Top Primary Choices: Clinton, Giuliani. 5) Rudy's Energy Commitments Don't Match His Record.</p>
<p>8. Honors and awards.</p>	<p>award awards honored received outstanding winners annual recognized leadership year excellence steel american ceremony presented honor achievement receive service magazine recognize hansen named recipients innovative served innovation hall winner inspiring georgia close significant climate achievements honorees market prize prestigious mass awarded recognizes year's lecture technology fame gala won jane evening individuals behalf communications ann categories trigen's recognizing medal dinner made distinguished industrial sullivan category serving contributions included recognition louis life arcelormittal sarah crs groundbreaking trigen</p>	<p>1) Malaysian Companies Honoured at Frost & Sullivan Green Excellence Awards Banquet. 2) Ralph Izzo Honored by New Jersey Inventors Hall of Fame; PSEG leader recognized for environmental innovation and leadership. 3) Close, Howard, Curry, Hansen to Receive 29th Annual Common Wealth Awards; 2008 Honorees Are Global Voices Whose Achievements Resonate In The Arts, Science And Political Arena. 4) Center for Resource Solutions Announces 2008 Green Power Leadership Award Winners. 5) NOAA Leaders Kathryn Sullivan and Jane Lubchenco Honored for Achievements in Freshwater Stewardship.</p>
<p>9. International issues and global markets, sector and industry analysis.</p>	<p>countries china european europe global india growth industry asia international germany mexico australia index south africa markets country france sullivan brazil frost mobile latin korea governments italy nations asia-pacific cent trends republic largest spain average kingdom world's number europe's russia chinese targets member malaysia australian r.o.c u.k top services savers japan canada denmark wwf increasing government destinations spots prospects rank interviews cancun argentina developments thorning belgium pacific indicators consensus nokia fdi influential participants high lafarge</p>	<p>1) Publics Want More Government Action on Climate Change: Global Poll. 2) Denmark, Climate Summit Host, Tops Table of Fighting Climate Change With Wind Power. In the run-up to the crucial climate change talks in Copenhagen, the European Wind Energy Association (EWEA) has published a league table showing which EU countries are best at exploiting CO2-cutting wind energy. 3) Mega Trends Create Enormous Opportunities in the Environmental Sector in Asia-Pacific, Finds Frost & Sullivan. Rapid workforce expansion on the cards. 4) First Global Peace Index Ranks 121 Countries; Norway tops list, U.S. comes in at 96. 5) Poll Finds Most Publics Around the World Want Their Governments to be More Cooperative.</p>

<p>10. Music and entertainment events.</p>	<p>music earth live album show festival rock concert park band linkin tour revolution artists center fans aug verizon event projekt wireless stage video top amphitheatre entertainment stuart sports relief single concerts sold announced blues debut hit mtv nation mars performances alamos arts classic tokyo pepsi features outdoors sunday worldwide tickets song beach theater seconds death experience broadcast july alternative release pavilion monster sat bands fan arena log harmony indian summer taking produced studio xzibit incited</p>	<p>1) Linkin Park Announce Projekt Revolution 2007 Line Up; Projekt Revolution Tour Launches July 25; Main Stage Acts Include My Chemical Romance, Taking Back Sunday, HIM, Placebo and Julien-K. 2) Linkin Park Announces Projekt Revolution 2008 Lineup. 3) Yusuf (Formerly Cat Stevens), Xzibit and Kenna to Join Live Earth Line-Ups in Hamburg, Tokyo & New York; The 24-Hour, 7-Continent Concert Series to Combat Global Warming Expected to Touch Over 2 Billion People on 7/7/07. 4) SHOW - The Renewable Hydrogen Roadshow - Debuting June 12-13 at Santa Rosa, CA'S Health & Harmony Festival, Enlists EarthDance(R) to Produce Its Entertainment Component. 5) Smithsonian's National Museum of the American Indian Hosts 'Mother Earth' Event for Climate Change in the Spirit of Live Earth Project.</p>
<p>11. Film, TV, and media.</p>	<p>film television documentary series planet world news producer premiere including special festival impact media abc films truth saturday et/pt fox animal channel award-winning takes inconvenient sunday young produced stories howard international actress directed audiences deep network woodruff inside adventure family michael feature programming production audience mtv hollywood discovery u.s crew cbs events afi journey original team executive hit digital actor broadcast story industry animals ride season entertainment featuring episode pictures viewers steven central star november</p>	<p>1) Animal Planet to Air Second Window of CNN's 'PLANET IN PERIL' With Wildlife Biologist Jeff Corwin. 2) Under the Sea 3D to be next original IMAX(R) 3D film from Warner Bros. Pictures and IMAX; IMAX(R)3D Production Underway in Papua, New Guinea, Will Explore Impact of Global Warming. 3) 2012's Hard Hitting Documentary Greedy Lying Bastards Taps Award Winning Composer Michael Brook for Soundtrack Filmmaker. 4) Politics, Passions and Intrigue Ignite When Global Warming Thriller BURN UP Makes Its U.S. Debut on Planet Green. 5) The Gyalwang Drukpa and Michelle Yeoh Walk the Red Carpet for International Film Festival of India.</p>
<p>12. News, press, interviews with political leaders.</p>	<p>bush site/newsweek http://www.msnbc.msn.com/id http://www.newsweek.com/id white house correspondent writes reports chief editor newsweek bush's women bureau interview senior president http://www.newscom.com/cgi-bin/prnh cover voters george aides rove office nysu whitman karen fear days political he's months women's staffers photo power talk politician editions clinton father china policy breaux zakaria milwaukee israeli conservatives writer month france cheney fareed worried sharon tells woman recalled inflation fears rice highlights</p>	<p>1) Bush Practices His Baseball Pitch As China Crisis Unfolds; The President Rates His 100 Days In Office As 'Doing Pretty Darn Good' Admits He Could Have Sold His Environmental Policy Better. 2) Newsweek Media Lead Sheet/April 3, 2006. 3) Media Lead Sheet/January 29, 2007. 4) International and Asia Highlights and Exclusives - July 23, 2001. 5) Newsweek: Media Lead Sheet/April 16, 2007. Cover: "Save the Planet - Or Else."</p>

	media british michael o'neill arsenic newsstands tip begley columnist quietly hughes presidency	
13. Announcements regarding projects, plants, and facilities.	project plant million company facility percent u.s. year facilities expected site fuel projects construction approximately additional operating txu announced capacity process cost provide system program department located units addition estimated billion total costs texas manufacturing annually including includes area florida operations tons largest build purchase agreement receive station produce siemens end today contract completed partners annual operation agreements produced county operational received generating company's phase megawatts sales local operate based pounds approval plans customers combined	1) AEP Places Carbon Capture Commercialization on Hold, Citing Uncertain Status of Climate Policy, Weak Economy. 2) TXU Corp. Outlines Vision to Displace Older Power Generation with Advanced Technologies; Progress on Texas Projects; Expansion of Plans Outside of Texas; Update of Financial Outlook; Board Declaration of Increased Dividend, Authorization of Share Repurchases. 3) Pennsylvania DEP Awards More than \$4.4 Million in Alternative Fuels Grants. 4) USE And Crested Announce Long-Term Contract. 5) Progress Energy Florida Signs Contract for New, Advanced-Design Nuclear Plant; Takes steps to secure carbon-free energy for Floridians.
14. Canada.	canada canadian ontario management north canada's government <i>software services</i> minister sands <i>spending market</i> world tar project toronto swot ontario's province analysis united brunswick provincial environment darkwoods supply john weyburn transboundary natsource border region alberta kyoto submission george contribute systems action hydrogenics chain cent cers labeling northeast eastern respect canadians david broten sdtc saskatchewan ncc residents green chair home share defence forklifts cellex honourable ems tonnes iea cdn lakes competitive external america analytics broten's wade bio- fuels	1) Reportlinker Adds Carbon Management Software and Services. 2) GM, Hydrogenics Demonstrate No-emission, No-compromise Hydrogen-powered Forklift. General Motors of Canada Limited and Hydrogenics Corporation today demonstrated that commercially viable hydrogen-powered industrial vehicles are closer to the market than many people think. 3) Ontario Government Challenges U.S. Government Agency To Protect Air Quality; Reducing Transboundary Air Pollution Will Benefit Northeast Ontario. 4) Rick George, CEO of Suncor Energy, speaks to the Canadian Club about Canada's role as the continent's preferred energy supplier. 5) Unprecedented International Protests Challenge Canada's Extreme Oil.
15. Conservation organizations, national parks, and funding for these efforts.	national conservation wildlife environmental natural resources projects parks environment foundation organizations fund park protect species biodiversity protecting society land groups nature water support association local ecological areas america's defense director council habitat restoration federation audubon forests activities lands ecosystem diversity include preserve area wwf funding ecosystems trust pew wetlands loss conservancy farm	1) Kenny Chesney Joins Nature Valley(R) to Raise Money for National Parks; Ticket Sales to "Kenny Chesney: Summer in 3D" Movie will Help Support National Parks Conservation Association. 2) National Park Foundation Grants More Than \$65,000 To Teach Climate Change Using National Parks As Living Classrooms. 3) PA DCNR Announces Grants Available for Protecting Non-Game Species. 4) The Pew Charitable Trusts Announces Environmental Partnership With the Prince Albert II of Monaco Foundation.

	<p>associates native country ensure funds advocacy communities alliance survival biological effects charitable habitats coalition flood management valley friends agencies california supporting preservation marine</p>	<p>5) Conservation Groups Criticize Clinton Budget.</p>
<p>16. Rivers, waters, and water supply. Generally as background or climate is mentioned tangentially.</p>	<p>water river colorado drinking bay quality management supply agriculture freshwater basin impacts waters impact fresh wastewater region safe resources production gulf information western treatment irrigation call resource rivers demand membrane nutrient supplies flow runoff mexico nation's current consortium ecosystems bion's bion soils chesapeake stream mountain coastal regional separation watershed mississippi fish toxic aquatic bureau availability outdoor groundwater conditions improve frandsen vestergaard arizona reclamation platform paper rocky added streams southwest infrastructure stress large dust johnson discharge</p>	<p>1) 1st Part of Colorado River Basin Water Supply & Demand Study Praised for Climate Impact Focus – But EDF Says Future Reports Must Examine Healthy River Flows, Impacts on Recreation & Tourism. 2) EDF Submits Proposal to Protect Colorado River Flow, Ecosystems, Western Economy – Proposal Meets Deadline for Public Input to Colorado River Water Supply & Demand Study. 3) European Union Awards FIGARO Consortium EUR6 Million for New Precision Technologies to Improve Irrigation Management. 4) Major Developments Along China's Yangtze River Basin Could Lead to Regional Climate Change. 5) NASA Funded Study Shows Desert Dust Cuts Colorado River Flow.</p>
<p>17. Financial reports and company earnings.</p>	<p>million quarter sales diamond year company company's prior mine october compared retail diavik comparable mining expenses production ended income months segment harry winston cost financial rough operations consolidated net margin exchange capital canadian dollar period cash results loss earnings gross costs increase foreign future diamonds tax risks impact interest sg&a share gain fiscal credit pipe accounting operating primarily market demand rate subject jewelry due grade current calendar decreased taxes recorded january activities joint result ddm</p>	<p>1) Harry Winston Diamond Corporation Announces Third Quarter Fiscal 2009 Results. 2) N-Viro International Corporation Achieves Record Year. 3) Calpine Enters International Power Market; Company Initiates Program At Cerro Prieto Geothermal Resource. 4) Sasol Limited: Update From the Chief Financial Officer. 5) Global Cooling Hurts Duke Energy, According to JunkScience.com.</p>
<p>18. Local communities and local events.</p>	<p>los angeles local communities city community center york county service campaign day black cities week south people area residents events usa region partners street projects garden west washington coalition home east country visit town urban tour movement including chicago san save family part donated hills americans tom advertising boston extreme jones color league port daily gardens benefit george coast citizens</p>	<p>1) Jill Martinez to Speak at Global Warming Town Hall Tonight, Tuesday, October 24th - 7PM Downtown Century 10 Theater; Event Sponsored by the City of Ventura and Local Citizens. 2) Hip Hop Caucus Clean Energy Now! Bus Tour Wraps-Up On Capitol Hill. EPA Administrator Lisa Jackson Leads Call to Action for Clean Energy Solutions. 3) Landmark Theater in Oakland to Run 'An Inconvenient Truth' on Thursday to Benefit Draft Gore.</p>

	downtown popular event newspapers centers hundreds nationwide nepal larger low-income beach vegas rose offering late	4) CBS's EcoMedia Launches the 'EcoAd'; New EcoAd Leaf Icon Will Brand Sustainable Advertising that Directly Funds Essential Environmental Projects in Local Communities. 5) Celebrating 5th Anniversary, Orbitz Looks Back at Top 5 Destinations in Last Five Years; Insider Staff Picks Predict the Next 5 Future Hotspots.
19. Conferences, forums, panels, and experts.	conference global event press national media washington p.m director warming gore held president discuss a.m news vice issues experts center include speakers meeting information address forum summit american session tuesday discussion day debate d.c room policy topics thursday web friday host events association july september monday representatives symposium hotel sponsor open keynote week society december present david speak remarks wednesday panel march briefing public attend april discussed anniversary october community place contact call presented hosted	1) Prnewswire Washington Daybook For Thursday, Oct. 29, 1987. Conference. 8 a.m. Quality Inn Capitol Hill Hotel, 415 New Jersey Ave. N.W. Subject: The Climate Institute's conference titled "Preparing for Climate Change: A Cooperative Approach." 2) Brookings Event: 'Climate Week.' Climate Change Takes Center Stage During the last week of September, three high-profile global meetings will address the challenge of climate change. 3) International Conference on Climate Change (The Other Side Of Global Warming) Sold Out For March 2-4. 4) News Advisory. What: Los Angeles World Affairs Council Luncheon 5) News Advisory. What: The Conservation Foundation, together with the Climate Institute, The William Bingham Foundation, and the Woods Hole Research Center, is sponsoring a one-day scientific symposium on the implications of global climate change for economic growth.
20. Ozone layer, HFCs and CFCs.	ozone layer cfc montreal cfcs protocol hfcs alternatives production depletion manufacturers chlorofluorocarbons refrigeration hcfc hfc protection air equipment chemicals refrigerator phase-out efforts serp phase eia super stratospheric solvents substitutes effort canada agency associations alternative cooperative conditioning substances replace scientific aerosol treaty sky called shattered ozone-depleting existing hcfc depleting refrigerators protective greenpeace eliminate hole refrigerants warming investigation compounds phaseout account safe ultraviolet earth's phase-down programme mitigation phasing special destruction aerosols ods air-conditioning widely refrigerant freezers responsible	1) Air-Conditioning And Refrigeration Manufacturers Support Accelerated CFC Phaseout, But Warn Of Perils Of Premature HCFC Phaseout. 2) Industry Cooperative For Ozone Layer Protection Formed. 3) Ti Joins Industry Cooperative For Ozone Layer Protection. 4) Trade Associations Announce International Agreement On CFC And HCFC Policies. 5) ARB Cuts Smog From Aerosol Deodorants.

<p>21. Speeches, transcripts, colloquial speech.</p>	<p>president it's that's i'm we're don't prime good minister we've bush states people you're important lot united work applause forward country there's vice question talk fact i've we'll india he's part understand didn't they're nuclear laughter democracy working strong press talked apec what's strategy make free war friend freedom you've friends interesting deal i'll give history job security thought proud relationship iran china kind north grow remarks share agree discussion wanted terms continue polls expect</p>	<p>1) Interview of President Bush by Sabine Christiansen of Ard German Television. 2) Remarks by President Bush and Prime Minister Prodi of Italy in Joint Press Availability. 3) Press Briefing by Press Secretary Tony Snow and David McCormick, Deputy National Security Advisor For International Economic Affairs. 4) Pelosi Remarks Before Meeting With Prime Minister Jan Peter Balkenende of the Netherlands. 5) Interview of the Vice President by Jonathan Karl, ABC News.</p>
<p>Flawed or 'catch-all' topics.</p>		
<p>1. Catch-all: Real estate + Rainforests + Paper/catalogs.</p>	<p>real estate rainforest rainforests sept magazine camera chairman greenpeace indigenous roundtable cultural catalog catalyst rolling survival save network special action benefit paper stone grateful ritz dead acres activists chadbourne feed concert rate destruction ceo edition joining cultures sold band june production back commercial correction dollars dating massive million association land carbonfund.org square fight unique social catalogs grizzly cooled hour toxic peoples broadcast avenue remaining wednesday eco-green nikon manhattan candace retail sunday agro-toxics beef activist tribes</p>	<p>1) Focus: Grateful Dead joint fight to save the world's remaining rainforests. 2) Grateful Dead Hold Benefit Concert To Save Tropical Rainforests. 3) Rock Group Grateful Dead Joins Fight To Save Tropical Rainforests. 4) Ritz Camera's Latest Offer Celebrates Earth Day by Making You Carbon Neutral for a Month; With Each Purchase of a Special Edition ECO-Green Nikon S52 Camera, Ritz Camera Will Help Prevent Nearly Two Tons of Carbon Dioxide from Harming the Earth by Making a Donation to Carbonfund.org. 5) Real Estate Roundtable Elects New Board. "Sustainability," Tax Issues, Liquidity Named Top Policy Priorities for FY09.</p>
<p>2. Catch-all: Political actors as heroes or villains + Texas + Immigration + Platts.</p>	<p>texas immigration air platts heroes nursery dirty clean nrg n/a state villains population reps r-fl crane r-pa analysis r-oh david mauro veterans watson gysd senator steve dallas houston rain members r-il podium coal-fueled newsprint commissioner r-mi d-il textbooks citizen errors infobooks r-va mcgraw-hill omissions schulze particulate victoria includes r-wi msa d-va villain r-nc stein bias year-round eco districts scott robert d-nc spitzer d-fl ysa d-mi powerspan hero levin citations albright grades jeff royalty nurseries mike</p>	<p>1) NRDC Action Fund Identifies 193 House Members, 39 Senators as 'Dirty Air Villains' Who Voted Against Clean Air Protections. Link Between Dirty Air Votes and Contributions From Polluters Revealed; Numerous Villains and Clean Air Heroes in Battleground States. 2) Texas Releaf Project Set For Veterans Day. 3) Texas Public Policy Foundation Report Points Out Errors, Omissions and Bias In New Texas Textbooks. 4) Starpharma's DNT to Develop Water Purification Technology Under US Defense Dept Contract. 5) Coalition-Building Key To Texas Clean Air Legislation.</p>

<p>3. Catch-all: Legal system, professors and experts, current events, and industry.</p>	<p>law news contact phone bankruptcy expert government rights industry business author associate professor international freeman companies school amendment web san real university ciel harassment court case lobbying auto francisco times iberdrola online clinton firm holiday trust site profnet york working muffett alerts guantanamo constitution articles dirty william previously qvale detainees hwang dean alice chinese interested laws successful senior poisons salkin html habeas nacba trustee cybercrime internet gift corpus opinion child full issue improve carroll vectrix</p>	<ol style="list-style-type: none"> 1) Profnet Expert & Daily Topic Alerts: Government & Law. 2) Profnet Expert & Daily Topic Alerts: Business & Technology; Regulating Global Warming from Autos. 3) Associate Dean Salkin Authors 'Climate Change and Sustainable Development Law in a Nutshell.' 4) Profnet Wire: Government & Law: North Korea. 5) NACBA: Senate Bankruptcy 'Hearing' is Last-Ditch Effort by Credit-Card Industry to 'Slap Some Lipstick on the Pig' of Failed Law Changes; Republican Witnesses Either Blindly Support Failed Bankruptcy Law Changes or are Industry Shills; Senate Hearing is Typical of Industry-Dominated Process That Led to Anti-Consumer Law.
<p>4. Catch-all: United Kingdom + Airlines, travel/tourism, exploration.</p>	<p>gbp government cent review tourism including support trust today spending government's set business baa april income period public department travel services social development details system poverty communities runway aviation yasuni-itt bancroft allowance uk's ensure increasing the:hours arnesen csr contributions child duty measures ensuring plans meeting ecuador expedition consultation transport press sustainable pre-budget dempsey clarkson matthew notice infrastructure terms announces reform air year growth simplification pole schemes airport planning civil paper england fund mcmurdo bean aspirations</p>	<ol style="list-style-type: none"> 1) BAA Welcomes Air Transport White Paper. BAA today welcomed the Government's new framework for UK aviation policy and said that it would press ahead with plans for a second runway at Stansted Airport. 2) 2007 Pre-Budget Report and Comprehensive Spending Review - Meeting the Aspirations of the British People. 3) BAA Calls for Responsible Growth Of UK Aviation. 4) UK Infrastructure Must Keep Pace With Travel & Tourism Growth. Travel & Tourism Leaders Convened Today to Address the Urgent Need for Better Infrastructure in the United Kingdom, Based on the Forecasted Growth From the Travel & Tourism Industry Body. 5) President Correa Gives Ecuador's Yasuni-ITT Initiative a Positive Evaluation.
<p>5. Catch-all: Websites, poison ivy, science fiction and the future.</p>	<p>yahoo life web planet human idea search answers website researchers computers food users find free information online battelle welch bacteria site computer lives properly carbonstory petersen modern chemistry ivy spores hubbard genetic earth envirosearch.org hawking virtual game skin posts poison unique creating age fiction continues pollutants mission medical contact ivyblock blog universe images personalized animated stone phones thoughts turns personal powerful question dollar ron botulism drift interactive iacobellis insulated toxins spot responses man's hearing poisons</p>	<ol style="list-style-type: none"> 1) World Renowned Astrophysicist Stephen Hawking Speaks Out on Yahoo! On Wednesday, August 2, renowned British astrophysicist and professor, Stephen Hawking will vocalize his thoughts about the fate of world in an exclusive audio clip that will be posted on Yahoo! Search. 2) Recent Duke Study Links Global Warming, Increased Carbon Dioxide Levels with Poison Ivy Perils; Prevent Annoying Poison Ivy Itch and Rash with the ONLY FDA-Approved Product. 3) Greenhouse Effect: Science Fiction Or Science Fact. 4) Pollution Solution: The Billion Dollar Search. 5) Battelle Forecasts Strategic Technologies for 2020. Technology experts at Battelle think they have 2020 vision. They don't mean perfect eyesight today. They're talking about the ability to see the world of 2020.

<p>6. Catch-all: Mining, trade shows.</p>	<p>mining iaa sasol commercial visitors cent embedded ioc mine trade gtl gardens coalmine grazing exhibitors euro potential transport youtopia cracker synfuels blume esc ioc's alcohol mines exhibition metal back ethane visitor professional concluded efficiency african activities logistics polymer rio clear feasibility design lake apga botswana ranchers basics intelligent proportion drives rolling incidents operation mobility disruption quarter number mani-utenam mak uashat sasol's colliery utilisation arya optimisation oryx realise cmp mastercard premieres tinto dfc profitability rand aboriginal</p>	<p>1) "When is a mine not a mine?" - IOC - Rio Tinto & IOC's illegal mining activities the subject of a new lawsuit filed by Canadian Aboriginal group. 2) World's Largest Mobility Trade Fair Closes, Recording Huge Rise in Visitors - 354 World Premieres is a New Record. 3) Sasol Limited: Update From the Chief Financial Officer – Our international polymers, olefins and surfactants, mining, and international upstream businesses also had a good quarter. 4) YOUtopia: Public gardens pledge to reduce the impact of climate change and inspire visitors with positive solutions. 5) Important Role of Grazing Management Emphasized at Fourth National Conference on Grazing Lands.</p>
<p>7. Global market analysis + Biofuels. Strongly influenced by press releases from single source (Reportlinker).</p>	<p>table figure biofuels market energy generation chapter capacity production summary demand growth biodiesel global introduction fuel biomass series racing economies thousand consumption drivers emerging mans million key potential power bioethanol renewable hydropower world worldwide china india tons supply biopower algae players development l/a brazil europe countries fit cost resistors projected conclusions installed liters targets projections resources economy russia diesel distribution comparison forecasts conclusion tariffs filling overview metric station costs kwh renewables net existing current community</p>	<p>1) Next Generation Biofuels: Market Drivers, Growth Opportunities And Regulatory Change. Reportlinker.com announces that a new market research report is available in its catalogue. 2) Reportlinker Adds Green Energy in Emerging Economies: Renewable Investment, Capacity Growth, and Future Outlook. 3) Reportlinker Adds The Post Carbon Landscape: Alternative Pathways to a Low Carbon Landscape. 4) Feed-in Tariffs in Europe. Reportlinker.com announces that a new market research report is available in its catalogue: Feed-in Tariffs in Europe. 5) Carbon Management in Emerging Economies: New Mechanisms for Managing Carbon Dioxide Emissions. Reportlinker.com announces that a new market research report is available in its catalogue.</p>
<p>8. Greening efforts and projects, most business-led, some from state and local government. Strongly influenced by press releases from single source</p>	<p>purchase install conserve stonyfield lighting farm air efficient program yogurt heating upgrades ventilation company conditioning small lids installation equipment lemnis idling auxiliary hirshberg million parducci cup eliminate business high layovers long-haul llc truck car winery unit owners drive free insulation houston obd lid maker upgraded tire healthy check properly trucking guys gary tires ray ideas projects dba pharox restaurant beaver npr farm's kick inspection smaller talk led's fifa northampton lehigh pike i/m stonyfield's tampa miami</p>	<p>1) DEP Announces Small Business Advantage Grants to Help Improve Energy Efficiency, Reduce Pollution, Lower Operating Costs. 2) Live Large, Drive Small and Lose the Lid! Car Talk Guys & Yogurt Maker Team up to Create Counter-'Culture' asking 'What would you do with 3.1 Million Lids?' 3) PENNDOT: 12 More Inspection Stations Begin Offering Free Onboard Diagnostic Checks For Inspection And Maintenance Pilot Program. 4) Hey Florida, Tell Washington to Wake Up! - Yogurt-Maker Stonyfield Farm Rolls Out 'Tell the Hill "Not to Drill"' Energy Conservation Campaign in Miami And Tampa.</p>

(Stonyfield Farms).		5) Houston, Save Your Energy! We'll Fill You and Your Tires Up for Breakfast. Houston-Galveston Area Council's Clean Air Action Program and Stonyfield Farm Are on a Mission to Educate Drivers and Inflate Tires to Conserve Gas And Electricity.
9. Natural gas, pipelines, and fracking + Landfills + Methane.	gas natural methane north decision ccx exchange reserves landfill chicago shale mitchell drilling slope feet martin coal geologic source area alaskan exploration lay mit underground exports lng states pud wells field city congress formations baxter cubic anghts half boilers yukon liquefied pipeline morrow houston chairman equivalent chelan keyspan firm conversion acid cpp barnett hydrates philippines foothills export abundant fracturing legally enron volumes mobil producers rain hill concern hydraulic logo prudhoe northwest drilled northern develop permafrost	<p>1) Approval To Export Alaska's North Slope Gas Reserves Is Challenged. "The 26 trillion cubic feet of discovered, proved, and unquestionably producible natural gas contained in developed reservoirs at Prudhoe Bay is a national asset that will be needed by the United States," Wadlington said. Wadlington added the Prudhoe Bay gas, equivalent to 15 percent of U.S. proved reserves, would help reduce the dangerous and growing U.S. dependence on imported oil, projected at 55- 60 percent by the year 2000 and 70 percent by 2010.</p> <p>2) Foothills Challenges Decision On Exports Of Alaskan North Slope Gas Reserves</p> <p>3) CH2M HILL Provides Environmental Consulting to World's Largest Brick Manufacturing Plant Fueled by Landfill Gas.</p> <p>4) Glaciers, Ice And Snow -- Critical Keys To Global Change Research. Because gas hydrates in onshore permafrost are believed to be insulated from most atmospheric changes, they are presently not an important source of atmospheric methane. Studies of gas hydrates in onshore permafrost, however, can be used to develop geologic analogs for potential gas hydrate occurrences within unexplored areas such as the thermally unstable nearshore areas of the continental shelf.</p> <p>5) Experts: EPA Shale Gas Emission Rules "Too Little, Too Late." Natural Gas Industry Would Remain Largest Methane Polluter in U.S., Greenhouse Gas Footprint of Shale Would Still Be Larger Than That of Coal.</p>
10. Catch-all: Trends/public opinion+ Books, authors + Spirituality/human nature.	book nature author june issues august fairmont september man life blue positive books heart april publication review ratings spiritual february published january george end good partnering apocalypse jackson july negative webinar wal-mart angels williams written rate sacred status articles poor ecological shoppers holy new-vehicle jesse inovateus kelley notre stan excellent wall watch read fair trend pretty publisher sla dame marble collapse thoughtful overview quest examines interested wrote physical rights november awareness question vaughan-lee macgregor nlpc	<p>1) A Harris Interactive 'Political Trends' Update. President's ratings improve to 56% positive, 39% negative.</p> <p>2) Oprah Winfrey Interviews Sufi Teacher and Author, Llewellyn Vaughan-Lee, Super Soul Sunday -- March 4, 11AM ET/PT Vaughan-Lee Offers Teachings on Sufism, Mysticism, Consciousness of Oneness and Spiritual Ecology, Announces a New Book -- Prayer of the Heart in Christian and Sufi Mysticism.</p> <p>3) The Beginning Is the End, the End the Beginning: Author Reveals Visitations by Angels Who Foretell the Return of Jesus.</p> <p>4) 'Partnering with Nature': A Panacea for What Ails Us & The Earth.</p>

		5) Caveman Brains Cause Global Warming; 'An entertaining, tenable overview of why humans behave like dolts when it comes to protecting the environment.'
<p>11. State and regional environmental issues and programs. Strongly influenced by press releases from a single source (Pennsylvania state government).</p>	<p>pennsylvania governor state county jersey pennsylvania's state's rendell environmental virginia department commonwealth pseg dep protection izzo waste conservation program philadelphia businesses plan resources jersey's secretary grants local pilot gallons counties landfill act citizens hanger statewide public pennfuture pennsylvanians infrastructure grant regional bucks ralph keystone governor's services committee farm lebanon recycling visit announced greater mcginty edward valley investment delaware school municipalities casey corzine residents money media management contact signed roadmap rendell's allegheny show bpu erie township</p>	<p>1) Pennsylvania Helping Local Governments Reduce Greenhouse Gases, Combat Climate Change. Support for Delaware County Municipalities Part of \$300,000 Investment for Seven Communities Statewide. 2) Bucks County Is 'Cool!' First in Pennsylvania to Join Cool Counties Initiative. 3) PA Governor Rendell Announces State's First Multiple-Customer Landfill-Gas-to-Energy Project in Lancaster County. 4) Governor Rendell Honors Six Pennsylvania Environmental Leaders. 5) Pennsylvania Governor Rendell Says Investments Foster Better Environmental Understanding, Appreciation Among Students, Public Announces \$478,000 to 78 Organizations to Stimulate Life-Long Learning.</p>

Supplementary Table A.2: Frame Prevalence across Advocacy Organization Types: Proportion of press releases containing at least 4% of words from selected climate change frames.

Frame	Prevalence by Advocacy Organization Type				
	All Advocacy Organizations	Environmental Advocacy	Other Climate Action Organizations	Conservative Advocacy	Other Social and Political Advocacy
Core cluster and frequently co-occurring frames.					
Businesses and organizations as committed to sustainability.	54.07 ^{^^^}	59.60	63.75	20.51 ^{^^^}	60.16
Industry demands for regulation mindful of the needs of business.	44.68 [‡]	43.94	52.50	48.72	38.21 [^]
Climate change as catastrophe.	41.75 ^{***}	35.35	18.75 ^{^^}	69.23 ^{***}	49.59 ^{***}
Need for strategic, deliberative policy planning.	31.52	22.73 ^{^^^}	40.00	23.08 [^]	45.53 ^{**}
Patriotism, hope, and American greatness.	44.89 ^{***}	49.49 ^{***}	36.25	50.00 ^{**}	39.84
Climate change as global problem.	39.46 ^{***}	47.47 ^{***}	37.50 [†]	30.77	33.33
Greenhouse gas reduction methods described as good for business goals: Offsets, trading, and pilot programs.	18.58 [^]	19.19	23.75	20.51	13.01 [^]
Energy policy and jobs.	23.17 ^{**}	26.77 ^{**}	30.00 ^{**}	14.10	18.70
Advanced technologies, research and development.	5.64 ^{^^^}	3.54 ^{^^^}	11.25	1.28 ^{^^}	8.13 ^{^^}
Contentious identity frames and diagnostic frames citing particular group as responsible for environmental degradation.					
Shareholder activism vs. bad corporate actors.	4.18 ^{***}	3.03	3.75	12.82 ^{***}	0.81
Accusations and calls for accountability.	6.89 ^{***}	8.59 ^{***}	1.25	1.28	11.38 ^{***}
Oil drilling as destruction of sensitive areas; identity sub-frame of government-industry relations vs taxpayers and environment.	7.52 ^{***}	13.64 ^{***}	5.00	1.28	3.25
Frames describing or implicating moral concerns.					

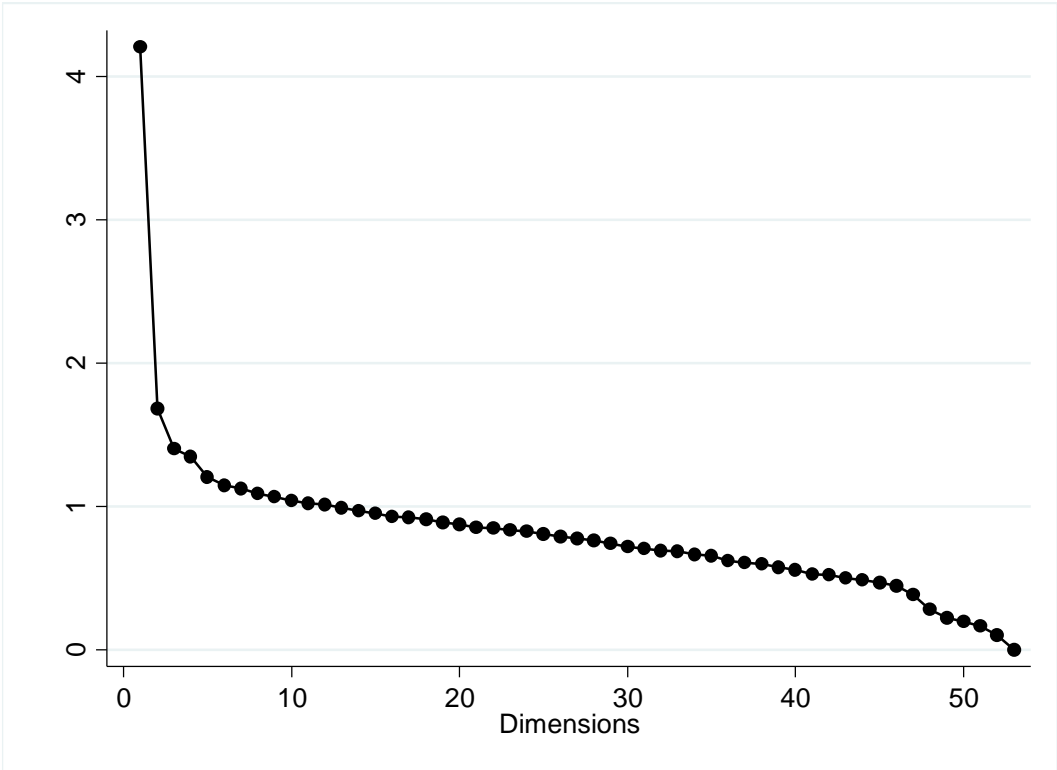
Faith, morality and stewardship.	3.55***	3.54*	1.25	6.41**	3.25
Climate change and emissions as harming public health.	5.22*	6.57*	1.25	5.13	5.69
Pollution, toxins, health, and clean water and air.	11.90**	22.22***	2.50‡	5.13	5.69
Environmental law and regulation as protecting human health and safety.	4.18	7.07**	0	3.85	2.44

Note: Significance levels indicate if frame is significantly more or less likely to be used by a particular type of organization relative to all other types, and symbols vary according to whether the frame is more or less likely to be used.

*If frame is more likely to be used by the organization type, *** $p < .001$, ** $p < .01$, * $p < .05$, and † $p < .10$.*

If frame is less likely to be used by the organization type, ^^ $p < .001$, ^ $p < .01$, ^ $p < .05$, and ‡ $p < .10$.

Supplementary Figure A.1: Scree Plot of Eigenvalues for Multidimensional Scaling Analysis



APPENDIX B

APPENDIX TO CHAPTER 3: WHOSE MESSAGES MAKE THE NEWS ON CLIMATE?

Supplementary Table B.1: Logistic Regression of Newspaper Coverage: Effects of General Organization Type, Organization Resources, and Message Characteristics

Model Number	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable	Press release picked up in major newspaper					
Goods, Wholesale Trade, Transportation and Warehousing	.105 (.216)	.111 (.216)	-.003 (.265)	-.757* (.386)	-.051 (.273)	-.803† (.414)
Services and Retail Trade, Except Advocacy Associations	-.175 (.217)	-.133 (.217)	-.182 (.249)	-.764* (.328)	-.196 (.250)	-.874* (.360)
Other Businesses	-.075 (.416)	-.020 (.417)	.497 (.451)	.090 (.575)	.503 (.457)	-.088 (.615)
Social and Political Advocacy Organizations	.380* (.183)	.336† (.184)	.414† (.218)	.801** (.266)	.457* (.224)	.909** (.284)
Business, Professional or Trade Associations and Coalitions	.763*** (.210)	.634** (.218)	.505† (.272)	.855** (.308)	.528† (.277)	.942** (.324)
Other Civil Society	-1.643** (.618)	-1.622** (.618)	-2.022* (.868)	-1.601† (.885)	-2.003* (.869)	-1.520† (.891)
Message Against Climate Action		.598** (.226)	.836** (.253)	.800** (.254)	.836** (.253)	.806** (.254)
Organizational Resources Data Unavailable			-.710* (.360)	-1.109** (.411)	-.859* (.435)	-1.295* (.515)
Employees (ln)			.017 (.034)	-.092† (.0511)	-.001 (.047)	-.111† (.062)
Assets (in millions) (ln)					.018 (.025)	.012 (.038)
Revenue (in millions) (ln)					.010 (.039)	.022 (.050)
Business X Organizational Data Unavailable				.853 (.922)		1.412 (1.100)
Business X Employees				.201** (.070)		.281* (.120)
Business X Assets						.015 (.059)
Business X Revenue						-.101 (.108)
Intercept	-2.443*** (.136)	-2.510*** (.139)	-2.567*** (.247)	-2.561*** (.255)	-2.610*** (.258)	-2.675*** (.274)
<i>N</i>	1,768	1,768	1,666	1,666	1,666	1,666

Note: Organizational type variables are effect-coded; reference category is governmental organization. “Other Businesses” are those businesses whose NAICS code is ‘Other’ or whose NAICS code I could not locate. “Other Civil Society” organizations include religious grant-making and civic organizations; labor unions; individuals, events, or blogs; and political candidates and campaigns. Models 5 and 6 use multiple imputation to impute missing values for assets and revenue. Table entries are coefficients and standard errors.

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Supplementary Table B.2: Logistic Regression of Newspaper Coverage: Effects of Specific Organization Type, Organization Resources, and Message Characteristics

Model Number	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable	Press release picked up in major newspaper					
Goods: Utilities	.328 (.294)	.373 (.295)	.316 (.327)	-.265 (.412)	.255 (.337)	-.254 (.435)
Goods: Manufacturing	.238 (.293)	.239 (.293)	.121 (.328)	-.447 (.423)	.089 (.333)	-.458 (.430)
Goods: Other	-1.099 (.676)	-1.112 (.677)	-1.136† (.681)	-1.454* (.698)	-1.181† (.684)	-1.531* (.713)
Services: Professional, Scientific, and Technical	-1.100* (.484)	-1.046* (.485)	-1.078* (.489)	-1.386** (.510)	-1.085* (.490)	-1.454** (.517)
Services: Education	-.099 (.496)	-.037 (.497)	-.088 (.510)	-.607 (.558)	-.084 (.511)	-.815 (.622)
Services: Information	.347 (.330)	.358 (.331)	.272 (.352)	-.115 (.392)	.253 (.355)	-.189 (.414)
Services: Other	-.020 (.341)	.056 (.343)	.067 (.350)	-.261 (.382)	.037 (.353)	-.369 (.405)
Other Businesses	-.091 (.446)	-.026 (.447)	.481 (.476)	.273 (.591)	.486 (.483)	.104 (.626)
Advocacy: Environmental	-.005 (.265)	.072 (.269)	.081 (.277)	.578 (.356)	.113 (.280)	.679† (.378)
Advocacy: Other Climate Action	.591† (.321)	.667* (.323)	.650† (.346)	1.088** (.401)	.702* (.353)	1.216** (.420)
Advocacy: Conservative	.817** (.303)	.329 (.384)	.559 (.427)	.941* (.468)	.616 (.433)	1.076* (.484)
Advocacy: Other	.375 (.285)	.445 (.288)	.522† (.301)	.937** (.358)	.560† (.306)	1.051** (.379)
Business, Professional or Trade Associations and Coalitions	.747*** (.207)	.625** (.218)	.485† (.264)	.899** (.328)	.509† (.268)	.991** (.352)
Other Civil Society	-1.659* (.672)	-1.629* (.673)	-2.035* (.945)	-1.566 (.971)	-2.017* (.946)	-1.483 (.981)
Message Against Climate Action		.603* (.291)	.752* (.338)	.752* (.339)	.743* (.339)	.749* (.341)
Organizational Resources Data Unavailable			-.825* (.364)	-1.114** (.414)	-.969* (.440)	-1.326* (.524)
Employees (ln)			.001 (.036)	-.083 (.052)	-.016 (.048)	-.103† (.062)
Assets (in millions) (ln)					.018 (.026)	.014 (.038)
Revenue (in millions) (ln)					.009 (.040)	.025 (.050)
Business X Organizational Data Unavailable				.696 (.919)		1.362 (1.119)
Business X Employees				.168* (.073)		.268* (.132)
Business X Assets						.006 (.062)
Business X Revenue						-.118 (.116)
Intercept	-2.427***	-2.503***	-2.465***	-2.614***	-2.505***	-2.738***

	(.108)	(.115)	(.227)	(.245)	.238	(.275)
<i>N</i>	1,768	1,768	1,666	1,666	1,666	1,666

Note: Organizational type variables are effect-coded; reference category is governmental organization. “Other Businesses” are those businesses whose NAICS code is ‘Other’ or whose NAICS code I could not locate. “Other Civil Society” organizations include religious grant-making and civic organizations; labor unions; individuals, events, or blogs; and political candidates and campaigns. Models 5 and 6 use multiple imputation to impute missing values for assets and revenue. Table entries are coefficients and standard errors.

†*p* < .10, **p* < .05, ***p* < .01, ****p* < .001

Supplementary Table B.3: Logistic Regression of Newspaper Coverage: No Significant Effects of Message Originating from Extractive or Polluting Industries

Model Number	(1)	(2)	(3)	(4)
Dependent Variable	Press release picked up in major newspaper			
Goods Sector: Extractive or Polluting Industries	.397 (.333)	.347 (.335)	.268 (.371)	-.443 (.463)
Goods Sector: Other	-.059 (.243)	-.029 (.244)	-.130 (.277)	-.745* (.362)
Services and Retail Trade, Except Advocacy Associations	-.214 (.215)	-.169 (.216)	-.203 (.240)	-.674* (.298)
Other Businesses	-.114 (.423)	-.056 (.423)	.467 (.458)	.167 (.577)
Social and Political Advocacy Organizations	.341† (.179)	.303† (.180)	.392† (.210)	.867** (.281)
Business, Professional or Trade Associations and Coalitions	.724** (.208)	.603** (.215)	.483† (.270)	.924** (.322)
Other Civil Society	-1.682** (.631)	-1.657** (.631)	-2.046* (.887)	-1.536† (.910)
Message Against Climate Action		.582* (.227)	.810** (.254)	.779** (.256)
Organizational Resources Data Unavailable			-.715* (.360)	-1.106** (.411)
Employees (ln)			.014 (.034)	-.092† (.051)
Business X Organizational Data Unavailable				.837 (.922)
Business X Employees				.197** (.070)
Intercept	-2.404*** (.128)	-2.473*** (.132)	-2.530*** (.247)	-2.623*** (.261)
<i>N</i>	1,768	1,768	1,666	1,666

Note: Organizational type variables are effect-coded; reference category is governmental organization. “Other Businesses” are those businesses whose NAICS code is ‘Other’ or whose NAICS code I could not locate. “Other Civil Society” organizations include religious grant-making and civic organizations; labor unions; individuals, events, or blogs; and political candidates and campaigns. Table entries are coefficients and standard errors. † $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Supplementary Table B.4: Descriptive Statistics

Variable	Mean	Standard Deviation	Minimum	Maximum	N
<i>General Organizational Type</i>					
Goods, Wholesale Trade, Transportation and Warehousing	.180	.384	0	1	1,768
Services and Retail Trade, Except Advocacy Associations	.225	.417	0	1	1,768
Other Businesses	.038	.191	0	1	1,768
Social and Political Advocacy Organizations	.271	.445	0	1	1,768
Business, Professional or Trade Associations and Coalitions	.119	.324	0	1	1,768
Other Civil Society	.068	.253	0	1	1,768
Government Agencies	.100	.299	0	1	1,768
<i>Specific Organizational Type</i>					
Goods: Utilities	.067	.251	0	1	1,768
Goods: Manufacturing	.073	.260	0	1	1,768
Goods: Other	.040	.195	0	1	1,768
Services: Professional, Scientific, and Technical	.079	.270	0	1	1,768
Services: Education	.031	.172	0	1	1,768
Services: Information	.051	.220	0	1	1,768
Services: Other	.064	.245	0	1	1,768
Advocacy: Environmental	.112	.315	0	1	1,768
Advocacy: Other Climate Action	.045	.208	0	1	1,768
Advocacy: Conservative	.044	.205	0	1	1,768
Advocacy: Other	.070	.254	0	1	1,768
<i>Message Content</i>					
Message Against Climate Action	.104	.305	0	1	1,768
Message For Climate Action	.831	.375	0	1	1,768
Message Ambiguous	.064	.245	0	1	1,768
<i>Organizational Resources</i>					
Organizational Resources Data Unavailable	.123	.329	0	1	1,768
Employees (ln)	4.588	3.384	0	14.604	1,666
Assets (in millions) (ln)	4.175	4.207	-5.809	14.560	852
Revenue (in millions) (ln)	3.629	3.508	-7.601	13.168	1,307
<i>News Coverage</i>					
Coverage in Any News Source	.098	.298	0	1	1,768

APPENDIX C

APPENDIX TO CHAPTER 4: MONEY AND MEANING IN THE CLIMATE CHANGE DEBATE

Supplementary Table C.1: Descriptive Statistics

	1	2	3	4	5	6	7	8	9	10	11	
Mean	0.180	0.225	0.038	0.271	0.119	0.068	0.104	0.123	4.588	3.309	3.100	
Standard Deviation	0.384	0.417	0.191	0.445	0.324	0.253	0.305	0.329	3.384	4.110	3.486	
Minimum	0	0	0	0	0	0	0	0	0	-5.809	-7.601	
Maximum	1	1	1	1	1	1	1	1	14.604	14.560	13.168	
N	1,768	1,768	1,768	1,768	1,768	1,768	1,768	1,768	1,666	1,075	1,530	
1	Goods, Wholesale Trade, Transportation and Warehousing	1										
2	Services and Retail Trade, Except Advocacy Associations	-0.252	1									
3	Other Businesses	-0.093	-0.107	1								
4	Social and Political Advocacy Organizations	-0.286	-0.328	-0.121	1							
5	Business, Professional or Trade Associations and Coalitions	-0.172	-0.198	-0.073	-0.224	1						
6	Other Civil Society	-0.127	-0.146	-0.054	-0.165	-0.100	1					
7	Message Against Climate Action	-0.034	-0.126	-0.058	0.097	0.218	-0.041	1				
8	Organizational Resources Data Unavailable	-0.162	-0.161	0.286	0.039	0.059	0.212	0.081	1			
9	Employees (ln)	0.423	0.174	-0.194	-0.262	-0.212	-0.174	-0.126	-0.526	1		
10	Assets (in millions) (ln)	0.683	0.189	-0.149	-0.332	-0.231	-0.132	-0.139	-0.406	0.930	1	
11	Revenue (in millions) (ln)	0.551	0.142	-0.154	-0.281	-0.178	-0.119	-0.141	-0.363	0.923	0.972	
12	Individualism – Individuals as Cause of Problem	-0.088	-0.071	0.001	0.216	-0.037	-0.006	0.056	0.056	-0.081	-0.075	-0.093
13	Individualism – Individuals as Solution	0.124	0.001	0.089	-0.053	-0.088	-0.064	-0.118	-0.021	0.103	0.070	0.108
14	Individualism – Voluntarism	0.314	0.035	0.005	-0.121	-0.106	-0.066	-0.179	-0.096	0.261	0.349	0.307
15	Individualism – Rationality and Markets	0.230	-0.071	-0.004	-0.132	0.140	-0.117	0.035	-0.063	0.139	0.207	0.211
16	Emotional Energy	-0.226	-0.028	-0.031	0.271	-0.101	0.073	0.064	0.063	-0.157	-0.196	-0.178
17	Economic Concerns	0.067	-0.129	-0.036	0.030	0.209	-0.081	0.197	0.048	-0.008	0.033	0.057
18	GDP Growth	0.064	-0.017	0.036	-0.048	-0.009	-0.005	0.156	0.046	0.010	0.018	0.004
19	National Security Concerns	-0.174	0.020	-0.003	0.084	-0.029	0.084	0.077	0.102	-0.185	-0.214	-0.150
20	Military Conflict	0.028	0.023	-0.018	0.021	-0.124	0.025	-0.106	-0.053	0.060	0.084	0.080
21	Press Release Picked Up in Major Newspaper	-0.016	-0.055	-0.016	0.029	0.072	-0.075	0.086	-0.055	0.015	0.030	0.013

Supplementary Table C.1: Descriptive Statistics (continued)

	12	13	14	15	16	17	18	19	20	21
Mean	0.015	0.051	0.150	0.169	0.186	0.244	1.519	0.107	0.492	0.098
Standard Deviation	0.055	0.098	0.129	0.146	0.139	0.167	2.036	0.097	0.500	0.298
Minimum	0	0	0.002	0.001	0.005	0.003	-2.500	0.002	0	0
Maximum	0.562	0.685	0.822	0.803	0.823	0.806	4.800	0.792	1	1
N	1,768	1,768	1,768	1,768	1,768	1,768	1,768	1,768	1,768	1,768
1	Goods, Wholesale Trade, Transportation and Warehousing									
2	Services and Retail Trade, Except Advocacy Associations									
3	Other Businesses									
4	Social and Political Advocacy Organizations									
5	Business, Professional or Trade Associations and Coalitions									
6	Other Civil Society									
7	Message Against Climate Action									
8	Organizational Resources Data Unavailable									
9	Employees (ln)									
10	Assets (in millions) (ln)									
11	Revenue (in millions) (ln)									
12	Individualism – Individuals as Cause of Problem									
13	Individualism – Individuals as Solution									
14	Individualism – Voluntarism									
15	Individualism – Rationality and Markets									
16	Emotional Energy									
17	Economic Concerns									
18	GDP Growth									
19	National Security Concerns									
20	Military Conflict									
21	Press Release Picked Up in Major Newspaper									

