THE INFLUENCE OF POWER IN CLIMATE

CHANGE MEDIA: FRAMING STRATEGIES AND

FIELD DYNAMICS OF INSTITUTIONAL ACTORS,

1990-2015

By

ADAM MICHAEL STRAUB

Bachelor of Arts in Sociology

Millersville State University of Pennsylvania

Millersville, Pennsylvania

2009

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
MASTER OF SCIENCE
July, 2017

THE INFLUENCE OF POWER IN CLIMATE CHANGE MEDIA: FRAMING

STRATEGIES AND FIELD DYNAMICS OF INSTITUTIONAL ACTORS, 1990-2015

Thesis Approved:

Dr. J. Micah Roos

Thesis Adviser

Dr. Tamara Mix

Dr. Riley E. Dunlap

ACKNOWLEDGEMENTS

Completion of my graduate program and this thesis have been the most challenging and rewarding experiences of my life thus far. My success would not have been possible without the support of the following individuals. First, I would like to thank my advisor, Dr. J. Micah Roos and the rest of my committee members, Dr. Tamara Mix and Dr. Riley E. Dunlap. I appreciate the perspective, commitment, and patience you taught me. To all of my fellow graduate students at Oklahoma State University: I feel honored to have shared this brief time in my life with you all. It is hard to put into words how much you all mean to me. Without every single one of you I would not have been able to persevere. To my dear friend, Scarlett Janell Whitfield: you are the closest thing to family that I have so far from home, you, perhaps more than anyone else made my life in Stillwater possible. I must also thank my family and extended family in Maryland (Patricia Lawson, Leigh McAlpin, Phoebe Dunbar, Nate Hynson, and others that suffered through enumerable iterations of my writing sample) who have remained supportive, optimistic, and encouraging all these years. I hope I have made you all proud

Name: ADAM MICHAEL STRAUB

Date of Degree: JULY, 2017

Title of Study: THE INFLUENCE OF POWER IN CLIMATE CHANGE MEDIA: FRAMING STRATEGIES AND FIELD DYNAMICS OF INSTITUTIONAL ACTORS, 1990-2015

Major Field: SOCIOLOGY

Abstract: This project provides an alternative theoretical perspective from which to assess the influence of power in media narrative construction of politically contentious issues, in this case, climate change. There has been a prolific amount of research addressing the problem of climate change. I argue that most of this research has neglected power as a key dimension in the persistence of climate change inaction. This neglect is a product of myriad factors: conceptual inconsistencies in the definition of "framing"; limitations to conventional analytic frameworks in situating media in larger social and political contexts; properly orienting key political actors and sponsors in the construction of framing strategies; and a lack of assessing the relationship of powerful actors and institutions through time. This project first orients key political actors in relation to one another and their role in the production of climate change discourse. Using Field Theory, I purport to properly situate institutional fields by considering coordinative and oppositional frames in the print news media. This theoretical framework allows me to construct a larger, dynamic constellation of social and political power, departing from traditional "agentic vs. hegemonic" dichotomous standpoints. To substantiate this I investigate a longitudinal analysis of media narratives from 1990-2015. I contend that these data demonstrates that climate change inaction is persistent because of surplus power and resources wielded by elite institutions, allowing them to permeate and elicit support from adjacent institutional fields. This effectively forestalls action in spite of both scientific consensus and public opinion advocating for regulatory intervention.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Figure   Page

CHAPTER I

INTRODUCTION

Contemporary literature discussing the processes, influences, and effects of mass

media narratives on public discourse has grown in the past decade. At the vanguard of

this research has been the field of communications, which has delved into a variety of

different aspects of this phenomenon. These include gatekeeping, agenda setting,

political orientation of news affiliates, analyses of news bias, power dynamics, and

journalistic norms (Altheide 1984; Simon and Xenos 2000; Callaghan and Schnell 2001;

Carragee and Roefs 2004; Boykoff 2006; Habermas 2006; Boykoff 2007; and Boykoff

and Boycoff 2007). Recent work in sociology has also contributed to this literature,

particularly in discussing the role the media plays in the raging public debate over the

legitimacy and "truth" of climate change (for some examples see Brossard, Shanahan,

and McComas 2004; Dunlap and Jacques 2013; Jacques, Dunlap, and Freeman 2008; and

Lefsrud and Meyer 2012). However, with exception of very few (see Farrell 2015a,

2015b for examples of these), the literature has not addressed the consideration of power

in media research on climate change (Carragee and Roefs 2004). The lack of research in

this particular area is due to the nature of the powerful; elites have consistently utilized

their political and social power to shroud themselves in secrecy (Mills 1956; Plankey-

Videla 2012). There is little doubt that most citizens, particularly in technologically saturated and dependent societies such as the United States and Canada, rarely proactively shape their perception of the world. Instead they allow mass media to establish their world view. Here, media constructs a hyper reality for their audience (Simon and Xenos 2000; Schulz 2004; Cottle 2006; and Farrell 2015). However, there is considerable disagreement in communications literature on media's part in constructing climate change discourse. On one end of the spectrum are scholars that subscribe to a "hegemonic thesis," believing that mass media simply acts as a means for elite actors to proliferate dominant class ideologies among the public (van Dijk 1995; Simon and Xenos 2000; and Block 2013). Contrary to this are academics who believe that media is afforded discretion in the depiction of information. These scholars argue that the power of mass media resides in mediation and production frames. In other words, agency. Media actively chooses what information reaches their audience (Altheide 1984; Callaghan and Schnell 2001; Boykoff and Boykoff 2007; and Anderson 2009).

Additionally, media, as an institution, is located in the unique spatial geography to influence and critique other social institutions. Media also serves as a means to view those institutions and their relationships with one another. Thus, it provides a convenient lens through which to explore the spatial relationships between these institutions and their spheres of influence. The relationships, articulated spatially, within and between these "fields" form linkages articulating a hierarchical orientation of institutional power in society. By charting these relationships, the relative strength of them, and their changes over time, I demonstrate which institutions hold the most power and thus, contribute most to the reproduction of systems of inequality in our society.

This project seeks to first investigate the positioning of predominant print news media in the framing climate change. Next, I orient key political actors within these texts to explore how climate change discourse is constructed by social institutions in North America. Then, by introducing *Field Theory* as an important analytic tool to interrogate institutional power dynamics, I use media discourse on the development of climate change to highlight the interdependent relationship between these actors, their institutions, and their overall orientation in the (re)production of structures of power in the United States and Canada from 1990-2015. To explore these exchanges, I use the following questions to guide this project: How do key print news media sources frame climate change? What action and collective action frames do institutional actors employ in response to the developing crisis of climate change? How do these strategic frames evolve through time? What role do key individual and institutional actors play in the precipitation of the climate change crisis, shaping its trajectory, and ultimately help or hinder changing field dynamics in the overall constellation of fields?

CHAPTER II

REVIEW OF LITERATURE

To provide an appropriate context for addressing the institutional power dynamics

of climate change demonstrated in newspaper print media I will begin by surveying

relevant literatures on media framing. Before I can position key actors and their

narratives, I must first determine the perspective each particular publication adopts to

properly contextualize the construction of print news media climate change discourse.

While there are swaths of significant research contributing to this area within social

movements' literature, I will primarily highlight conversations on framing occurring

within the field of communications. Focusing on this discipline strategically highlights

how media frames particular issues, which is of paramount importance as print news

media is the sole source of data analyzed in this project. This effort is also an attempt to

engage in an active conversation across academic lines rather than neglecting media

specific literatures to favor a discipline-centric approach. Additionally, there is a rift in

research forming a polarity among communications scholars as to whether or not media

acts in an agentic or hegemonic capacity is of central interest to this project. Considering

both perspectives is critical in conceptualizing the dynamic nature of media and its

influence on constructing and perpetuating information.

Next, I will summarize "Field Theory" and its specific importance in analyzing predominant institutional power dynamics. Fligstein and McAdam's (2012) synthesis of Bourdieu's articulation of fields, institutional theory, social movements, network analysis, and structural analysis is a powerful tool in interrogating how social institutions negotiate power in relation to one another to (re)produce the prevailing institutional hierarchy when confronted by a crisis such as climate change. Utilizing field theory in this project provides a unique theoretical perspective to explore the often-neglected influence of power in the evolution of climate change discourse in the media (Carragee and Roefs 2004). Lastly, using field theory demonstrates how innovative theorizing can elucidate new perspectives on a well-studied, complex social problem.

What is Media Framing?

Before attempting to unveil the potential connection between climate change discourses and mass media frames, I will define and conceptualize framing. Framing has been used in many disciplines to describe the way society contextualizes and sets boundaries for the interpretation of a particular discourse. Framing works in same way as a window. Constraining our ability to view the outside world. All other imagery is obscured by the opacity of the frame and that which lies around it. Put succinctly:

> We can define framing as the process of culling a few elements of perceived reality and assembling a narrative that highlights connections among them to promote a particular interpretation... ...to frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, casual interpretation, moral evaluation, and/or treatment recommendation for the item described (Entman 1993; 2004; 2007).

In other words, framing acts as a means to not only describe an issue, but to assign meaning to it. Once meaning has been established, the frame makes moral judgements about the problem and assign blame to causal agents. Lastly, media provides a prescriptive assessment of how the audience should feel about the problem or what action should be taken. There is extensive extant literature exploring this framing phenomenon and how audiences interpret these synthesized communications. Other research attends to the influence these interpretations have on understanding an issue. Cohen (1963 as quoted in Entman 2007: 165) articulates this in a pragmatic sense when he suggests that "the media may not be successful much of the time in telling people what to think, but is stunningly successful in telling its readers what to think *about*" (emphasis in the original). While apparently a minor difference, what we think about often determines our understanding of a particular topic (Entman 2007: 165). This suggests that framing in inherently teleological. With this in mind, it is easy to see how those with inequitable shares of political and social power can influence discourse, and subsequently, action, concerning social issues.

Hegemony v. Agency in Mass Media

Recent public opinion research has found that the origins of public opinion are resonant with the narratives found in elite discourse (Page, Shapiro, Dempsey 1987; Simon and Xenos 2000; Entman 2007). Additionally, it is understood that most of our public population is reliant upon mass media to acquire its information (particularly that which is political in nature). The inferred connection between these narratives borne of elite discourse and its consequential dissemination via the apparatus of mass media has proven more difficult to unveil. Some scholars suggest integrating Gramsci's hegemony

as the underlying nexus through which these discursive sites can be connected, better equipping scholars to investigate the elite's proliferation and indoctrination of a dominant class ideology (Carragee and Roefs 2004; Snow, Tan, and Owens 2013). The elites understand the semiotic nature of media; its ability to facilitate the publics' construction of reality through symbols, language, and meaning. The "coding" of these messages is imperative in the consideration of framing strategic action as articulated by different media agents. According to authors like Innis and McLuhan (as cited in Schulz 2004), "every medium has a 'bias' affecting the reception of its messages and transforming the recipients' modes of consciousness." This realization is not only applicable to fictional topics and materials, but non-fictional ones as well. Understanding that these conceived "truths" are, at least in part, constructed subjectively is integral to the interpretation of our social world (Simon and Xenos 2000; Weber 1962). To compound this effect, the pervasive expansion of technology continues to increase the power of media as an economic tool. Media messages incite responses, which, consequently, create a requisite need for more media messages in a variety of different contexts that connect and intertwine with one another. This intensification process creates a continuous, perpetual series of self-sustaining "feedback loops" of events being disseminated by the media and the media covering he development of those events and others (Kepplinger 2002 as cited in Schulz 2004). In other words, the technological development of contemporary media creates a pervasive and continuous stream of information that demands a higher level of attention from its audience. This necessarily disconnects and displaces direct interaction with the world. Media acts as a substitute, dictating our interpretation of the world.

This reciprocal relationship between audience and mass media, fueled by economic incentive and opportunity, suggests another possibility that refutes the hegemonic thesis; mass media possesses a degree of agency (Altheide 1984). These scholars posit that mass media does not simply act as a medium for transmittance, but operates independently from elite influence, selecting, omitting, reshaping and perpetuating their own interpretive strategic action frames. Media then can act as, both, perpetuators of source frames as well as originators of their own unique narratives (Callaghan and Schnell 2001). From this standpoint, there are three particular ways that media might craft and disseminate information. First, they might articulate a one-dimensional story, giving power and visibility only to one particular group. Second, they might portray the story as multi-faceted, giving all "sides" a voice, highlighting the complexity of the story and fostering conflict. Lastly, media can choose not to air the story, obfuscating the issue entirely. In this way, the power that mass media wields is certainly not limited to what is ostensible. Indeed, mass media can choose to articulate and prioritize certain frames over others. However, what is equally significant, and perhaps more so, is their discretion to suppress or silence certain actors, thus controlling the salience of vantage points or entire issues altogether (Anderson 2009). The implications of this power led to a theoretical distinction of mass media as a separate institution capable of interacting with and enacting significant influence on the power dynamics found in other institutions (Hjarvard 2008). Following this logic, media occupies the unique position in which it has the proclivity to impact other institutions. Media is perhaps the only institution that is charged with detailing the strategic actions of other institutions, shaping public perception on those institutions. These commentaries

may potentially influence corporate financial allocations or public support and investment. Structurally, they might even affect the relative significance of all other institutions depending on how media narratives are constructed, and who(m) those particular constructions endorse or condemn. This is particularly true when considering public opinion research on public dogma. Research has demonstrated that contemporary dogma is formed by individuals unable or unwilling to construct their own meanings, leading them to rely on external sources such as the media, to construct it for them. However, the use of an institutional conceptual framework is too rigid and inflexible to capture the dynamic and fluid nature of the power dynamics found within and between mass media and proximal institutions with whom it is entangled (Block 2013). To expand the power of our analytic framework to incorporate and attend to these fluid dynamics, I take the substance of institutional theory and incorporate it into a larger constitution, the theory of "fields" (Fligstein and McAdam 2012).

An Introduction to "Field Theory"

"Field theory" is a multi-faceted perspective that forms the theoretical framework implemented by this project. Using power as common currency between institutions, Fligstein and McAdam (2012) incorporate work from Bourdieu, social movements, network analysis, and Giddens to create a fluid, dynamic, and evolutionary theory on the interconnectedness between organizations in contemporary society.

Many contemporary conflict scholars have used the general concept of a "field" to describe any particular, distinctive spatial arena within which there are inequitable distributions of power and resources (Arthur 1988, 1989; Bourdieu [1997] 2000; Fligstein

1996; Fligstein & McAdam 2012; Hannan and Freeman 1977; McAdam 1999; Powell et al. 2005; Steinmo, Thelen, and Longstreth 1992; Thelen 2004). Bourdieu posits, "Each field is characterized by the pursuit of a specific goal, tending to favor no less absolute investments by all (and only) those who possess the required dispositions" (Bourdieu [1997] 2000: 11). These "fields" can emerge in a variety of different contexts and in all levels of analysis. This concept is not only used to describe organizations, but extends its theoretical reach to other social orders. While an organization is objective, and has clear and distinguishable boundaries, a "field" is abstract. Fields are socially constructed social orders that define an arena for contestation between two or more groups. The flexibility of the concept of fields allows for a complex understanding of an intricate tapestry of interdependent yet distinct constituents which marry into a larger constellation of fields that constitutes the structural fabric of our social world.

Fligstein and McAdam (2012) advance Bourdieu's concept, fundamentally rooted in power dynamics, by purposing the apparatus to understanding not only the relationship within, but also *between*, what they label "strategic action fields" (SAF). Defined as "fundamental units of collective action in society" (Fligstein and McAdam 2012: 9), each of these is composed by two types of actors competing for dominance, challengers and incumbents. The social engagement and interaction of these field actors occurs under the precept of a mutual understanding of the purpose(s) of the field, the relationship they have with one another, and the rules that govern legitimate action in the field (Fligstein and McAdam 2012). Indeed, all those actors in the field understand, at least to some degree, the capabilities of every other actor to exert influence and accomplish their own particular goals. This shared, coproduced, and mutually constructed cultural

understanding of the "rules" of the SAF is instrumental in reproducing the structure of the field and (re)affirming what forms of action are legitimate within each contextually distinct field. A monolithic understanding of an overarching "institutional logic" is too rigid and simplistic. Borrowing from symbolic interactionism, the cultural understanding is collectively constructed but individually interpreted based on the relative position of that particular actor. In this way, variant interpretations of what a particular individual can accomplish within a field, given contextually situated access to resources within a field, helps better elucidate the presence of both agency and structure within and between fields (Fligstein and McAdam 2012).

SAFs do not occupy spaces entirely independent of one another, but instead, are connected and associated with other adjacent, conjoined, and dependent SAFs. These connections between fields serve to mutually reinforce and support a greater latticework as a whole, adding stability to structure of society. Fligstein and McAdam (2012) recognize that fields within this network are both nested and contiguous, hierarchical and sovereign. Thus strategic action fields are situated alongside other SAFs, and nested within still larger SAFs.

As Bourdieu ([1989] 1996, [1997] 2000) and Fligstein and McAdam (2012) suggest, the most basic tenet of fields is the inequitable distribution of resources, and subsequently power, within each. Incumbents retain the majority of both, while challengers do not. This initial cross-section is not to suggest that fields are not dynamic in nature. The composition of power within a field is in a constant state of flux and is characterized by fluidity. While dynamic in nature, the overall stability of these fields remains intact most of the time. What then might facilitate the destabilization in fields

and a reorganization of the power, resources, and constituents within fields? The

mechanisms that facilitate the transformation of fields is a point of contention within the

literature. The two main perspectives deviate in where they suggest the catalyst for

transformation occurs spatially; inside or outside the field. Some theorists suggest that

change occurs within the field and is facilitated by constant and consistent contestation of

the status quo power orientations within the field (Powell et al. 2005; Steinmo, Thelen,

and Longstreth 1992; Thelen 2004). The second perspective, to which I attend, does not

discredit the first, but instead suggests that the primary site for the transformation of

fields occurs outside the field. This singular, external event is referred to as an

exogenous shock (Arthur 1988, 1989; Fligstein 1996; Hannan and Freeman 1977;

McAdam 1999; White 1981 as cited in Fligstein and McAdam 2012). Depending on its

magnitude, this exogenous shock can potentially redefine the distribution of power,

resources, legitimate rules of action, and even the purpose(s) of fields. Both perspectives

agree that while fields typically enjoy a relatively stable state, change is the only constant

within and between fields. A changing social, cultural, and political environment ensures

that the challengers are always prodding and probing for new weaknesses in a fields'

power structure. Incumbents are constantly searching for ways to maintain the status

quo, whether by conceding certain conditions to the challengers to prevent upheaval, or,

more commonly, forging alliances with more powerful dominant or tangential fields.

Just as internal relationships between actors were requisite in the comprehension of

within-field dynamics, alliances are instrumental in understanding the relationships

between fields, and consequently, the larger constellation that comprises the greater

network of institutions. Pathways between institutional actors lay the road map for exercises of power that influence social action.

The State is the first site that all fields look to for alliance formation. In nearly all contemporary societies, the State is the single predominant institution that occupies the unique social space to form legitimate rules that govern the actions of all non-state strategic action fields (Fligstein and McAdam 2012). The State is also typically structured bureaucratically. This hierarchical structure makes it among the most stable and unchangeable organizational orientations (Weber 1962). These two factors make state fields the ideal ally for fields to join with. The closer this relationship, the better the opportunity for incumbents in non-state fields to solidify their hold on their own field, as well as favorably position themselves relative to other fields to gain access to power and resources. Connections between fields are made by *internal governance units*. Once these linkages are formed, internal governance units such as lobbyists, academics, media or non-profit organization representatives, etc., maintain these alliances. These relationships are not unilateral. In reciprocal fashion, the State SAF benefits from its association with particularly powerful non-state SAFs by way of legitimation. Interestingly, especially in a democratic society, the State granted its power and authority through consent. Accordingly, this State SAF relationship can be fickle. Dependence on legitimation can prompt the State to shift its allegiance to support the transformation of a strategic action field to retain the favor of a powerful group. If the orientation within the field changes, the support of the state must likewise change to reflect support for the new incumbent. The civil rights movement was an incredible example of this. The state was reluctant to acknowledge and legitimize the minority vote until the power exerted by

these groups on the whole of society became too large to ignore (Fligstein and McAdam 2012).

Transformations are precipitated by *crises*; a tumultuous event that catalyzes a movement within a field(s). These can occur from within or without a field. War and regime changes are the most dramatic examples of an exogenous crisis that can facilitate a change in the power dynamics in an entire network of fields. Threat and opportunity are indicative of these events which incite conflict between field participants. Depending on the progress of contentious interaction with other internal actors, calls are made to external fields to participate in the contest (Fligstein and McAdam 2012). These movements have the potential to shift the landscape of not only a particular field, but have the propensity to shift the meaning of the entire society due to the interconnected and interdependent structure of the field network,. This is especially true if these transformations are located at the site of the State, or some other centrally oriented field. In the case of the State (as the most easily recognizable and archetypal field) the dissolution and reformation/transformation of the power structure could, and often does, serve to reshape the entire sovereign space over which the former State presided. These changes are often situated in the transformation and emergence of a new predominant economic model, which like a painter reusing a canvas, utilizes the same space of the previous work but creates an entirely new apparatus with the particular political, social, and cultural variegations that compose the new field network.

Although exogenous shocks are the most common initiate of field transformation, this should not suggest that change cannot occur from within, but only that it is a more gradual, erosive force as the power distribution within fields is constantly being

monitored and reinforced by those in power to preserve the integrity of field's structure. Transformation initiated from this site is exceedingly rare given inequitable access to and distribution of power and resources. Reorganization is also unlikely due to misrecognition and reluctance (Bourdieu [1979] 1984, [1984] 2003; Fligstein and McAdam 2012). Challengers often fail to recognize a proper opportunity to initiate a potentially transformative movement because of their position in the field. Remembering the situated perspective of actors within a field, positioning often obfuscates a clear holistic view of the field. Thus, an actor's information about a field's fragility is distorted and incomplete. Actors are aware of this incomplete perspective which not only inhibits detection of a weakness/opportunity to upset the order of a field, but also the confidence in the authenticity of such an opportunity. Lastly, even when correctly identified, the repercussions for a failed coup are severe and purposefully well known. Therefore, if challengers do possess the aptitude to correctly identify a revolutionary opportunity through the clandestine symbolic veil of the incumbent, they are reluctant to pursue such an opportunity.

Having established the general theoretical framework of field theory, I shall contextualize it specifically to the climate change issue and situate mass media as a strategic action field.

Mass Media as a "Strategic Action Field"

Schulz (2000) argues that mass media acts as an institutional force, causing organizations to account for how they might be represented. Hjarvard (2004) takes this idea one step further and positions media as its own independent institution which exerts

force on other proximal institutions to reproduce its own structural position. Although useful in conceptually orienting mass media in the societal organizational hierarchy, this institutional analytic framework is too rigid and inflexible to capture the dynamic nature of media and its capacity to interact at multiple locations within and across institutional hierarchies. Conceptualizing hierarchical power configurations in this two-dimensional space illustrates the limitations and difficulties that traditional frameworks have in properly conceptualizing the complexity of the relations between and across institutions. Constructing mass media as a field, however, allows for a more appropriate three-dimensional rendering of the spatial arrangement of these fields. In order to do this mass media must have a set of goals and constituents competing for them as does any other field. As with most other fields in the capitalist economy, revenue is the primary motivating factor of media. As mentioned earlier, mass media is motivated by other factors as well. Their capacity as political and social commentary, for instance. But media indulges these ancillary motivations insofar as they enhance their financial profitability. Complementarily, their capital accumulation is a demonstration of their proficiency in those goals (Weber 1968). Reorganizing media into this conceptual paradigm better equips theorists to interpret the meaning interactions of multiple SAF simultaneously through time, as well as the implications of those actions in the larger field network or constellation of fields.

The four main strategic action fields that will be the focus of this project are centrally oriented around the State. This is primarily because the reasons stated in the discussion of internal governance units and the alliances between fields. The issue of note in this situation is that of climate change, a contentious topic that has become highly

politicized in the past three decades, precipitating a polarization on its scientific legitimacy and the prescriptive action proposed to alleviate it (Boykoff 2011; Brulle, Carmichael, and Jenkins 2012; Klein 2014; McCright, Xiao and Dunlap 2014). Considering climate change as an exogenous shock, numerous SAFs are confronted with a threat to field stability and thus appeal to the State to act (or not act).

Industry, when operationalized as a field, employs agents in an attempt to prevent any limitation on their ability to emit greenhouse gasses that are intrinsic in the practices and processes of cheap production. These internal governance units (IGUs) take the form of lobbyists, academics, other businesses, state officials, and non-profit organizations. Within North America, these IGUs are tasked engage with law makers in the United States and Canada as well as the international/supranational regulatory community (the United Nations Framework Convention on Climate Change/UNFCCC, Conference of the Parties/COP, North American Free Trade Agreement/NAFTA, Trans-Pacific Partnership/TPP) to stymie or prevent regulatory action. These IGU intermediaries use political capital from years of political inculcation and financial contributions to garner legislative favor and preserve their dominant position within their respective fields (Bourdieu [1984] 2003). As with the reciprocal relationship between State and non-State actors discussed in the theoretical framework above, the influence of the financial industry in the electoral process (especially in the United States) is reciprocated in legislative action sympathetic to industry desires; particularly subsidization and deregulation. It is important to note that these interactions are between positions, not individuals. Viewing these interactions as exchanges between individuals rather than positions suggests a degree of agency between people involved in these interactions

rather than the structuring power of institutional structures (Bourdieu [1972] 1977).

While these considerations are important in the complex interactions held within field

theory, and there is certainly some important evidence of agency found in the data, the

contribution of "social skill" is beyond the scope of this particular project and should be

an intense center for study in later research. The primary focus of this project resides in

the structural factors that shape the evolution of climate change discourse and subsequent

action and a consideration of these behaviors longitudinally emphasizes the

institutionalization of these actions in the continued alliance between state and industry

fields (Fligstein & McAdam 2012).

Environmental movements attempt to utilize these same pathways but instead of

acquiring political capital via economic capital, they invoke it through cultural, academic

and (subsequent) symbolic capitals (Bourdieu [1979] 1984, [1989] 1996, [1984] 2003).

This is to say that they foist the pedigree and prestige of the academy to legitimate the

authority of their scientific claims (academic capital), demonstrating the damages that the

burning of fossil fuels exerts on the planets ecological system(s) (cultural capital), and in

turn appeal for regulatory intervention on behalf of the collective citizenry to curtail the

malicious environmental apathy of the capitalist machine (Foster 2010; Bourdieu [1989]

1996; Weber 1962).

Situated within this constellation presided over by the State, but consonant with

the diametrically opposed environmental groups and industry, is mass media. Mass

media operates in the geographic space between the State, these political affiliates

(IGUs), and the public, putting it in the unique position where media narratives could

potentially sway the zeitgeist to one side or another based on media consumption and the

public's antipathy for media diversity (Simon & Xenos 2000; van Djik 1995). The framing power of media outlets combined with public nepotism creates an enticing situation for proactive and intense encroachment on media as a SAF in an effort to propagate pro and anti-climate change frames for public consumption. First, motivationally speaking, to continue to ossify and legitimate their field situation within the larger constellation of fields (reproduction of structure), and to utilize those alliances to perpetuate their own particular narrative (production of structure). Likewise, the media is bound, as most SAFs are, by the predominant economic structural constraints under which all capitalist institutions must operate. These restraints influence their normative culture and thus necessitate alliance building with myriad fields to collect source material for media narrative construction and development (Callaghan and Schnell 2001; Cottle 2006; Fligstein and McAdam 2012).

Capitalizing on this need, Industry utilizes their primary weapon in in manufacturing power: economic capital (Bourdieu [1979] 1984). Between non-state fields, the propensity of this form of capital to reshape field dynamics is most powerful. Non-state private fields can absorb one another. One widely researched instance of this is the conservative news outlet, FOX News. Rupert Murdock (CEO) has manufactured an exogenous shock in the form of acquisition. By acquiring the news media outlet, he was able to restructure the power dynamics of that particular subfield within mass media and utilizes its influence to endorse and support industry (Klein 2014; McCright and Dunlap 2003; McCright, Xiao, and Dunlap 2014). This direct form of media subjugation is the most effective and efficient way of disseminating the industry frame for public consumption. The other strategic action is the attempt to influence news media through

discourse propagated by corporate think tanks (another IGU in this framework) that have

perpetuated the elite framing narrative since 1988 when several were founded in response

to Hansen's testimony to congress on the reality of anthropogenic climate change

(Boykoff and Boykoff 2007; Elsasser and Dunlap 2013; Sapinski 2015). These

organizations, funded directly by industry, create disparity in the perceived legitimacy of

climate science that confirms anthropogenic climate change by employing "contrarian"

scientists of their own directed to report contradictory findings. The issue with this is not

competing science, variant discourse is always present in scientific research, but with the

intention of publishing material that directly refutes evidence for anthropogenic climate

change. This dissention diminishes pro-environmental groups' influence across the

constellation of fields. First by eroding science's symbolic capital thus reducing their

effect in influencing policy. Second, within the context of field transformation, it

diminishes pro-environmental credibility which weakens the reproduction of the

movement as the perception of "opportunity" to challenge industry recedes (Fligstein &

McAdam 2012; Fligstein 2001).

These literatures and theories speak to the capacity of media as an agentic and

hegemonic institution in society. They also demonstrate the ways in which media can act

as a figurative "stenographer" detailing the exchanges in power within and between

institutions in society as they pivot and negotiate the exogenous shock exemplified by

climate change. In the next chapter, I will detail the ways in which I will interrogate

these narratives and how they detail these volatile institutional field dynamics from 1990-

2015.

CHAPTER III

METHODOLOGY

The methods used in this study will be conducted to collect and analyze data to specifically address the questions set forth by this project: How do key print news media sources frame climate change? With what forms of action and collective action frames institutional actors employ in response to the developing crisis of climate change? How do these strategic frames evolve through time? What role do key individual and institutional actors play in the precipitation of the climate change crisis, shaping its trajectory, and ultimately help or hinder changing field dynamics in the overall constellation of fields?

To investigate these questions I will conduct a quantitative and qualitative content analysis of newspaper articles from two major newspaper publications from both Canada and the United States during the years between 1990 and 2015 (rationale for this particular period will be discussed later); *The New York Times* and *The Wall Street Journal* from the United States, as well as *the Globe and Mail* and the *Toronto Star* from Canada. I have chosen to select these particular countries as a veritable barometer for commitment to environmental regulation as the two dominant economic forces in North America (and the western hemisphere). Additionally, these two countries have shown

both similar and dissimilar commitment to combatting climate change by their varying commitment to the *Kyoto Protocol*, an international legally binding regulatory treaty intended to hold the industrial leaders of the developed world accountable for the management and reduction of greenhouse gas emissions (GHG). The *Kyoto Protocol* was a highly contentious agreement that marked a decisive moment in which a rift was drawn among developed nations regarding appropriate climate change action. North America opposed it while the rest of the developed world sought to adopt it.

Pre-Analysis

Initially, to both test the sampling strategy and coding strategy (attended to in the subsequent section discussing coding) I performed a pretest sampling and analysis of this population of articles. In reference to the sampling, I used this as a litmus test to confirm the viability of this method when conducted on a larger scale. Using a random number generator (http://www.random.org), I identified one article from each strata to represent each publication resulting in a pre-analysis sample of sixteen. After confirming that each article was complete (not abridged or partial) and relevant to the topic, I concluded that this sampling strategy was appropriate for this project. Subsequently, because of the size of the population, the sample used for pre-analysis was discarded.

Sampling Strategy

I sampled articles from *The New York Times* and *The Wall Street Journal* (US), and *the Globe and Mail* and the *Toronto Star* (CAN). I will use *LexisNexis* to locate articles from *The New York Times* (US), and *the Globe and Mail* and the *Toronto Star*

(CAN). Unfortunately, via *LexisNexus* I could not obtain full articles for *The Wall Street Journal* (US) (only abstracts) so I utilized *ProQuest* to supplement my sample for analysis. These sources were obtained through identification by keyword searches focused on two particular terms: "climate change OR global warming." In reviewing the literature on studies that have conducted similar sampling techniques, I anticipated encountering a population of tens of thousands of news articles, a number that was confirmed by a preliminary search which located a population in excess of 39,000 articles. This number of data was strategically reduced to 802 articles. I selected my sample based on two criteria suggested by the literature attending to journalistic norms: episode (or novelty) and personalization. Based on a simple frequency distribution of these data, I separated the period into four phases, reflecting both the chronological phrases for distinctive dominant frames in the meta-analysis, and the proclivity for novelty associated with those incidents in which climate change was most salient demonstrated by the frequency of articles published in each year.
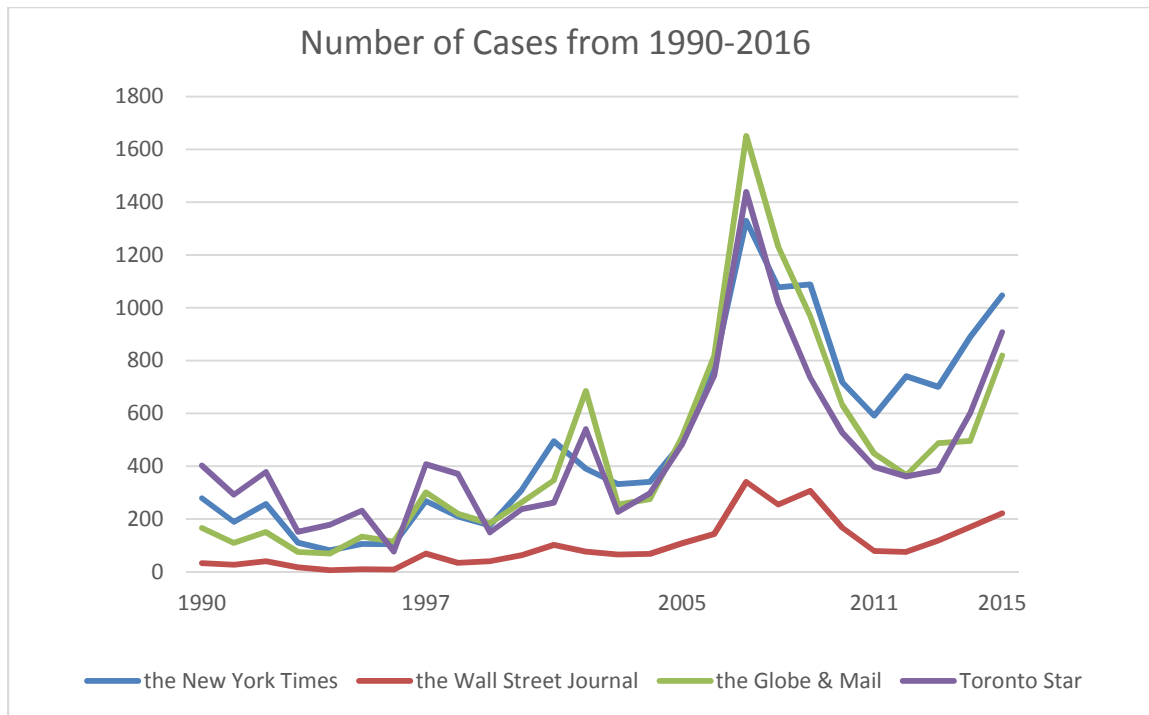
Number of Cases from 1990-2016

Figure 1

Using these two constitutive elements of institutional media, I selected four events that serve as the vanguard in initiating a new potential divergence in the climate change narrative. These selections focused on pivotal moments in the discourse surrounding climate change and the multiple dimensions and evolutions it has developed and undergone: (1) Dr. James Hansen's congressional testimony in 1988 (1990) about the existence of anthropogenic climate change (Dunlap and Jacques 2013; Jacques, Dunlap, and Freeman 2008); (2) the *Kyoto Protocol* in December of 1997 and subsequent efforts to implement these commitments; (3) *An Inconvenient Truth* in 2006; (4) and the prelude to the twenty-first conference of parties (COP21) culminating with the decisive United nations conference on climate change held in Paris, winter of 2015. Finally, once the population has been gathered through purposeful, relevant episodic selection, I filtered these data for duplicates. A preliminary search and composition of descriptive statistics

23

aligned almost perfectly with the theoretical choices mentioned above. The four spikes in media activity suggested by the literature indeed happened between 1990, 1997, 2006, and 2010. So these years shall serve to distinguish four stratified sources of data to conduct my analysis.

To reduce the population size to the mark of 802 I have reproduced the systematic sampling strategy with a random start conducted in the pre-analysis (Babbie 2013). After randomly selecting the first article, I selected an appropriate interval (every sixth, tenth, etc.) to reduce my sample to the target of 800 articles (Babbie 2013; Boykoff 2006; Boykoff and Boykoff 2007). As mentioned previously, I chose to split the sample into four distinct strata. These strata each contain (approximately) the same amount of articles as will the contribution of each publication to their own relative strata; approximately 200 and 50 respectively. In order to achieve this I used a variable sampling ratio depending on the amount of articles found in each strata for each publication, and sampled from the search engine found in the databases. For example, to attempt to collect the target number of articles for *The Wall Street* Journal (US) for the period between 1990-1996 I needed to sample every third article from the corpus of 145 articles, resulting in a slightly less than perfect 48 articles contributing to that strata's sample. After systematically sampling the entire population in this manner I ended up with a final sample composed of 802 articles.

Sampling Rationale

First, these newspaper publications are ranked first and second most circulated in-print newspapers in their respective countries. Second, each is considered a "major" or

"prestige" newspaper which, in addition with exposure to a wider audience through circulation, has been shown to be heavily influential in crafting the media narratives of regional and other secondary news sources across a variety of mediums (Boykoff and Boykoff 2007), demonstrating their paramount importance as a force in crafting public opinion. Lastly, these papers have been selected to represent varying locations on the political spectrum to consider how political affiliation affects the framing of media narratives (Boykoff 2006; Boykoff 2007; Boykoff and Boykoff 2007; Brossard, Shanahan, and McComas 2004). This achieves two things: capturing a representative sample, especially given the polarization surrounding the politically contentious issue of climate change, or demonstrate a departure from the political polarization around climate change. These factors help in the examination of the agentic-hegemonic dialectic intrinsic to media that is of fundamental importance in investigating a core theoretical subtext of this project.

The two journalistic norms mentioned above were used to inform the sampling process because these journalistic norms suggest an institutional inclination for intense focus on a particular social issue at a particular point in time. In other words, the more novel or nascent a news story, the more likely it is to receive media attention. In the "negative space" of this value, a newer incident often marks a point of departure from the previous. This makes the most notable news stories related to climate change to act as the harbinger for a new strata of analysis, as a new story (with its own spatial and temporal context) provides a likely point in which new discourses or themes could emerge. Concordant with this logic, particularly in reference to climate change, studies have shown 'spikes' in media attention surrounding events related, inferentially or

directly, to the impacts of this phenomenon (Boykoff 2006; Boykoff and Boykoff 2007; Brossard et al. 2004).

The second norm of interest I will use to theoretically and empirically inform these methodological sampling choices is that of "personalization." Media tend to gravitate toward incidents that are easily ascribable to the tangible, rather than the abstract. This practice of personalizing social events makes it makes it more relatable to the audience (Boykoff 2007; Brossard et al. 2004; Entman 1993, 2007; Lefsrud and Meyer 2012; Snow, Tan, and Owens 2013), this induced empathy inspires emotional responses of sympathy, grief, joy, fear, hate, and love. Emotions have been shown to lead to better audience attention, readership, and thus ratings, feeding the economic motivations of institutional media (Anderson 2009; Hjarvard 2000; Schulz 2004). As mentioned above, these were also chosen in coordination with the temporal arrangement of the three emergent dominant themes found in the comparative meta-analysis from 1990-2010 (see aforementioned discussion in literature review for details). As the logic derived from these literatures suggested, I empirically confirmed the presage incidents selected above by conducting a manifest content analysis using a frequency distributions of each publication across the selected timeframe (1990-2015). Distinctive spikes in news articles were found surrounding the events chosen above. The systematic selection provides a minimal risk for sampling error as the population should have no conceivable consistent or repeated pattern of orientation (i.e. days of the week was accounted for my making sure the sampling ratio was not to a factor of seven, etc.) (Babbie 2013).

Coding and Analysis

I began with open coding on the framing and reasoning mechanisms, and the actors associated with those frames, in the journalistic material within each of the four newspapers. Initial analysis of the data began by investigating multiple dimensions, such as "statements about climate change as a legitimate phenomenon, or not;" "how are these statements legitimated;" "how do these statements position key actors in relation to one another on the subject of climate change;" in an effort to explore and identify the framing strategies employed in these data (Schreier 2012). Exhaustive sub-categories were identified for each of the above dimensions to better organize and interrogate these data, their sources, and the key actors represented in these statements (Corbin and Strauss 2015; Schreier 2012). I also attended to a latent evaluation of the text surrounding these quotes and identified themes in the discourse and language used by that newspaper article, looking for key common words, phrases, or narratives through a line by line coding of the pre-analysis sample by hand. This provided the opportunity to uncover preliminary codes using dimensions derived from the deconstruction of the conclusive themes detailed the meta-analysis as a starting point (Schlichting 2013). From this I was able to identify some preliminary codes and sub-codes of the foundational dimensions mentioned below (i.e. uncertainty, disbelief, and belief for the dimension of "(non)belief in climate change"). Additionally, this step allowed me the opportunity to discover any other fundamental dimensions that emerged outside of those suggested in the literature. The themes constructed in the meta-analysis, and confirmed through pre-analysis, qualify six fundamental dimensions: (a) (non)belief in climate change; (b) perceptions of the attribution of climate change; (c) impacts of climate change; (d) action suggested/taken

by actors; (e) domination of nature; and (f) exhibitions of power between the strategic action fields involved. These served the basis for analyzing the content of the main sample. Coding and analysis was conducted in November and December of 2016, and January 2017.

To assist with this analysis on the main sample of 802 articles, I used NVivo11 software for organizational purposes and to help locate key words and patterns, as well as to craft visual aids (tables, charts, word clouds, and graphs) and to provide a manifest content analysis. This introduced incipient apparent framing intentions of these nations and their representative newspaper publications in reference to their depiction of climate change, how they legitimized their position, and the key actors implicated in the data.

A more detailed construction of latent primary themes, as well as secondary and tertiary nodes (sub-categories/themes) revealed the narratives that constituted the primary source for the final analysis (Schreier 2012).   This was achieved, with the assistance of NVivo11, through a reconstruction of strategic frames from the source documents via primary quotes (i.e. verbatim statements from the data) related to the aforementioned deductively constructed key dimensions. Based on these selected quotes, inductive frame analysis of these quotes was conducted to isolate and construct thematic media narratives over time within each newspaper publication, paying particular attention to the most salient themes and the actors implicated within them. In addition to identifying key indicative statements, the primary and secondary actors implicated by association within the data was analyzed. The year of each article was noted for temporal consideration.

After I identified key dimensions, the discourse associated with each, the sub-categories and their subsequent themes within each of the newspapers, I compared these

findings and noted any distinctive differences or similarities within and between these publications by political lean and nationality, followed by a similar comparison between nations from 1990-2015. Once the analysis of the media narratives was conducted and the framing strategies were identified I organized them a second time according to actors contributing to those narratives and the institutions that they represent (Van Gorp 2009 as cited in Schlichting 2013). These analyses allowed for the distinction and coupling of institutions through relationships and interactions between actors.

The focus of the forthcoming analysis chapter is presented in two phases which attend to two main points of consideration. The first is a presentation of the data chronologically organized along two thematic analytical categories: dominant climate change narratives and institutional relationships. The discussion section mirrors the organization of the findings section. It centers first on reinforcing past research on dominant narratives as found in these data and then highlights departures from research on the evolution of climate change discourse (Boykoff 2013; Schlichting 2013). This is followed by an analysis of the most dominant institutions that contribute to that discourse and how they strategically interact with other fields to enhance those narratives. It should be noted that these interactions are only part of a very elaborate and complex structure of institutional engagements. Additionally, they highlight the most dominant narratives and interactions through time. These analyses do not presume to capture all of the discursive narratives or interactions of all institutional actors, as disconfirmatory evidence can be found throughout the data, but only that the presentation of these data and its analyses are indicative of the most prominent narratives and interactions shown to have the most profound effect on collective action responding to climate change. More nuanced

temporal analysis would demonstrate a more discursive character of these narratives and

interactions and should be a subject for future study.

Synthesized depictions of recurrent frames and institutional relationships from the

data will serve as the primary presentation of themes. Additionally, actual quotes by

actors within the source material will capture exemplary participation and engagement

with these themes. All articles cited will appear in the table found in APPENDIX I and

the verbatim excerpts from exemplars are displayed in APPENDIX II to provide

appropriate context for my analysis of this text.

CHAPTER IV

ANALYSIS

The analysis chapter will be organized into two sections. The first presents the

findings analyzed from the data followed by a discussion section. The findings will

synthesize the relevant article tone, climate change discourse, and institutional

relationships chronologically to demonstrate how these three dimensions evolve through

time. The discussion section will interpret these syntheses and present their relevance

within the context of relevant literature.

FINDINGS

The basic findings of this research unfolds in three distinct parts. The first

captures the inferential framing context that print news media sources implement

regarding perceptions of the reality of climate change. Next, I discuss the dominant and

contributing framing strategies of particular actors and institutions in historical order.

Finally, I present the position, relative position, and changes in the orientation of

intuitions which are of central importance to the evolution of climate change discourse

and subsequent action taken in response to this problem. These orientations are

significant in understanding, constructing, and tracking the position and trajectory of

institutions relative to climate change action within the larger context of the constellation of fields. To accomplish this I attend to the following research questions: How do key print news media sources frame climate change? With what forms of action and collective action frames institutional actors employ in response to the developing crisis of climate change? How do these strategic frames evolve through time? What role do key individual and institutional actors play in the precipitation of the climate change crisis, shaping its trajectory, and ultimately help or hinder changing field dynamics in the overall constellation of fields?

> "Climate change, which threatens to render all human projects irrelevant; which presents us with detailed evidence of our lack of understanding of the world we inhabit while, at the same time, demonstrating that we are still entirely reliant upon it. Climate change, which highlights in painful colour the head-on crash between civilisation (sic) and 'nature'; which makes plain, more effectively than any carefully constructed argument or optimistically defiant protest, how the machine's need for permanent growth will require us to destroy ourselves in its name. Climate change, which brings home at last our ultimate powerlessness" (*The New York Times*, July 27, 2014).

Media Framing

The first point of concern regarding using print news media as a medium for studying climate change discourse propagated by institution actors is potential differences in those publications characterization of climate change. The trend in all 802 observation points clearly show consistency, across all print news sources regardless of political affiliation, in each publications' sentiment towards the issue of climate change. While the language used in reference to the phenomenon and its symptomatic phenomena is used somewhat arbitrarily, a noticeable transition has emerged over time. "Global warming" was the preferred word choice in the early 1990s with "climate change" taking over as the dominant semantic reference to the phenomenon during and after the Kyoto

32

negotiations. It remains the most prominent language choice in public discourse pertaining to this issue. The tone of each article was assigned to one of three categories indicating if that article operated under the presupposition that 1) climate change is happening; 2) a balanced approach in which articles presented both arguments and sentiments for and against climate change as real; 3) climate change is not occurring. Although articles ranged across all three categories, they were by no means equally represented. Overwhelmingly, the tone of all print news sources reported the chosen story under the contextual presupposition that climate change is a reality with an average of approximately 26 per publication (just over 50% of each sample in each quartile).

Longitudinally, there were slight shifts in the utterance level analysis of each article. Those articles that assumed the non-existence of climate change generally grew less frequent from each period to the next (1990-1996, 1997-2004, 2005-2010, and 2011-2015). The difference between the greatest and least number of occurrences conveying a sense of "anti-climate change" between publications in any time period was 10 (11 in The Globe and Mail 1997-2004 and a single article in The New York Times 2011-2015). This maximum range represents 20% of the total articles in the sample size for each publication in each period (n=50). This finding suggests the presence of trends contrary to those found in other analyses of print news media as a means of studying the public discourse surrounding climate change (Boykoff and Boykoff 2007; Callaghan and Schnell 2001; and Lefsrud and Meyer 2012). Here, analyses of these data suggests that media frames politically contentious subjects objectively. Communications framing research often finds media sources provide a balanced approach to reporting, presenting both sides of an argument equally. Generally framing climate change as a reality

corroborates the notion of "media agency." Demonstrating media's ability to selectively frame an issue divorced from elite hegemonies (Altheide 1984; Anderson 2009; Boykoff 2007; and Brossard, Shanahan, and McComas 2004).
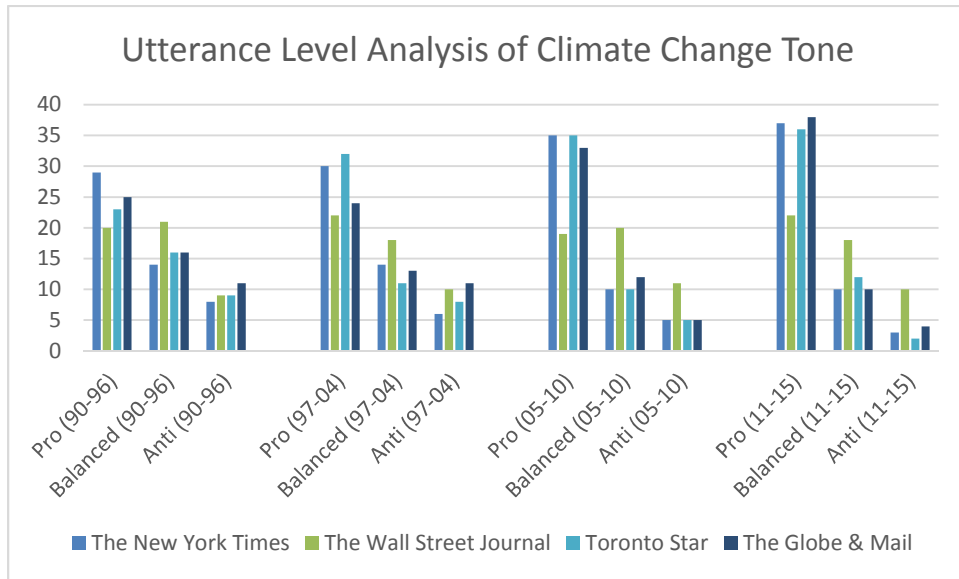

Figure 2

Also of note, these presuppositions toward characterizing climate change as reality occur regardless of political lean or country of origin. In other words, there was very little distinguishable difference in the tone from the Wall Street Journal or The Globe & Mail (self-identified conservative publications from the United States and Canada respectively) to that found in The New York Times or Toronto Star (self-identified liberal publications). To a smaller degree, *The Wall Street Journal* did provide a more balanced, or uncertain, position on climate change, but over time all four publications generally avoided positioning themselves as unsupportive of climate change.

The Evolution in Climate Change Media Discourse

As pertinent literature asserts, the prevalence of print news articles on a particular subject change in concert with important historical events. Events that served as the primarily basis for print news media construction of climate change followed four major events: the Earth Summit in Rio de Janeiro in 1992, the Kyoto Protocol negotiations (and subsequent attempts at conformation) in 1996 through the early to mid-2000s, Al Gore's *An Inconvenient Truth* in 2006, and the 21st Conference of Parties climate change negotiations in 2015. While these events dominated the news cycle in terms of salience and subject matter, other ancillary events were also notable. These include numerous climate negotiations such as Copenhagen in 2009, Cancun in 2010, and the US-China emissions commitment in 2014. It is apparent that political events, in particular, dominated the print news media discourse. However, when gaps between coverage of socio-political events pertaining to climate change appeared, science dominated the headlines. Case after case presents the evidence of climate change (i.e., scientific research on environmental changes).

The sample of print news media was primarily constituted by full articles with editorials contributing approximately one fifth of observations to the total sample. These editorials were most often composed by individual primary actors belonging to two specific institutional fields: industry and academia ("primary" in this case should be read as those with credentialed authority e.g., a CEO or PhD, respectively). Interestingly, the framing strategy employed by these actors was not focused on the reality of climate change or the legitimacy of the science supporting that reality. In fact, other than *The Wall Street Journal*, oppositional frames rarely appear at all. Rather, these actors assume

climate change as a reality. Nearly 82% of framing strategies regarding perceptions of climate change affirm its existence. This majority is further enhanced by an additional 4% of frames displaying apathy to its existence. In other words, actors employing the apathy frame were not concerned with climate change, or its potential negative impact on the environment. In contrast, only 4% of cases in which actors discussed the reality of climate change outright denied its existence. Based on the historical distribution of these cases, no visible trend appears. This type of discourse has remained steady as frames of climate change disbelief are found with consistency, in both content and frequency, throughout observations sampled within the 1990-2015 timeframe. Surprisingly, those actors assert that if they are wrong about the existence of climate change, there would be profound negative and detrimental effects (*The Toronto Star*, September 8, 2008). Not only environmentally, but economically as well. Those who make this concession constitute a substantial population those disbelievers (33%) and more interestingly still, all of these assertions were made by scientists. These statements occur early in the sample (in the first five year time period) and are nearly all made in reference to the same study about environmental change. These studies are conducted on micro phenomena which scientists caution are not indicators affirming the existence of climate change, but collectively could demonstrate its effects (*The Globe & Mail*, August 4, 1994). In the wake of these statements, industry and state actors often seize an opportunity to cast doubt on the existence of climate change and challenge the legitimacy of science in providing adequate and reliable information from which policy makers can make decisions to act on climate change. Similarly, when scientists or scientific panels such as the Intergovernmental Panel on Climate Change (IPCC) issued a correction of previous

data, methods, or evidence, they were derogated by anti-climate change advocates (*The Wall Street Journal*, February 18, 2010). Exploitation of the nature of science as an iterative and etiologically uncertain process is a common tactic employed by politicians and industry representatives in order to cite a logical basis for forestalling action on climate change. "Scientific uncertainty" is one of the most commonly implemented strategies for this inaction and is the dominant frame in the first historical time period of this study.

In the years following Kyoto, the strategy shifts to the "socio-economic" narrative. This remains the dominant standpoint of stakeholders advising no action on climate change throughout the final 20 years of the study (1996-2015). Broadly, this narrative almost entirely abandons the position of climate change disbelief and instead focuses on the economic ramifications of instituting policy to combat climate change. These sponsors argue that suggested action on climate change, including but not limited to: stricter regulations on carbon emissions, carbon taxes, government subsidies or tax incentives for alternative "green" energy sources, conservation efforts, and carbon trading/tradable emissions permits, constitute an unconscionable and irresponsible set of measures that would have devastating effects on economic growth and prosperity (*The Globe & Mail*, July 21, 2001). Building on the conceptual mission established during the Earth Summit in Rio de Janeiro, in the years following Kyoto, more than 150 countries have been attempting to adopt a more substantial, both in terms of commitment and impact, international agreement toward combatting the dangers of rising greenhouse emissions. Particularly those created by industrialized nations. Due to fossil fuels being the dominant and globally pervasive form of energy production, regulation was

anticipated to affect "every conceivable interest group." In response to this threat, a coalition of fossil fuel advocates composed of producers, labor unions, and related industries, starkly opposed these government restrictions[1] (The New York Times, December 7, 1997).

Complementing this narrative is a return to the notion of scientific uncertainty and questions of legitimacy surrounding climate change research, particularly in the first historical period of this study. Following Kyoto, the supplementary legitimation of the socio-economic narrative largely departs from questioning the science and instead argues for competitive geo-politics. The first contention is the exclusion of the majority of less-developed countries from the Kyoto agreement. The United States and Canada also contend that Kyoto will impact European countries far less than their North American counterparts citing post Second World War reconstruction efforts which focused on newer technologies as well as English political action to divest in coal power during the 1980s. Such measures put these nations in a far better position to conform to the Kyoto agreement due to their relative distance from fossil fuel dependence. By 2005 the narrative adds criticism of governance as the primary facilitator impacting the looming threat of climate change. Instead industry allies suggest an alternative approach. In contrast to regulatory action, which would inhibit economic prosperity, they recommend neoliberal, market based solutions (*The Globe & Mail*, Oct 26, 2002). This rationale suggests that by allowing natural, uninhibited market forces via technological innovation and development to organically transition to cleaner energy production and use, developed nations can use economic growth as the primary driver for climate change remediation. Historical analysis of these data have demonstrated ineffectiveness of

voluntary action. Specifically, the Canadian national government permitted industry to voluntarily approach the issue of reconciling Kyoto's targets with economic production. In Ottawa, a decade long national report, compiled by a variety of different government agencies, unanimously found no significant change in carbon dioxide emissions over that time period concluding that the "voluntary approach and limited incentives [are] not sufficient to drive substantive change." Instead, policy makers "need more consideration of regulation and taxation to drive behavioural [sic] change and technology deployment and uptake"[2] (The Globe & Mail, January 11, 2005). Furthermore, despite the scientific consensus on climate change and the ominous threat that this problem poses to the sustainability of the planet, as well as human civilization, industry interests have remained a priority. To explore this I turn to the power dynamics apparent through the interactions of key institutions in news print media.

Institutional Field Relationships

Although this project's primary theoretical focus is on the interactions and power dynamics between institutional actors (i.e., the state, the academy, industry, media, NGOs, etc.) print media discourse also focused on individual actors acting on behalf of these institutions. The most dominant institutions represented in these data were that of the state and industry. Prominent actors representing these institutions included US presidents (George H. W. Bush, 1989-1993; Bill Clinton, 1993-2001; George W. Bush, 2001-2009; and Barack Obama, 2009-2017), Canadian Prime Ministers (Jean Chrétien, 1993-2003; Paul Martin, 2003-2006; Stephen Harper, 2006-2015; Justin Trudeau 2015-present), congressional and parliament representatives, state governors and provincial

premiers, energy administrators/ministers, scientists, Al Gore, and those with fossil fuel industry affiliations. When I interrogate the data with the purpose of situating the historical positioning of actors, the names of both state institutions and individual actors were mentioned by the source material. These individual/group distinctions were made depending on the context of the article or situation presented. For example, if the article discussed the relationship between nations, or nations with the larger international governmental community (United Nations, Earth Summit, Kyoto, etc.), the institution was most often referenced, especially when the situation was politically contentious or oppositional[3]. This was also the practice when print news media referenced adherence to a traditional political position, economic policy, environmental policy, etc. of a nation or state/province. In contrast, when a departure from traditional nation-state policy appears, the print news media attributes responsibility for these divergences to individual actors rather than the country they represent:

> China has long argued that it should not have to commit to cutting carbon pollution, since its energy consumption helped fuel the rise of its poor rural population to the middle class. But Mr. Xi [President of the Peoples Republic of China] has laid out a strategy of economic growth that is not directly tied to fossil fuel consumption, in hopes that his country could begin to decouple economic growth from carbon emissions (*The New York Times*, November 13, 2014).

However, this occurs primarily for representatives of the state (in its multitude of scalar manifestations). Industry actors retain a noticeable degree of anonymity, and therefore relative invisibility, throughout the historical timeframe of these analyses. Print news media sources did not name these agents specifically. Instead, individual and institutional industry actors are most often categorized into largely ambiguous categories such as "business owners," "lobbyists for corporations," "industry affiliates," etc. Furthering this notion of invisibility, these groups are inferentially treated as community

40

constituents. This is the case particularly in Canada, where they frame resistance to acting on climate change as hurting the Canadian citizenry and their communities rather than industry interests. Much of the data in the late 1990s and early 2000s implicitly tied industry resistance with community resistance. Utilizing strategies of "othering," government officials and industry actors from Alberta and Ontario used similar rhetoric that represented industry goals as community priorities. While government officials vehemently denied corporate influence, they intentionally subsumed and linked industry interests within community identity, making action toward industry an affront on the community[4]. This invisibility is particularly evident when referencing institutional industry actors who stand to bear the greatest burden and impact from regulatory action on climate change, such as fossil fuel and automotive industries.

As time progresses, industry actors lose some of that anonymity as the fossil fuel and automotive industries get loosely branded and receive consistent incorporation in media discourse. Particularly when they are opposed to action on climate change. The final five years of data sees explicit company names (i.e. Exxon Mobil, British Petroleum, Shell, Chevron, ConocoPhillips, and other constituents of the energy industry being the most common) referenced with regularity. Specific mention of individuals does not happen until the final years of analysis in which the Koch brothers and Koch Industries are specifically identified as patrons and benefactors of anti-climate change lobbying efforts, as well as political campaign contributions to lawmakers who oppose action on climate change[5].

Although, these incidences are the most ostensible examples of the intimate and intense relationship between industry and the state, other implicit and inferential

examples appear throughout the print news media discourse to reinforce the presence of this relationship. Here, when we interrogate particular references in these articles, we find the greatest incidences of exercises of power as well as alliance building and maintenance from these two constituents: industry and state institutions. Interactions involving these two make up the majority of all interactions within and between institutions (65.6%).

Total Interactions Within & Between Fields

■ Academy ■ Industry ■ State ■ MLTA ■ MGNO ■ NGO ■ Media
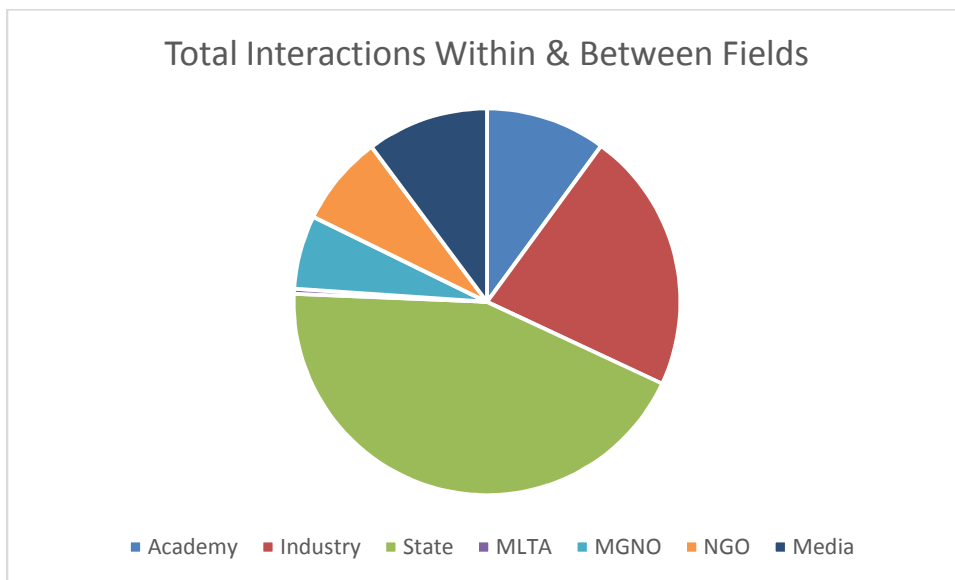
Figure 3

Additionally, making up 22% of all interactions *between* institutions (when compared with NGO-state interactions which form the next most populated category at 7%), industry and state power dynamics constitute the largest such institutional relationship/interaction. Based on this data, the institutions of industry and the state form the nexus through which perceptions and policy/action on climate change predominantly take shape. More importantly, these findings suggest that as the most active sites for

activity, state-industry interactions also likely weigh most heavily into the decision making process about climate change in the United States and Canada.

Exchanges between state and industry fields occur with considerable consistency and in a variety of capacities that evolve through time. Industry uses a variety of strategic actions to influence nation-state constituents and elicit non-action on climate change. The first, and most obvious of these relationships is that of corporate lobbying groups and reactionary coalitions that obstructed environmental legislation. This occurred in spite of public opinion which supported these measures[6]. This was by far the most common, and perhaps effective, relationship that preserved industry interests. By preventing and endorsing climate-negligent legislation. Effective not only because they circumvented public opinion and global initiatives designed to combat climate change, but also in the frustration that this caused within pro-environmental groups. Indeed, momentum in social movements is an important element. As their efforts were stymied and corporate influence in politics grew, the budgets and memberships of some environmental groups began to fall[6]. The reverberations of these frustrations were felt within state institutions as well. In December 2012, Lisa Jackson, Administrator of the EPA, stepped down as head of the agency due to congressional intransigence inspired by corporate lobbyists and the Obama administration's perceived imminent move to support the Keystone pipeline[7]. The fossil fuel industry also made a concerted effort to infiltrate the United States government to maintain their power and capitalize on convenient economic and political circumstances. This effort was calculated, strategic, prolific, and extensive:

> As Shell surveyed the political landscape ahead of the 2008 presidential
> election, its lobbyists compiled a thick planning book for dealing with the

three likeliest winners, ranking them in order of predicted finish. First was Hillary Rodham Clinton, followed by John McCain. Last was Barack Obama.

Shell retained the retired senators John B. Breaux, Democrat of Louisiana, and Trent Lott, Republican of Mississippi, to lobby Mrs. Clinton and Mr. McCain.

Approaching Mr. Obama, with far less history in Washington, took more creativity. One top Obama adviser who offered some hope to Shell was Mr. Obama's Senate chief of staff, Pete Rouse. With family roots in Alaska and experience as an aide to the state's Republican lieutenant governor, Mr. Rouse understood the importance of oil to Alaska's economy and knew the politics of oil and the Senate. He eventually became the White House point man on Arctic drilling.

A more unlikely campaign aide destined to play a significant role was Ms. Zichal, Senator John Kerry's former legislative director. Her first trip to Washington had been as a college student and an advocate for the Alaska Wilderness League, lobbying against drilling in the Arctic National Wildlife Refuge.

The 2008 campaign played out amid near-record gasoline prices. The Bush administration and the McCain campaign pushed for lifting the Congressional moratorium on most offshore drilling, and Republican campaign rallies were punctuated by cries of "Drill, baby, drill" (*The New York Times*, May 24, 2012).

Actions by corporate representatives were also reactionary, whether refuting or seeking to devalue scientific evidence warning governments of climate change, or through the formation of coalitions to confront the threat of regulatory action. These latter efforts were also proactive by directly financially contributing to the congressional campaigns of anti-climate change advocates. Commitment to both preparation and reaction is substantial as Shell alone employs over three dozen lobbyists (according to government disclosure records obtained by *The New York Times*). Beyond persons employed, Shell made large financial contributions lobbying against climate change; $4.5 million in 2008 (the Bush administrations last year in office), $10.2 million in 2009, $10.4 million in 2010, and $14.8 million in 2011.

While primarily confronting climate change sympathizers, fossil fuel industries also attempted to earn their trust. ExxonMobil and Shell, fearing president-elect Obama's potential cuts to fossil fuel subsidies and the introduction of climate change legislation, joined the United States Climate Action Partnership (USCAP). This was a new tactic in which industry could gain access to top policy makers and even the president by superficially advocating for a pro-environment response to climate change: "It helped people look at us differently and open doors," Mr. Odum (the Shell affiliate which joined USCAP) said. "I do not think there is any doubt about that" (*The New York Times*, May 24, 2012). Industry followed the action regardless of who the decision makers were or the forums where climate change was discussed. Travelling to the Kyoto Protocol climate change negotiations to apply direct pressure to decision makers, Senator Joseph Liebermann recalled in a telephone interview with *The New York Times*, "It is as if a large chunk of the lobbying community from the capital has been transported from Washington to Kyoto for two weeks"[8] (*The New York Times*, December 7, 1997).

These anti-climate change coalitions were first formed after Dr. James Hansen's 1988 congressional testimony in which he presented his findings on the reality of anthropogenic climate change. Corporate think tanks such as the Global Climate Coalition were formed to present scientific findings that refuted climate change research and created an air of uncertainty about the legitimacy of the science. Effectively, this stymied governmental intervention which bases its policy decisions on scientific experts. These coalitions were a collective constituted by a variety of institutions including: industry, non-profit organizations, academia, and the media. By funding legislators, pooling resources, and sponsoring climate change denial, a complementary and indirect

exercise of power takes shape. Industry exerts additional influence on the state by

coordinating with, and mediating their efforts through, other institutions. Proponents of

these denial narratives were nearly never mentioned individually, however, the

reoccurring presence of one particular individual provided an interesting example of the

formulation of this discourse. Rex Murphy, CBC Radio and *The National* media

commentator, was one of the only salient voices to challenge the data and scientific

consensus on climate change in Canada.

> I am under no illusion about the force of the global warming consensus.
>
> It is the grand orthodoxy of our day. Among right-thinking people, the idea of expressing any doubts on some of its more cataclysmic projections, to speak in tones other than those of veneration about its high-priests, such as Mr. Suzuki or Al Gore, is to stir a response uncomfortably close to what in previous and less rational times was reserved for blasphemers, heretics and atheists.
>
> But wherever we are on global warming, and on the models and theories supporting it, it is not yet The Truth, nor is it yet Science (with a capital S) as such. And to put a stay on our full consent to its more clamorous and particular alarms is not, pace Dr. Suzuki, either "ignoring science" or complicity in criminal endeavour (sic). Nor is reasoned dissent or dispute, on some or all of the policy recommendations that global warming advocates insist flow, as night follows day, from their science. –Rex Murphy, Commentator with The National and host of CBC Radio's Cross-Country Checkup (The Globe & Mail, February 16, 2008).

Not only did his frame appear empirically in editorials, but was referenced secondarily by

reports found in full articles. This flippant, facetious, and patronizing tone was a

common rhetorical device among similar social commentators in the United States who

adamantly disagreed with, or refused to acknowledge, the scientific consensus on climate

change. Coupled with this strategy, hyperbole and sarcasm sensationalized and

summarily dismissed the predicted social, economic, or most often, environmental effects

of this problem.

While consistently employed by industry affiliates throughout the history of these data, the dominance of the "scientific uncertainty" pathos gave way to the new strategic frame of "socio-economic consequences" in the mid-1990s. This changed the landscape of field interactions. Preserved and constrained in an air of intransigence through lobbying and election campaign contributions, the lack of action by the United States and Canada facilitated a reaction by pro-environmental nations. A new type of inter-State conflict emerged. Motivated by the binding mutual commitments called for by the Kyoto agreement, a variety of state actors' exerted pressure on the United States and Canada to implement meaningful legislative regulatory action. These political pressures take shape through both interstate and intrastate pathways of power. The first is demonstrated by interactions of two international state institutional actors that follow a binary categorization with economic development serving as the criteria by which lines are drawn. The first of these is a coalition of less-developed, or periphery, countries from the "Global South." Employing the narrative discussed earlier, the "Group of 77" (g77), use global climate negotiations from Rio in 1992 to Paris in 2015 as a venue to plead their case to the developed world. In taking responsibility for and acknowledging that their process of development is not conducive to combatting climate change, while simultaneously blaming the "global North" for excessive consumption as well as outsourcing dirty production practices to the "South", they pressure developed nations to finance their green development.

Due to their reputation, the United States often bears the brunt of international criticism. Unfortunately, the United States is often the fulcrum upon which international action on climate change pivots. President George H. W. Bush began the trend by

threatening an American hold out from the Earth Summit in Rio in 1992 unless Agenda

21 was taken off the table. Agenda 21 was a provision that would have set binding limits

to how much atmospheric carbon dioxide developed nations could emit. Despite pressure

from 148 other countries and environmental groups like Greenpeace USA, the first Bush

administration refused to attend unless Agenda 21 was removed from the summit's

agenda. They claimed it would hurt the economic self-interests of the United States (*The

Globe & Mail*, March 30, 1992)[9]. Similar anti-climate change sentiment can be seen with

more recent presidencies. President Barack Obama, widely considered one of our most

environmentally conscious presidents, decided to open the arctic to offshore oil drilling

only months after the British Petroleum Deep Horizon oil spill. Excited by the prospect

of decreasing American dependence on foreign oil, President Obama consented in part

due to Shell's reassurances that the proposed low pressure, relatively shallow wells

proposed for use in arctic waters did not represent the same environmental risk that BP's

high-pressure well did. A well that exploded and released over 130 million gallons of oil

into the Gulf of Mexico in 2010. EPA commissioners close to the president recalled that

the president's mere mention of drilling in the arctic while the country was still reeling

from the BP disaster signaled to them that "Shell's audacious plan to drill in waters

previously considered untouchable had gone from improbable to inevitable"[10].

Unfortunately, Canada often uses the United States as a barometer for their own

commitment to environmental regulation. This appears to be a strategy motivated by the

preservation of an amiable political and economic relationship with Canada's closest

neighbor and principal trade partner[11][12]. Article after article emphasized the lock step

relationship between Canadian and American environmental policy.

The European Union represents the antithesis of this anti-climate change sentiment and have consistently applied political pressure to the United States over the course of this study. Whether it be direct means of pressuring North America to take action on climate change through proposing a binding commitment to limiting greenhouse gas emissions at the Earth Summit in Rio 1992, symbolically condemning American inaction by ratifying the Kyoto Protocol, or leading through example by divesting from fossil fuels and subsidizing renewable and sustainable sources of energy, Europe is depicted in news print media as the global standard of environmental progressivism. The most prominent direct exercise of power from Europe has been on Canadian accountability to Kyoto. Following US reluctance to invest in alternative energy due to the wealth of oil found in provinces like Alberta, Canada sought to negotiate "carbon trading" provisions in order to meet their Kyoto commitments. Essentially, these would permit Canada to continue their rate of greenhouse gas emissions (instead of the Kyoto recommendation to reduce them 15% below 1990 emissions levels). In exchange, Canada suggested an alternative. The combination of two pro-environmental actions: (1) legislation that would preserve vast Canadian forests as a carbon "sink" (preservation of trees has been shown to absorb large amounts of carbon from the atmosphere) and (2) receiving carbon credits toward these emissions targets by selling clean(er) energy to the US. The European Union was highly resistant to this proposal suggesting that Canada was attempting to sidestep its commitment to Kyoto. Additionally, if Europe could persuade Canada to institute meaningful policy toward a serious reduction in greenhouse gas emissions, the EU might be able to exploit the Canadian-American relationship and coerce the United States into taking action[13].

At the conclusion of this study an interesting and compelling dynamic emerges in the power relations between industry and state institutions in the US. Industry solidarity begins to dissolve and fragment. Energy giants like Shell and Exxon Mobil begin to transition away from reinvestment in oil infrastructure and begin to diversify and finance the development of greener fuel sources, specifically natural gas. These actions signify that the long term financial goals for these companies do not necessarily lie in the traditional markets dominated by coal and oil. Exxon Mobil has even explicitly consented to the reality of climate change (*The Wall Street Journal*, November 5, 2015). Not just a natural phenomenon, but as an anthropogenic one linked to human activities. Additionally, companies like Walmart and others (27 in total) have changed their long-term investment strategies to account for perceived carbon taxes and other forms of government intervention. This stands in stark contrast to Koch Industries which maintains its long held stance and financial support for congressional candidates that are fiercely opposed to the science (and legislation)[14]. Despite this shift in industry ideology and practice, conservative politicians, traditional advocates and allies of these industries, are maintaining (and perhaps ossifying) their positions of climate denial and political obstinacy. No longer employing the "scientific uncertainty" narrative, and assailed by 25 years of research affirming and reinforcing the reality of climate change, these conservative ideologues refuse to acknowledge science at all. "I'm not a scientist" becomes a new conservative party slogan [14].

After presenting the most important results of the analyses of these data, I now turn to discuss the interpretation and relevance of these findings.

DISCUSSION

These findings underscore the complexity of climate change as a societal problem. More specifically, it highlights the entangled nature of political, social, and economic structures that are reproduced and reinforced through time. These structures are substantiated and legitimated by cultural conventions and ideological systems that serve as the foundation of these structures. These structures, and the cultural and ideological edifices which legitimize them, extend across a macro, meso, and micro levels of analysis. The problem of climate change is a macro-level collective issue, as is the international institutions often charged with proposing solutions (i.e., the Earth Summit, the UN, or Kyoto), but the implications of these decisions focus on the relationships *between* actors and constituents at meso and micro levels. These relationships add considerable complexity to the problem of climate change. These transcendent complications further inhibit and forestall consensus and coalition building (Parks and Roberts 2010). From this spatially elaborate vantage point, field theory provides an appropriate temporal accommodation to, and means of visualizing, the multi-scalar interaction and integration of two sociological traditions which consider structural inequality on one hand, and symbolic exchange on the other.

The following section will discuss first, print media framing strategies, starting with an utterance level interpretation of media tone. Next, I will discuss the narratives of "scientific uncertainty," and "socio-economic consequences" (Schlichting 2013) and the implications and actors advocating for these anti-climate change narratives. Next, I will discuss the relationships within and between fields, charting how these relationships have changed over time, and the implications of these changes in position and relative position

in the overall context of field dynamics, elucidating key relationships and trajectories that could provide a key indication of the future position of these fields and field actors.

Strategically Framing Climate Change

Viewing the longitudinal progression and discursive evolution detailing the ways in which different actors regard climate change within fields is crucial in accounting for the strategic positioning of institutional fields in relation to one another through time. Contingently, it is also imperative to establish how dominant groups project the disposition of their field to other proximate fields. With these considerations in mind, it is perhaps most important to identify the strategic purpose for this position taking. The relative positions of fields are representative of the goals of those particular fields and thus, representative of dominant groups within those fields (Bourdieu 1984, 2007; Bourdieu and Wacquant 1992; Fligstein and McAdam 2012; and Parks and Roberts 2010). Climate change represents an exogenous shock or opportunity to upset these balances in power dynamics within and between fields. Here, it is possible to interpret the action proposed by actors as an indicator of position within a field. In other words, do these positions, designated by suggested action, represent a reproduction of the status quo or a change in relations within and between fields? The corresponding interpretation indicates whether someone is in power (preserving the status quo) or is seeking it (transformative field dynamics).

Surprisingly, and contrary to a large contingent of literature on media framing (Carragee and Roefs 2004; Entman 2007; Simon and Xenos 2000; and Snow, Tan, and Owens 2013), the initial framing of climate change was tacitly considered a reality in the

majority of the articles sampled in this study, departing from dominant narratives found in elite discourse (Boykoff 2006; Boykoff 2013; and Schlicting 2013). This trend persists and actually, with the exception of *The Wall Street Journal*, grows through time (see Figure 2). Here, *The Wall Street Journal* stands alone as the only publication which does not trend towards adopting support for climate change as a reality. Instead, they remain consistent in their stance over time, and while the articles sampled from *The Wall Street Journal* do feature a larger proportion of articles which deny the existence of climate change compared with the other three publications, those articles appear with less frequency than either "pro-climate change" or "climate change skeptic" articles. This corroborates research that finds political affiliation is the strongest indicator of perceptions of climate change (Farrell 2015a; Jacques, Dunlap, and Freeman 2008; McCright and Dunlap 2003; McCright, Xiao, and Dunlap 2014), but only when considering United States sources. *The Globe & Mail*, the most widely distributed conservative printed newspaper in Canada, shows no such trend and follows *The New York Times* and *The Toronto Star* toward supporting a stance on climate change as a reality.

Scientific uncertainty

However, when moving beyond the utterance level of each article to consider the ways that social and political actors contribute to the overall conversation on climate change these polarities reappear. In more detail, Schlichtings (2013) meta-analysis on elite climate change discourse is consistent with this study's findings in that the first dominant narrative conservative politicians and industry sponsors adopt is that of

"scientific uncertainty." Through a variety of fields, these groups (i.e., state, industry, and NGO being the most common) utilized a number of strategies to dismantle the legitimacy of the academic/scientific institution. The first and most subtle of approaches was emphasizing the nascent nature of the scientific findings which point to climate change as a likely reality. Here, from within state fields, proponents of this narrative argue that more research should be completed before action is taken. A variety of sub-narratives contribute to this larger assertion: (1) there is not enough data to support the reality of climate change, more needs to be completed; (2) the system is too complex to observe and thus fully understand; (3) the scientific community is in disagreement on the existence of climate change. Ultimately, these individual and institutional actors suggest that climate change is an undetermined reality, precluding decision makers from acting, which reproduces status quo power dynamics and current positions within and between fields. This strategy is not unique to the issue of climate change. Similar constructed frames and strategic action were employed by the tobacco industry when health concerns arose around the use of their products (Parks and Roberts 2010). The intersection of climate change and smoking at the issue of public health, and thus a potential example of how public health concerns can be used to influence governmental policy and public perception, were frequently compared. An excerpt from the following article serves as an example of this:

> "In the end, smoking became unacceptable. That was not a legal statement. It was a social statement, and consensus was broad and has held for a long time," Mr. Holtz-Eakin [economic policy advisor] said. "Maybe you get there on carbon emissions, but right now, this is an issue for the elites."
>
> Though there are significant differences between the fights over coal and tobacco, the numerous parallels offer a potential road map to a settled peace. The burning of both causes adverse health effects. The affected regions overlap in Kentucky, Virginia and North Carolina, and they are

similarly struggling. (Wyoming, the No. 1 coal producer, did not have a stake in the tobacco fight.) For years, the producers of both have denied and funded the denial of what a vast majority of scientists agree on: the damaging results of the products' use (*The New York Times*, June 4, 2014).

These similarities in industry counter-movements suggests that delegitimizing science is the first tactic against social reform that challenges current economic and political institutions of power. This could be a considerable point in further research on social movements which intend to challenge these structures.

These findings reinforce McCright and Dunlap's (2010) work on what they refer to as "anti-reflexivity," which highlights Lukes (1974) theorem on dimensions of power, a dynamic that is largely ignored (or at least marginalized) in reflexive modernization theory. Agents of conservativism focus primarily on Lukes (1974) second dimension of power. This suggests that political actors constrain the lens through which decision making occurs to focus only on those issues which support, or at very least fail to challenge, the subjective interests of those in power. It is on this basis that the conservative movement, particularly under the second Bush Administration, has contested climate science in an attempt to disrupt and prevent environmental regulation. Actions which have directly benefitted the economic interests of elites. Using doubt, obfuscation, and diffusion as tools, they successfully thwarted the goals of the environmental movement for over 20 years.

While these analyses are important in dissecting the tactical frameworks employed by powerful institutions, what insulates these positions from contestation is the anonymity and relative invisibility of these elites. The findings of this study demonstrate that when science is challenged in the media, as was the case when Hansen testified before congress, the scrutiny applied to the methods of scientific analysis. One such

55

example was that of the "hockey stick" scandal (*The Wall Street Journal*, May 15, 2012).

Here, anti-climate change advocates viewed a leaked strategic exclusion of an

inconsistent indicator of climate change as a manipulation of data, a charge which has

since been invalidated and all parties exonerated (https://phys.org/news/2014-07-

vindicates-climate-accused.html)). Similar tactics include quoting specific scientists'

reluctance to use the study of micro-level phenomenon as representative of climate

change. When voicing these critiques the scientist is always identified by name,

credential, and institutional affiliation. I argue that these efforts are part of an attempt to

isolate the scientist. Viewing the science as an isolated event symbolically disassociates

it from a generalization. This disassociation implies a lack of consensus, relegates the

power of their voice to the level of the individual, thus denying the correlation between

emissions and climate change. This promotes the finding as an individual one, a single

issue that requires more substantial evidence than a social problem that demands a

political solution (Cable, Shriver, Mix 2008). Contrastingly, until the latter part of the

time series, media rarely, if ever, isolates industry elites in the same fashion. This

invisibility framing strategy demonstrates how political and economic actors obfuscate

elite actors and their powerful intentions in society (Mills 1956). Not only is the working

power of the elite withheld from public view, but few are even aware of the extent to

which it penetrates society. This secrecy serves to mask and obscure elite identities, their

networks, and their intentions. This invisibility always works to the benefit of the elite

due to their connection with, and proximity to, other decision makers, in this case,

through economic and political affiliation. And while this power is not altogether

"surfaced" through media silence and neglect, the people cannot be but aware of its

power. This being said, "[t]here is nothing conspiratorial about it, although its decisions are often publicly unknown and its mode of operation manipulative rather than explicit (Mills 1956: 294). Mills (1956) provides astute commentary on the public's awareness of the presence of elite actors and how that awareness is confounded by their relative invisibility in terms of identity and intention.

This institutional drive to preserve current elite positions and prevailing economic structures (namely the dominance of the fossil fuel industry) is also demonstrated through the means by which science is evaluated and misunderstood by society. Anti-climate change frame sponsors use this misunderstanding of the scientific process as a means to delegitimize it. Beyond the common practices of denying the often cited figure of the "97%" scientific consensus, industry actors attack the necessarily imperfect methodologies of scientific inquiry (Lefsrud and Meyer 2012). Compounding this criticism, industry simultaneously employs scientists of their own to manipulate methods to reach a specific outcome (Farrell 2015b) and intentionally misinterpreting the inaccessible language of scientists (Boykoff 2007; Brossard, Shanahan, and McComas 2004). A multitude of examples depict scientists as unwilling to extrapolate micro-level environmental phenomena to macro-level indications of climate change but this perceived lack of continuity is not described as a logical and scientific fallacy, but as direct evidence to refute the existence of climate change, or to suggest it is unobservable. These arguments are symptomatic of a cultural disconnect between judicial and scientific value systems (Boykoff 2007). The public is familiar with burdens of judgement in which fingerprints and eye-witness testimony constitute

"proof" while scientific inference does not. Even the common language of "evidence" contributes to this confusion. This burden of proof falls to party which seeks to change conventional understanding of our planet. A trial would require an incontrovertible level of certainty, or "beyond the shadow of a doubt," to render judgement and prescribe subsequent action for rehabilitation. The etiological nature of scientific inquiry and natural systems prevents such an absolute expectation from ever being realized (Brossard, Shanahan, and McComas 2004). Thus the misappropriation of judicial values is used to exploit scientific ignorance, create public doubt, support conservative arguments, and inhibit regulation.

Socio-economic consequences

This narrative begins to weaken, or perhaps more precisely, transition, over time to that of "socio-economic consequences" (Schlichting 2013). This shift in dominant narrative emerges as a reaction to, and coincides with, the Kyoto Protocol negotiations and persists through the end of the time series. This should not suggest that the narrative of scientific uncertainty is not still present, but only that it is not the most prevalent or emphasized frame among key individual and institutional actors. The combination of these framing strategies adds to the complexity of the anti-climate change conservative movement, adding further convolution to the overall discourse thus providing more defended spaces that environmental advocates and climate scientists need to assail in order to seek

policy changes that might undercut the political and economic structures that dominate North America.

This narrative attacks the proposed solutions to climate change as articulated through the Kyoto Protocol, crudely reduced to measures that cut carbon dioxide emissions to levels 15% below 1990. The means by which each country addressed this challenge was left to that particular nation, as long as their target was met. The United States flatly rejected and refused to ratify this proposal citing that it was not in the economic interest of the country, echoing the position of President George H. W. Bush when he threatened US nonparticipation in the 1992 Earth Summit in Rio (*The New York Times*, March 24, 1992). These sentiments alluded to another prevalent rationale adopted by developed countries mentioned previously, blaming less-developed countries for climate change. The United States validated their abstinence from Kyoto by arguing against the exclusion of many less developed nations from the accord. Nations who have traditionally been characterized as the most egregious climate offenders. This antagonism persisted even after more comprehensive agreements were proposed at meetings like the Bali Action Plan in 2007. Countries like China and India did little to assuage this perception which ossified the rift in the international community. "China's argument in the climate change talks, like India's, has been: 'The West created the global warming problem; the West should fix it.' And please give us your technology, preferably for free as a kind of guilt tax, and we'll deal with our problems" (*The Globe & Mail*, August 8, 2008). While it is true that Western countries were the largest contributors of atmospheric carbon

dioxide since the industrial revolution, China has surpassed the United States as the top global emitter, and India is not far behind (*The Wall Street Journal*, March 10, 2010). At today's rate, these two countries will be responsible for the most significant portion of emissions by midway through the twenty-first century. Closing this developmental rift between the industrialized and less developed nations, through necessarily including leaders of the latter, will aid in mending this schism and is essential to removing geopolitical and economic obstacles that inhibit substantial action on climate change (*The Globe & Mail*, August 8, 2008).

While Canada did ratify the Kyoto Agreement, parliament was mired with indecision as to how to meet these commitments. Alberta (as a producer) and Ottawa (as a consumer), constitute the two Canadian spaces most responsible for carbon dioxide emissions. Alberta, galvanized by community tradition built on their vast deposits of oil, fostered the most stringent opponents of cutting carbon emissions, arguing that cutting these emissions would devastate local and national economies as well as the livelihoods of Canadian citizens. Prime Minister Chrétien, and subsequent leaders Martin and Harper, relented under fierce industry lobbying and allowed corporations to voluntarily adhere to proposed restrictions, giving them license to continue with production unabated. This alliance is legitimated by another framing narrative: "industrial responsibility." Here, business practices, rather than regulation, should drive climate change solutions. However, faith in neoliberal market ideology without governmental intervention changing dominant political and economic structures overnight was hopelessly optimistic. One particular article explores the structural constraints of such policy, both in terms of consumer choice, access, and opportunity to install green

technologies on a grand enough scale that would significantly, and dramatically, restructure the energy market. At $20,000 to $30,000 per home, many communities lack the discretionary income to consider the installation of solar panels. Compounding this issue of economic inequality, recent legislation uses public health concerns as a means for outlawing energy independent homes or communities since secure energy use, safety, and consistent access to things like clean water, plumbing and sanitation, cannot be monitored or regulated. These legislative initiatives, which are common in sunshine rich states like Florida, are largely sponsored by the Koch-brothers-funded front groups like American Legislative Exchange Council. It is clear that while these solutions have the potential to be powerful tools toward changing energy markets, government intervention is also required to realize these ambitions[15]. Take note, this particular critique and recommendation for government intervention occurred in 2006, meaning that this expectation of corporate voluntary adherence to the goals of Kyoto persisted for nearly a decade through two administrations. Summarily, market based solutions suggest unrealistic circumstances to create dramatic outcomes in market dynamics in a short period of time: (a) corporate resistance to reduce energy consumption; (b) lack of urgency to reinvest in new infrastructure to satisfy growing energy needs; (a) consumer economic capacity to afford new technologies; and (d) consumer access to alternative energy sources.

The combination of narratives: "socio-economic consequences" complemented by "industrial responsibility" is best explained by Mol's (2010) concept of "ecological modernization." This philosophy revolves around the unshakable faith that human innovation and technological development will resolving environmental problems while

allowing traditional capitalist economic modes of production to persist in order to satisfy

increasing needs for energy production and consumption (Spaargaren and Mol. 1992;

Mol 2010). Lack of corporate voluntary action not only suggests that faith in industry is

misplaced, but that it also hints at the political and economic structures and power

dynamics hindering the development and implementation of green technologies. Here,

economic growth will always supersede environmental responsibility (Foster 2012).

Indeed, the worldwide economic recession provided the convenient situation for industry

to emphasize the perceived economic repercussions of regulation:

> This recession will bring about the healthy respect for economic values
> that the Depression did. People need to recognize that a job is the most
> important thing they can have.
>
> We should use this recession to get the public to better understand how
> our economic system works. Social goals are OK, provided the public is
> aware of their costs.
>
> It would be better if the recession were allowed to weaken more than it
> will, so that we would have a sense of sobriety – anonymous corporate
> executive (Silk and Vogel 1976: p. 64 as cited in Domhoff 1983: p. 147).

The worldwide economic recession of 2008 served as a prelude to the collapse of Kyoto

and the withdrawal of key participants Canada and Japan. Subsequent international

attempts to reach meaningful consensus on what to do about climate change at

Copenhagen in 2009 and Paris in 2015 resulted in no binding commitments which,

consequently, did little to change this air of complacency.

Field Power Dynamics

To tease out the means by which these individual and institutional actors facilitate

and propagate these narratives, and the degree to which these narratives are reflected in

policy decisions, it is important to discern the relationships within and between these institutions through time. By examining the historicity of these interactions and the relative position of fields, I demonstrate how and why prevalent oppositional discourse surrounding climate change has been effective at forestalling meaningful action, primarily through institutional power as articulated through field dynamics. In this section I will interpret relationships between fields and note the dominance of particular groups within them that actively resist governmental action to combat climate change. As time progresses, I will uncover how actions amounting to dissent from state actors, and industry actors within fields, have formed a counter-resistance indicating a departure from status quo field orientations and a potential future trajectory in national decision making affecting climate change outcomes.

Preserving the status quo

The frames and strategies implemented by the anti-climate change coalition has been well argued and corroborated by data previously in this paper. The early days of climate change (the Earth Summit in Rio, 1992 as the most salient event) were characterized by fossil fuel companies aligning, pooling resources, recruiting allies (in the auto industry for example), to infiltrate proximate institutions. This was all an effort to create a formidable defense against a movement of environmentalists, scientists, and NGOs seeking to reform current economic productive processes to fight climate change. Already the institutional battle lines are drawn with clarity. Industry with contingents of academia and the media disseminate false information with the goal of influencing public opinion and creating uncertainty. Industry also reached "upward" to infiltrate all levels

of government, financing sympathetic politicians while foiling those opposed. These representative industrial constituents echoed their patrons' narratives of economic impracticality to national authorities and demonized less-developed nations. Using affluence and finance they directly petitioned decision makers at Kyoto in 1997 and met with President Obama behind closed doors to negotiate offshore drilling access in the arctic, months after the BP disaster in the Gulf of Mexico. Given these connections and alliances made with proximate institutional fields (Industry, media, academia), particularly those in positions of power to affect policy creation and enforcement (state institutions at various levels of government), it is easy to see how this well-conceived and executed structural network utilized economic power and influence at the highest level of the field hierarchy to prevent change.

The rigidity of a societal processes predicated on economic entrenchment and dependence on a particular natural resource is what Freudenburg and Gramling (1993) call "developmental channelization" and serves as a compelling theoretical justification for North American resistance to climate change action. This socio-ecological observation suggests that based on initial development of the surrounding environment of a given nation, society makes crucial decisions on infrastructure and energy needs based on existing geographies and the environmental resources present in those spaces. The North American continent is rich in fossil fuels, specifically oil and natural gas. The development of infrastructure to extract those materials, as well as the cultural evolution made in concert with a growing reliance on those resources (such as the commuter culture in the United States) reinforces and strengthens society's relationship with it:

> once an area or region takes a given developmental direction, both the
> process of specialization in a given primary activity and the investment of

human and economic capital in the capture of linkages tied to that primary activity can set in motion a process that may effectively preclude other developmental options (Gramling and Freudenburg 1996: 483).

This metaphorical channel is both cultural and economic, ideological and structural. As this society continues to develop further, it ingrains itself in these biophysical, social, and structural constraints, making the utilization alternative resources and productive processes increasingly difficult. This intensification of the developmental channelization process is called "rolling inertia" (Molotoch et al. 2000: 793). These two theoretical mechanisms illustrate the confluence of social and environmental factors that enable the continued societal dependence on fossil fuels, particularly in North America, as a product of history and cultural ideology, manifested through political and economic structures.

Acts of dissent and future directions of climate change action

While deeply entrenched, this fossil fuel culture and the resulting constellation of fields has shown recent signs of faltering, or at least transitioning toward other alternatives. The increasing productive efficiency and economic viability of solar and wind energies have put pressure on the socio-economic narrative. Building on these potential technological leverages, actions by other developed and less-developed nations (particularly in the European Union) have demonstrated how these technologies can satisfy the needs of energy consumption with plans of far reaching installation of new infrastructure to reduce emissions below those levels recommended by Kyoto. These nations are not only leading by example, but are also aligning with one another to critique the oil dependency of Canada and the US.

A focus of intense media attention across all newspapers, the battle over the

Alberta oil sands exemplifies the complexity and interdependence of institutional power

relations between various levels of state government, industry, environmental groups,

community organizations, and the international community. Initially, mired in

continental controversy and contentious politics, Europe enters the fray in fall 2009. The

Calgary-based tar sand oil company had a decisive role in the federal election in Norway

where they had hoped to expand their business[16]. Media commentary on this relationship

was extensive and prolific. First, production of a Swiss documentary which made its way

to Canada documenting the breadth of environmental impacts of tar sands oil. Three

times dirtier to process than Middle Eastern crude, the byproducts from extraction

devastate local ecosystems. They also find their way into water ways which connect to

adjacent areas extend the damage far beyond the extraction site. Next, a delegation of

Chinese journalists that planned to visit "the scarred landscape of northeastern Alberta"

to give a first-hand description of the degradation. Conjunctively, US environmental

activists remain persistent in Washington prior to Prime Minister Stephen Harper's visit

to address Canada's potential drastic increase in emissions should development of the oil

sands continue and expand. Further international state pressure preceded the

international climate change conference in Copenhagen in December of that year. For all

intents and purposes, the international community was threatening an informal embargo

on oil sands foreign investment in an attempt to force Canadian action, or as a prelude to

limits on trade[16]. This not only demonstrates the multi-national pressure exerted through

alliances between state fields but also complementary efforts by NGOs and the Media

around this issue, highlighting the complex nature of field dynamics, as well as how

alliances create shifts in the overall constellation of fields is useful in predicting future trajectories and outcomes from those relationships (Fligstein and McAdam 2012).

To challenge the economic viability of fossil fuels, other interesting institutional relationships have unveiled new developments in field contestation. Class action lawsuits all across America are being brought against the United States for climate change negligence. This party claims the air itself as a public trust. Lisa Heinzerling, an environmental law expert at Georgetown University, said of the new suit, "Part of this is keeping the issue alive in lots of different settings and having all the branches, including the courts, continually react to it"[17] (*The New York Times*, May 5, 2011). Reacting to state ineffectiveness in addressing climate change, an alliance of public constituents have formed a resistance group. This group identified an opportunity to challenge dominant power structures using the "rules of the game" and pursued this opportunity through non-traditional channels via adjacent fields to realize this goal (Fligstein and McAdam 2012).

Perhaps the most impactful change in the orientation of greater constellation of fields which may indicate a new trajectory in field dynamics has occurred *within* fields. Developing in the latter part of this time series, the once unified coalition of industry actors has begun to fragment. Moving away from their stalwart position resisting climate action, many key constituents of the fossil fuel industry are beginning to make preparations for inevitable governmental intervention. A number of articles in these data showcase the actions of an institutional coalition, indicated by the presence of various NGOs and multiple levels of state governments, divesting assets held in fossil fuels that are worth in excess of $50 billion dollars from their portfolios. Additionally, the divestment by individuals has added another billion dollars to this total. The Rockefeller

Brothers Fund, a philanthropic arm of Standard Oil, was the most remarkable of these. Due to the notoriety of the Rockefeller name predicated on their traditional ties to resource extraction, this specific action constitutes a political statement. Primarily because this announcement came only days prior to the United Nations climate summit meeting in New York City in the fall of 2014[18]. While many of these constituents concede that their actions are unlikely to have a dramatic impact on the policy of fossil fuel companies, the gesture is a critical first step in highlighting the discursive character of current American energy markets, deteriorates the perception of solidarity behind the socio-economic narrative, and subsequently diminishes the power of those institutions and structures that depend on it.

These sentiments are not limited the economic sector. In a gesture of huge symbolic significance, George P. Bush (an energy consultant, grandson of Presidents George H. W. Bush, and son of George W. Bush) has proclaimed a new direction for Texas in regards to fossil fuel extraction and production. Traditionally, in a place that is considered one of the hearts of oil production and a stronghold of oil culture in the United States, this departure from conventional republican ideology regarding energy use, the young Bush has publicly stated that Texas needs to move in developmental directions which makes considerations for the reality of climate change. Lastly, and most importantly, signals from oil powerhouses like Shell, ConocoPhillips, and others have demonstrated industry is now taking the threat of climate change legislations seriously. At least 29 companies had begun to incorporate changes in the price of carbon (either through regulation or consumer solutions such as carbon taxes) into their long term financial plans. Separated from these companies is Koch Industries. In fact, Koch has

attended anti-climate change sponsorship with a renewed commitment. More precisely, they are continuing to focus intensely on opposing any type of tax or price on carbon[19]. This fragmentation of elites, once aligned in their sponsorship of anti-climate change rhetoric, has several potential implications. The first, is a weakening resolve toward combatting climate change. This would signify a divisive new set of goals for some constituents of the fossil fuel industry. A lack of solidarity may also be symptomatic of corporate decision makers calculating the futility in resisting regulation to address climate change. The second implication is the visibility of individual actors resistant to climate change. Charles and David Koch are named specifically in this piece as fervent opposition to action on climate change, while their former cohort remains hidden behind the façade of their business titles. This could be an indicator of the waning power of the strongest remaining vanguard of anti-climate change doctrine which is now out in the open. Further research on developing media discourse could help track the trajectory of these groups, especially given the drastic change in perspective from the Obama administration to the Trump presidency.

CHAPTER V

CONCLUSION

This project first sought to explain how key print news media sources frame climate change accomplished was ascertaining the media's position as an architect of climate change discourse. Surprisingly, analysis of the utterance level or tone of print news media sourced for this study showed consistent and growing support for the reality of climate change through time from 1990-2015. While the distribution of articles sampled from *The Wall Street Journal* remained virtually unchanged supported, were skeptical of, or denied the existence of climate change over the time period of this study, an overall trend toward accepting climate change persisted regardless of a publications' political lean or country of origin.

After I determined the standpoint of these data sources, I began an historical exploration of action and collective strategic action frames in order to situate prominent institutions and their relative positions within the context of climate change. Despite a general media endorsement and growing support (both public and academic) for the scientific consensus on climate change, policy decision makers made little progress in instituting aggressive regulation to combat the threat. Industrial and governmental resistance to meaningful action in North America remained steadfast. Some media

executives point to the explosion of alternative media sources for news, primarily from television and online sources, as a force that diminishes the influence of traditional print news media on constructing public discourse. However, research on advertising practices has found no evidence to support the assertion that the print news media industry is declining as a result of the influx of online news sources (Ahlers 2006). Further research on this topic would better illustrate the impact of these news media platforms on the relevance of print news media in the digital age.

The efforts of environmental groups and state agencies in combatting climate change in North America have been largely ineffective. Preserving fossil fuel industry interests have remained a priority in spite of overwhelming scientific consensus on the negative implications of climate change, even when industry representatives no longer refute these dangers (*The Globe and Mail*, September 10, 2010; *The New York Times*, January 7, 2011; *The Wall Street Journal*, January 24, 2013). The rationale for this intransigence has evolved through time. The first argument revolved around the science of climate change, or the frame of "scientific uncertainty." Industry representatives, and their allies in adjacent fields, implemented a variety of narrative strategies to contend anthropogenic climate change. These contestations fell into three prominent categories: (1) there is not enough data to support the reality of climate change; (2) the global climate system is too complex to observe and thus fully understand; (3) the scientific community is in disagreement on the existence of climate change. As the scientific consensus grew, and the development of better climate models and increasingly sophisticated methodologies produced incontrovertible evidence supporting the reality of

anthropogenic climate change, Industry and their allies augmented and adjusted their strategy.

Economics became the new focus of the "socioeconomic consequences" narrative. Industry and their allies argued that to institute the type of aggressive policy recommended by scientists to hedge the looming threat would be civically irresponsible and economically devastating. Agents of industry found greener technologies inadequate to satisfy the needs of developed society and too expensive to implement in developing countries. This was especially true in North America. These oppositional positions among developed nations corroborates the theoretical concepts of "developmental channelization" (Gramling and Freudenburg 1996) and rolling inertia (Molotoch et al. 2000) in helping to explain the North American resistance to regulating fossil fuels and transitioning to "greener" energy infrastructures. Complementing this strategy through 2015 is that of "industrial responsibility." As the volume of work supporting climate change grew, industry provided a more nuanced approach to contending environmental regulation. While opposing the transition to greener infrastructure and production processes, they persuaded government officials to allow industry to self-regulate. This is a reflection of their contestation of the anthropogenic nature of climate change, and their opposition to government intervention to solve the problem. Here, industry maintained to position of equating government interference with economic stagnation. By convincing government to acquiesce to this neoliberal ideology, industry effectively "passed the buck" to future generations. Echoing the "environmental modernization" thesis (Spaargaren and Mol. 1992; Mol 2010), these actors promised the development of technologies that would solve the climate change problem, and that private industry

would be the ones to do it. While this project emphasizes the most salient and dominant frames implemented in these data, it is important to acknowledge the increasing complexity of this strategic frame as time progresses. Future research should constrain the time period to focus on the entanglement of these frames, where they are implemented institutionally, and how they interact to reinforce current power structures and forestall action on climate change.

Finally, I interrogated how these frames were utilized by dominant institutions to interact with other proximate fields. These interactions provided clear indications of relative institutional position through time. Additionally, they demonstrated the formation of alliances, painting a picture of the constellation of fields and their actions relative to climate change. I argue that the persistence of political intransigence and inaction is the product of industry power. Precisely, the coercive influence that industry actors have on state agencies, both directly and indirectly. These influences are innovative, adaptive, and consistent through time. Industry surreptitiously exercises this power through a variety of institutions and across all scales of analysis. The dominance of state and industry actors in print news media discourse is an indication of the significance these two actors have in the production and reproduction of institutional structures and the orientation of these institutions in the larger constellation of fields. Through Field Theory, one would expect the presence of state fields, as the main legitimate power authority in crafting the "rules" for non-state fields, as a main thoroughfare for political discourse. The dominance of industry in state—non-state field interactions (more than three times that of the next most prominent) is a testament to the power and access that industry holds in North American politics and field dynamics.

Furthermore, the diversity in relationships cultivated by industry extending to other non-state fields, which in turn contend action on climate change, suggests industry is prolific force in North American politics with myriad connections to nearly all relevant fields. A pattern of strategic industry resistance consistent with past exogenous shocks or crises (i.e., the tobacco industry crises of the 1980s) is characterized by three distinctive, processual categories; denial, socio-economic consequences, and neoliberal market based solutions. This evidence corroborates past research on industry tactics to combat threats to economic prosperity of dominant industry actors (Boykoff 2013, 2007; Schlichting 2013; and Levy and Egan 2003). This template for industry action might suggest that industry resistance to public health action is divorced from solving these problems in the interest of health and extends only as far as preserving the integrity of their economic model (Parks and Roberts 2010; *The New York Times,* June 4, 2014).

While all of these categorical frames were present, this study finds that socio-economic consequences remained the dominant frame after the Kyoto negotiations, contrasting the conclusions of Schlichting's (2013) meta-analysis on elite frames in which "industrial leadership" took control circa 2010. The final five years of this study suggests a fragmentation of industry solidarity in resisting action on climate change as, in spite of Koch Industries persistence in sponsoring fervent climate change denialism, significant long-term policy goals by oil constituents toward "greener" infrastructure and production practices marked the first concession by industry actors toward climate change action. This departure from traditional industrial narratives could indicate of two things. First, industry is beginning to conceptualize stark opposition to any action on climate change as futile, and are maneuvering themselves for a more favorable position to

capitalize on a transition away from fossil fuels. Second, and complementarily, these

actions could articulate an integral theoretical component of Field Theory: "social skill"

(Fligstein 2001; Fligstein and McAdam 2012). Basically, "social skill" is the ability of

an individual actor to elicit change in their own field, or the relationship(s) between

fields, due to unique personal attributes and access and utilization of available resources.

In essence, agency. In this case, I point to President Barack Obama as an actor able to

elicit a change in the strategic behavior of the field of industry due to his second term,

characterized by his pro-environmental activism. Actions such as the substantive

agreement he brokered with China on reducing greenhouse gas emissions, the Clean

Power Act, tougher regulations on pollution emitted by power plants, the retraction of

leases to drill for oil in the arctic, and the protection of 260 million acres of land through

the RESTORE Act are a few of these notable pro-environmental actions. However, the

climate change denialism that characterizes the current Trump administration, as well as

the reluctance of Prime Minister Trudeau to impede development of the tar sands in

Alberta, might indicate a reversal of this trend. I suggest that further research on the

potential association between social skill, industry discourse, and climate change action

could elucidate some of these relationships and the degree to which powerful individual

actors can influence policy on climate change and other wide reaching social problems.

　　　　"The truth of the interaction, is not to be found in the interaction itself" (Bourdieu

2005: 148), but instead the interaction is an expression of the power that preserves the

structures that encompass these interactions (Liu and Emirbayer 2016). In this project I

have contributed to the literature by using Field Theory to explore these underlying

power dynamics to explain why the United States and Canada have resisted taking action

on climate change in spite of nearly three decades of research affirming its existence and the implications it holds for the planet. Field theory is a useful analytic tool in exploring this phenomenon because it makes several conceptual distinctions that other frameworks do not. Considering the concept of fields, actors are "situated in a place in social space, a distinct and distinctive place which can be characterized by the position it occupies relative to other places (above, below, between, etc.) and the distance… that separates it from them" (Bourdieu [1997] 2000: 134). This approach attempts to bridge the rift between the objective and the subjective, the structural and the agentic. A comprehensive and inclusive attempt most research neglects. These abstract representations of the spatial orientations of social actors are also considered in respect to time. Accounting for the historicity of actors through time gives theorists a framework for conceiving future trajectories of these actors and the structures that encompass them, allowing for both a diagnostic and prescriptive conceptualization of social problems and the actors that engage with them. I have demonstrated the utility in applying this type of framework to a social problem that has been the subject of intensive scholarly attention over the past twenty years. However, there is still a great opportunity to implement this theoretical framework more effectively. By developing and using more sophisticated techniques, such as incremental network analysis, future research can enhance the utility of field theory. Furthermore, this project focused almost entirely on the structural component of field theory. In the future, scholars should attend specifically to the agentic element of "social skill" to provide a better analysis of the impact of individual actors on the overall constellation of fields. The combination of these two constitutive schematic aspects would produce a far more comprehensive investigation of this complex social

problem. Lastly, by including alternative sources of media researchers can attend to a broader range of audiences, capturing a more holistic perspective on media discourse. These future implications and directions for study can further enhance the conceptual and theoretical applications found in this project and further the development of field theory in exploring the institutional power dynamics of climate change.

REFERENCES

Ahlers, Douglas. 2006. "News Consumption and the News Electronic Media." *Press/Politics* 11(1): 29-52.

Altheide, David L. 1984. "Media Hegemony: A Failure of Perspective." *The Public Opinion Quarterly* 48(2): 476-490.

Anderson, Alison. 2009. "Media, politics and climate change: Towards a new research agenda." *Sociology Compass* 3/2: 166-182.

Arthur, W.B. 1988. Elf-Reinforcing mechanisms in Economics." Pp. 9-32 in P. Anderson, K. Arrow, and D. Pines (eds.), *The Economy as an Evolving Complex System.* Reading, MA: Addison Wesley.

Babbie, Earl. 2013. *The Practice of Social Research*, 13th Edition. Delhi, India: Cengage Learning India Private Limited.

Ball, Jeffrey. 2010. "U.N. Climate Chief to Resign." *The Wall Street Journal*, February 18.

Barringer, Felicity. 2011. "Suit Accuses U.S. Government of Failing to Protect the Earth for Generations Unborn." *The New York Times*, May 5, pp. 22.

Block, Elena. 2013. "A Culturalist Approach to the Concept of Mediatization of Politics: The Age of 'Media Hegemony'." *Communication Theory* 23: 259-278.

Bourdieu, Pierre. [1972] 1977. *Outline of a Theory of Practice*. Translated by Richard Nice. Cambridge, U.K.: Cambridge University Press.

Bourdieu, Pierre. [1979] 1984. *Distinction: A Social Critique of the Judgement of Taste.* Translated by Richard Nice. Abingdon, Oxon: Routledge Kegan and Paul

Bourdieu, Pierre. [1989] 1996. *The State Nobility: Elite Schools in the Field of Power*. Translated by Lauretta C. Clough. Stanford, CA: Stanford University Press.

Bourdieu, Pierre. [1997] 2000. *Pascalian Meditations*. Translated by Richard Nice. Stanford, CA: Stanford University Press.

Bourdieu, Pierre. [1984] 2003. *Language and Symbolic Power*. Translated by Gino Raymond and Matthew Adamson. Cambridge, UK: Cambridge University Press.

Bourdieu, Pierre. 2005. *The Social Structures of the Economy.* Translated by C. Turner. Cambridge, UK: Polity Press.

Boykoff, Jules. 2006. "Framing Dissent: Mass-Media Coverage of the Global Justice Movement." *New Political Science* 28(2): 201-242.

Boykoff, Maxwell T. 2007. "Flogging a dead norm? Newspaper coverage of anthropogenic climate change in the United States and United Kingdom from 2003 to 2006." *Area* 39.4: 470-481.

Boykoff, Maxwell T. and Jules M. Boykoff. 2007. "Climate change and journalistic norms: A case-study of US mass-media coverage." *Geoforum* 38: 1190-1204.

Boykoff, Maxwell T. 2011. *Who Speaks for the Climate? Making Sense of Media Reporting on Climate Change*. Cambridge, NY: Cambridge University Press.

Boyle, Theresa. 2002. "Hold off on Kyoto, PM told." *The Toronto Star*, October 24, pp.A06.

Broder, John M. and Clifford Krauss. 2012. "Offshore Oil Drilling's New and Frozen Frontier." *The New York Times*, May 24, pp. A1.

Brossard, Dominique, James Shanahan, and Katherine McComas. 2004. "Are Issue-Cycles Culturally Constructed? A Comparison of French and American Coverage of Global Climate Change." *Mass Communication and Society* 7(3): 359-377.

Brown, Ian. 2002. "The Kyoto Stampede; Oh no, sighs the East. Those Alberta rednecks are at it again, trying to wreck the consensus on climate change. But on the eve of the provinces' Kyoto debate in Halifax on Monday, what the oil-patch boys have to say about the environment may surprise you." *The Globe & Mail*, October 26, pp. F1.

Cable, Sherry, Thomas E. Shriver, and Tamara L. Mix. 2008. "Risk Society and Contested Illness: The Case of Nuclear Weapons Workers." *American Sociological Review* 73(3): 380-401.

Callaghan, Karen and Frauke Schnell. 2001. "Assessing the Democratic Debate: How the news media frame elite policy discourse." *Political Communication* 18(2): 183-213.

Carragee, Kevin M. and Wim Roefs. 2004. "The Neglect of Power in Recent Framing Research." *Journal of Communication* June: 214-233.

Collins, Gail. 2014. "Florida Goes Down the Drain." *The New York Times*, September 25, pp. A31.

Cook, Lynn. 2015. "Exxon Mobil Gets Subpoena From N.Y. Regarding Climate-Change Research; Attorney General Schneiderman seeks information about research and response to climate change." *The Wall Street Journal*, November 5.

Corbin, Juliet and Anselm Strauss. 2015. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory.* Thousand Oaks, CA: SAGE Publications.

Cottle, Simon. 2006. "Mediatized rituals: beyond manufacturing consent." Media, Culture & Society 28(3): 411-432.

Crane, David. 2002. "We must use green technology we invented." *The Toronto Star*, March 7, pp. E02.

Cushman Jr., John H. 1997. "Intense Lobbying Against Global Warming Treaty." *The New York Times*, December 7, pp. A28.

Davenport, Coral. 2014. "Pushing Climate Change as an Issue This Year, but With an Eye on 2016." *The New York Times*, May 22, pp. A18.

Dunlap, Riley E. and Peter J. Jacques. 2013. "Climate Change Denial Books and Conservative Think Tanks: Exploring the Connection." *American Behavioral Scientist* 57(6): 699-731.

Elsasser, Shaun W. and Riley E. Dunlap. 2013. "leading Voices in the Denier Choir: Conservative Columnists' Dismissal of Global Warming and Denigration of Climate Science." American Behavioral Scientist 57(6): 754-776.

Entman, Robert M. 1993. "Framing: Toward Clarification of a Fractured Paradigm." *Journal of Communication* 43(4): 51-58.

Entman, Robert M. 2007. "Framing Bias: Media in the Distribution of Power." *Journal of Communication* 57: 163-173.

Farrell, Justin. 2015a. "Corporate funding and ideological polarization about climate change." PNAS Early Edition. Retrieved from www.pnas.org/cgi/doi/10.1073/pnas.1509433112.

Farrell, Justin. 2015b. "Network structure and influence of the climate change counter-movement." Nature Climate Change. DOI: 10.1038/NCLIMATE2875.

Fligstein, Neil. 1996. "Markets as Politics: A Political-Cultural Approach to Market Institutions." *American Sociological Review* 61(4): 656-673.

Fligstein, Neil. 2001. "Social Skill and the Theory of Fields." *Sociological Theory* 19(2): 105-125.

Fligstein, Neil and Doug McAdam. 2012. *A Theory of Fields*. New York, NY: Oxford University Press.

Foster, John Bellamy, Brett Clark, and Richard York. 2010. *The Ecological Rift: Capitalism's War on the Earth*. New York, NY: Monthly Review Press.

Foster, John Bellamy. 2012. "The planetary rift and the new human exemptionalism: A political-economic critique of ecological modernization theory." *Organization & Environment* 25(3): 211-237.

Galbraith, Kate. 2011. "Carbon Dioxide, the Bane of Environmentalists, Is in Demand in the Oil Industry." *The New York Times*, January 7, pp. 17A.

Galloway, Gloria. 2005. "Tougher Kyoto rules urged; Ottawa's voluntary approach won't meet pollution targets, federal documents say." *The Globe & Mail*, January 11, pp. A1.

Habermas, Jurgen. 2006. "Political Communication in Media Society: Does Democracy Still Enjoy an Epistemic Dimension? The Impact of Normative Theory on Empirical Research." Communication Theory 16: 411-426.

Hannan, Michael T. and John Freeman. 1977. "The Population Ecology of Organizations." *American Journal of Sociology* 82(5): 929-964.

Henton, Darcy. 1998. "Controversy gushes over greenhouse gas targets, Firms move to trade credits for reductions in carbon dioxide." *The Toronto Star*, September 8, pp. D7.

Hjarvard, Stig. 2008. "The Mediatization of Society." *Noridcom Review* 29: 105-134.

Hopkin, Michael. 2014. Study vindicates climate models accused of 'missing the pause.' https://phys.org/news/2014-07-vindicates-climate-accused.html. Retrieved March 3, 2017.

Houpt, Simon. 2006. "An urgent plea to go green; 'The world is watching Canada,' the Australian author of The Weather Makers tells Simon Houpt." *The Globe & Mail*, March 28, pp. R1.

Jacques, Peter J., Riley E. Dunlap, and Mark Freeman. 2008. "The Organization of Denial: Conservative Think Tanks and Environmental Skepticism." *Environmental Politics* 17(3): 349-385.

Jolis, Anne. 2012. "The Climate Kamikaze; 'The Hockey Stick and the Climate Wars' argues that global temperatures have risen in conjunction with our use of fossil fuels."

Kissel, Mary. 2010. "Climate Change 'Quagmire'; Why India's environment minister doesn't like Al Gore's approach to global warming." *The Wall Street Journal*, March 10.

Klein, Naomi. 2014. *This Changes Everything: Capitalism vs the Climate*. New York, NY: Simon & Schuster.

Lefsrud, Lianne M. and Renate E. Meyer. 2012. "Science or Science Fiction? Professionals' Discursive Construction of Climate Change." *Organizational Studies* 33(11): 1477-1506.

Lewis, Paul. 1992. "U.S. Under Fire In Talks at U.N. On Environment." *The New York Times*, March 24, pp. A1.

Liu, Sida, and Mustafa Emirbayer. 2016. "Field and Ecology." *Sociological Theory* 34(1): 62-79.

Lomborg, Bjorn. 2013. "Bjorn Lomborg: Climate-Change Misdirection; Fear-mongering exaggeration about effects of global warming distracts us from finding affordable and effective energy alternatives." *The Wall Street Journal*, January 13.

MacCharles, Tonda. 2002. "PM threatens to delay ratifying Kyoto deal." *The Toronto Star*, May 9, pp. A14.

MacKinnon, Mark. 1999. "Germany vetoes emissions-credits plan, Canada's proposal to use nuclear energy to meet greenhouse-gas-reduction goal." *The Globe & Mail*, November 2, pp. A8.

McCarthy, Shawn. 2009. "OIL SANDS UNDER ATTACK; The oil sands industry is accustomed to defending its image in North America, but it now faces a multifront war, with opposition growing from Norway to Washington." *The Globe & Mail*, September 14, pp. B1.

McCarthy, Shawn, Jane Taber, and Nathan Vanderklippe. 2010. "U.S. Speaker calls for cut in Canadian oil imports; Pelosi makes known her distaste for 'fossil'." *The Globe & Mail*, September 10, pp. A1.

McCright, Aaron M. and Riley E. Dunlap. 2003. "Defeating Kyoto: The Conservative Movement's Impact on U.S. Climate Change Policy." *Social Problems* 50(3): 348-373.

Mills, C. Wright. 1956. *The Power Elite*. Oxford, UK. Oxford University Press.

Mol, Arthur P. J. 2010. Ecological modernization as a social theory of environmental reform. In M. Redclift & G. Woodgate (Eds.), *The international handbook of environmental sociology* (2nd. Ed., pp. 63-76). Northampton, England: Edward Elgar.

Page, Benjamin I, Robert Y. Shapiro, and Glenn R. Dempsey. 1987. "What moves public opinion?" *American Political Science Review*, *81*(01), 23-43.

Powell, Walter W., Douglas R. White, Kenneth W. Koput, and Jason Owen-Smith. 2005. "Network Dynamics and Field Evolution: The Growth of Interorganizational Collaboration in the Life Sciences." *American Journal of Sociology* 110(4): 1132-1205.

Prior, Lindsay. 2004. "Following in Foucault's Footsteps: Text and Context in Qualitative Research." Pp. 317-333 in *Approaches to Qualitative Rsearch: A Reader on Theory and Practice* edited by S. N. Hesse-Biber and P. Leavy. New York, NY: Oxford University Press.

Randomness and Integrity Services Ltd. 2016. "True Random Number Service." Retrieved Sept. 18, 2016 (https://www.random.org/).

Renouf, Simon. 2001. "Kyoto consequences." *The Globe & Mail*, July 21, pp. A14.

Sampei, Yuki, and Midori Aoysagi-Usui. 2009. "Mass-media Coverate, It's Influence on Public Awareness of Climate-change Issues, and Implications for Japan's National Campaign to Reduce Greenhouse Gas Emissions." *Global Environmental Change* 19: 203-212.

Sapinski, Jean Philippe. 2015. "Climate Capitalism and the Global Corporate Elite Network." *Environmental Sociology*, DOI: 10.1080/23251042.2015.1111490

Schlichting, Inga. 2013. "Strategic framing of climate change by industry actors: A meta-analysis." *Environmental Communication* 7(4): 493-511.

Schneider, Keith. 1994. "The Nation; For the Environment, Compassion Fatigue." *The New York Times*, November 6, pp. 4-3.

Schreier, Margrit. 2012. *Qualitative Content Analysis in Practice*. Thousand Oaks, CA: SAGE Publications.

Schulz, Winfried. 2004. "Reconstructing Mediatization as an Analytical Concept." *European Journal of Communication* 19(1): 87-101.

Schwartz, John. 2014. "Heirs to an Oil Fortune Join the Divestment Drive." *The New York Times*, September 22, pp. A3.

Simon, Adam and Michael Xenos. 2000. "Media Framing and Effective Public Deliberation." *Political Communication* 17: 363-376.

Simpson, Jeffrey. 2008. "Look who's marching up the standings; China's new global role is not as a key player, but a decisive one." *The Globe & Mail*, August 8, pp. A15.

Snow, David A., Anna E. Tan, and Peter B. Owens. 2013. "Social Movements, Framing Processes, and Cultural Revitalization and Fabrication." *Mobilization: An International Quarterly* 18(3): 225-242.

Spaargaren, Gert, and Arthur P.J. Mol. 1992. "Sociology, environment, and modernity: Ecological modernization as a theory of social change." *Society & natural resources*, *5*(4), 323-344.

The Globe & Mail. 1992. "Bush threatens boycott of Earth Summit in Brazil, U.S. accused of trying to shape meeting's agenda to suit its own." Reuters News Agency, January 9.

The Globe & Mail. 1994. "Europe bakes in record heat wave Greenhouse-effect debate rages as temperatures soar." New York Times Service and Staff, August 4.

The New York Times. 2012. "Time to Confront Climate Change." Editorial Section, December 28, pp. A26.

Thelen, Kathleen. 2004. *How Institutions Evolve: The Political Economy of Skills in Germany, Britain, the United States, and Japan.* Cambridge, UK: Cambridge University Press.

Thompson, Allan. 2002. "Graham keen to take on U.S." *The Toronto Star*, June 10, pp. A07.

van Dijk, Teun A. 1996. "Discourse, power, and access.*"* In Carmen Rosa Caldas-Coulthard and Malcolm Coulthard (Eds.), *Texts and Practices. Readings in Critical Discourse Analysis*. (pp. 84-104). London: Routledge.

Weber, Max. 1962. *Basic Concepts in Sociology*. Translated by H. P. Secher. New York, NY: Citadel Press.

White, Harrison C. 1981. "Where Do Markets Come From?" *American Journal of Sociology* 87(3): 517-547.

APPENDICES

APPENDIX I: TABLE I – NEWSPAPERS CITED

Date	Newspaper Publication	Article Title
24-Mar-92	The New York Times	"U.S. Under Fire In Talks at U.N. On Environment"
30-Mar-92	The Globe & Mail	"Bush threatens boycott of Earth Summit in Brazil U.S. accused of trying to shape meeting's agenda to suit its own"
4-Aug-94	The Globe & Mail	"Europe bakes in record heat wave Greenhouse-effect debate rages as temperatures soar"
6-Nov-94	The New York Times	"The Nation; For the Environment, Compassion Fatigue"
7-Dec-97	The New York Times	"Intense Lobbying Against Global Warming Treaty"
8-Sep-98	The Toronto Star	"Controversy gushes over greenhouse gas targets Firms move to trade credits for reductions in carbon dioxide"
2-Nov-99	The Globe & Mail	"Germany vetoes emissions-credits plan Canada's proposal to use nuclear energy to meet greenhouse-gas-reduction goal rejected"
21-Jul-01	The Globe & Mail	"Kyoto consequences"
7-Mar-02	The Toronto Star	"We must use green technology we invented"
9-May-02	The Toronto Star	"PM threatens to delay ratifying Kyoto deal"
10-Jun-02	The Toronto Star	"Graham keen to take on U.S."
24-Oct-02	The Toronto Star	" Hold off on Kyoto, PM told"
26-Oct-02	The Globe and Mail	"The Kyoto Stampede; Oh no, sighs the East. Those Alberta rednecks are at it again, trying to wreck the consensus on climate change. But on the eve of the provinces' Kyoto debate in Halifax on Monday, what the oil-patch boys have to say about the environment may surprise you."
11-Jan-05	The Globe & Mail	"Tougher Kyoto rules urged; Ottawa's voluntary approach won't meet pollution targets, federal documents say"
28-Mar-06	The Globe & Mail	"An urgent plea to go green; 'The world is watching Canada,' the Australian author of The Weather Makers tells SIMON HOUPT"
8-Aug-08	The Globe & Mail	"Look who's marching up the standings; China's new global role is not as a key player, but a decisive one"
14-Sep-09	The Globe & Mail	"OIL SANDS UNDER ATTACK; The oil sands industry is accustomed to defending its image in North America, but it now faces a multifront war, with opposition growing from Norway to Washington"

18-Feb-10	The Wall Street Journal	"U.N. Climate Chief to Resign"
10-Mar-10	The Wall Street Journal	"Climate Change 'Quagmire'; Why India's environment minister doesn't like Al Gore's approach to global warming."
10-Sep-10	The Globe & Mail	"U.S. Speaker calls for cut in Canadian oil imports; Pelosi makes known her distaste for 'fossil'"
7-Jan-11	The New York Times	"Carbon Dioxide, the Bane of Environmentalists, Is in Demand in the Oil Industry"
5-May-11	The New York Times	"Suit Accuses U.S. Government of Failing to Protect Earth for Generations Unborn"
15-Mar-12	The Wall Street Journal	"The Climate Kamikaze; "The Hockey Stick and the Climate Wars" argues that global temperatures have risen in conjunction with our use of fossil fuels."
24-May-12	The New York Times	"Offshore Oil Drilling's New and Frozen Frontier"
28-Dec-12	The New York Times	"Time to Confront Climate Change"
24-Jan-13	The Wall Street Journal	"Bjorn Lomborg: Climate-Change Misdirection; Fear-mongering exaggeration about effects of global warming distracts us from finding affordable and effective energy alternatives."
22-May-14	The New York Times	"Pushing Climate Change as an Issue This Year, but With an Eye on 2016"
22-Sep-14	The New York Times	"Heirs to an Oil Fortune Join the Divestment Drive"
25-Sep-14	The New York Times	"Florida Goes Down the Drain"
5-Nov-15	The Wall Street Journal	"Exxon Mobil Gets Subpoena From N.Y. Regarding Climate-Change Research; Attorney General Schneiderman seeks information about research and response to climate change"

APPENDIX II: NEWSPAPER EXERPTS

1   For the past two years, more than 150 nations have been trying to devise a new,
        stricter treaty to replace the largely voluntary one that they agreed upon five years
        ago in Rio de Janeiro. It is intended to set binding limits on emissions of
        greenhouse gases by industrial nations. Because confronting global warming
        means altering energy patterns throughout society, a solution to the emerging risk
        of climate change affects practically every conceivable interest group. Opposing
        a binding treaty are car makers and corn farmers, steel mills and oil refineries,
        electricity producers and the coal miners who stoke their boilers. They claim that
        cutbacks in emissions would raise energy costs sharply, rippling through the
        economy, creating inflation and destroying jobs or sending them overseas (*The
        New York Times*, December 7, 1997).

2   Ottawa must consider regulating a reduction in the amount of harmful greenhouse
        gases that spew from automobiles and big industries because the voluntary
        approach is not working, federal documents warn. "With current policy and
        programs, Canada is still going to be significantly off the Kyoto target," says a
        document called Climate Change - Lessons Learned and Future Directions that
        was obtained by The Globe and Mail. The "voluntary approach and limited
        incentives [are] not sufficient to drive substantive change," says the document,
        dated Jan. 5 and marked "Draft - Secret." So policy makers "need more
        consideration of regulation and taxation to drive behavioural (sic) change and
        technology deployment and uptake" (*The Globe & Mail*, January 11, 2005).

3   A Canadian plan that would reward countries that export nuclear reactors with
        emissions credits has been denounced by the German government as
        "incompatible" with the Kyoto process. Canada has been pushing hard in
        negotiations for credits that would allow it to miss its stated target of cutting its
        greenhouse-gas emissions to 6 per cent lower than 1990 levels by 2012. The hope
        was that the other 36 countries participating in the campaign to reduce air
        pollution would allow Canada to set aside its emission-reduction goals as a
        reward for exporting nuclear technology -- which emits less carbon dioxide than
        burning oil or coal -- to developing nations (*The Globe & Mail*, November 12,
        1999).

4   Klein warned that Ontario and Alberta stand to lose the most under the Kyoto
        Protocol. Industries in Ontario that will be affected include steel, cement, lime,
        aluminum, pulp and paper and agriculture. "The provinces to be hit the hardest,
        relative to the implementation of the Kyoto Protocol will likely be Ontario and
        Alberta," he said. "Our (Alberta's) climate change plan has been designed to
        tackle climate change without compromising the economic potential of the
        province or the country," he said. Klein denied that he was simply a mouthpiece
        for the big energy interests, although he was more than happy to stand up to the
        energy sector. "The issue before Canadians is not Kyoto versus nothing. Don't let

anyone tell you that Alberta is recommending that Canada do nothing on climate change," he said (*The Toronto Star*, October 24, 2002).

5   Charles and David Koch, billionaire industrialist brothers, have put millions of dollars into advocacy groups and super PACs like Americans for Prosperity, which have campaigned aggressively against lawmakers who support climate change policy (*The New York Times*, May 22, 2014).

6   Polls indicated that Americans overwhelmingly supported tough environmental rules and said they would pay more for them……But midway through, the decade is shaping up as a period of turmoil for the environmental movement. Membership and budgets have dropped for most of the national groups. A well-organized counter-movement of landowners, city officials and industrial executives steamed into Washington and halted Congressional work this year on strengthening environmental laws. They argued that environmentalists were exaggerating and using inconclusive data to frighten people and influence lawmakers (*The New York Times*, November 6, 1994).

7   Any such regulations are likely to be strongly opposed by industry and will require real persistence on the administration's part. If Mr. Obama takes this approach, he will certainly need a determined leader at E.P.A. to devise and carry out the rules. Lisa Jackson, the E.P.A. administrator who on Thursday announced her resignation after four productive years in one of the federal government's most thankless jobs, was just such a leader. She suffered setbacks -- most notably the White House's regrettable decision to overrule her science-based proposal to update national health standards for ozone, or smog. But she accomplished much, including tougher standards for power plant emissions of mercury and other air toxics, new health standards for soot, and, most important, her agency's finding that carbon dioxide and five other gases that contribute to global warming constituted a danger to public health and could thus be regulated under the Clean Air Act (*The New York Times*, December 28, 2012).

8   If the Clinton Administration is struggling to strike a deal on global warming at talks in Kyoto, Japan, that is partly because warring domestic interest groups have spent many months -- and millions of dollars -- on highly effective lobbying campaigns designed to limit the White House's options. But powerful business interests have emphasized the economic risks and the need to bring developing countries into any binding new treaty, arguments that have strongly influenced the Senate, where any pact must be ratified. They say the Administration is going too far and too fast, the more so since the Third World is balking at a bigger role. The private-sector lobbying, more intense, prolonged and costly than usual in the realm of diplomacy, has reached a fevered pitch this week in Kyoto… …The antagonists include big corporations with revenues larger than the economies of little nations, labor unions with more members than some countries' armed forces, industrial trade associations with headquarters grander than embassies, and a corps of professional environmentalists that rivals the diplomatic corps in polish

and pinstripes. "It is as if a large chunk of the lobbying community from the capital has been transported from Washington to Kyoto for two weeks," Senator Joseph Lieberman, Democrat of Connecticut, marveled in a telephone interview from Kyoto, where he is an observer (*The New York Times*, December 7, 1997).

9   Mr. Bush's presence thus depends heavily on the outcome of negotiations at the United Nations where 148 countries are drafting a treaty on global warming. Virtually all of them support the European Community proposal for the limits on carbon dioxide emissions. The emissions are widely blamed for the so-called greenhouse effect, a warming…But they are also a main byproduct of industries that fuel the U.S. economy, such as car makers, oil companies and electricity providers. Bill Walker, spokesman for Greenpeace USA, a leading environmental group, said: "It's the height of arrogance for the White House to stand back and say (the Earth Summit) is not productive. The White House is blocking progress. They are trying to shape the summit agenda so that it reflects the United States' agenda, which has been to resist efforts to save the environment on a number of fronts. "We have to transcend business as usual. The only way to do that is for Bush to show leadership - he's talking about a selfish agenda. The focus and aim of the Earth Summit is to move beyond national prerogatives and on to global needs," Mr. Walker said in a telephone interview (*The Globe & Mail*, March 30, 1992).

10   Shortly before Thanksgiving in 2010, the leaders of the commission President Obama had appointed to investigate the Deepwater Horizon oil spill in the Gulf of Mexico sat down in the Oval Office to brief him. After listening to their findings about the BP accident and the safety of deepwater (sic) drilling, the president abruptly changed the subject. "Where are you coming out on the offshore Arctic?" he asked. William K. Reilly, a former chief of the Environmental Protection Agency and a commission co-chairman, was startled, as was Carol M. Browner, the president's top adviser at the time on energy and climate change. Although a proposal by Shell to drill in the Arctic had been a source of dissension, it was not a major focus of the panel's work. "It's not deep water, right?" the president said, noting that Shell's proposal involved low-pressure wells in 150 feet of water, nothing like BP's 5,000-foot high-pressure well that blew out in the gulf. "What that told me," Mr. Reilly later recounted, "was that the president had already gotten deeply into this issue and was prepared to go forward." The president's preoccupation with the Arctic proposal, even as the nation was still reeling from the BP spill, was the first hint that Shell's audacious plan to drill in waters previously considered untouchable had gone from improbable to inevitable (*The New York Times*, May 24, 2012).

11   The latest of these shrill outbursts came this week from the Canadian Chamber of Commerce, which claims "the impact on our economy would be devastating if Canada agreed to achieve its Kyoto commitments by

2010." The chamber made the unsubstantiated assertion that the economy would "drop by up to 2.5 per cent in 2010 under the Kyoto protocol,"…
…The chamber contends that if Canadian industry is forced to meet the Kyoto targets, "it will be impossible for our export industries to compete in the market south of the border." Industry will relocate to countries that haven't signed the Kyoto protocol, the chamber argues (*The Toronto Star*, March 7, 2002).

12 "Canadian foreign policy can't be divorced from our policy with the United States," he said. "Therefore I think our Canadian foreign policy and our U.S. foreign policy must be fully integrated and coherent. Obviously that is very much going to be the Prime Minister's [Paul Martin] decision." —Foreign Affairs Minister Bill Graham (*The Toronto Star*, June 10, 2002).

13 Prime Minister Jean Chretien warned the European Union yesterday he would not ratify the Kyoto accord on reducing greenhouse gases until it "clarifies" that Ottawa can claim credit for exporting "clean energy" to the United States. It was the Prime Minister's strongest declaration to date that Canada requires more concessions in the 1997 deal in order to meet its targets for reducing emissions to comply with the Kyoto protocol. Chretien said the Europeans have the impression the Kyoto deal is closed, but "for us we had the impression that it was not over" - that there is still room to negotiate just how countries achieve their targets. Chretien argued in meetings yesterday with EU president Jose Maria Aznar, European Commission president Romano Prodi and External Relations commissioner Chris Patten that Canada's exports of "clean" energy, like natural gas and hydroelectricity, should count against its emissions that result from burning such fossil fuels as coal and petroleum products. "I tried to be as forceful as I could," he added. "They have not responded clearly, but the (EU) president said, 'Let's think about it and see if something can be done.' But the goal of Canada is and remains, we'd like to be able to sign, and if we were to sign, it would put pressure on the Americans to move in that direction, too." The Kyoto agreement requires Canada to dramatically cut its output of so-called "greenhouse gas" emissions which contribute to global warming, and energy-producing provinces like Alberta are balking at the deal. But another top European official, speaking off the record, did not mince his words. The official said that "it would play very badly" if Canada was to refuse to ratify the international agreement and merely come up with its own plan to meet the Kyoto principles. "Our position is absolutely clear," the official said. "We intend to ratify Kyoto around the beginning of June. It's very important that Canada, Australia, Russia, Japan all ratify. I would hope Canada, given its environmental record in the past, renews the protocol." The official said that with the withdrawal of the United States, it is crucial that other major players ratify the agreement preferably by the end of the

summer, when a major sustainable development meeting takes place in Johannesburg (*The Toronto Star*, May 9, 2002).

14   In Congress, Republican environmentalists appear to be terrified of what should be the most basic environmental issue possible. Whitehouse blames the Supreme Court's decisions on campaign finance, which gave the energy barons carte blanche when it comes to spending on election campaigns. It's certainly true that there's no way to tick off megadonors (sic) like the fabled Koch brothers faster than to suggest the globe is warming. "At the moment, there's a dogma in the Republican Party about what you can say," Tom Steyer told me. He's the billionaire who formed a "super PAC" to support candidates who acknowledge that climate change exists, that it's caused by human behavior, and that we need to do something major about it. Steyer has committed to spending about $100 million this year on ads and organizing in seven states. Many in the campaign-finance-reform community think this is a terrible idea, and that you do not combat the power of right-wing oligarchs to influence American elections by doing the same thing on the left. They have a point. But think of the penguins. Florida's Republican governor, Rick Scott, who's running for re-election, has been asked many times whether he believes in man-made climate change. Lately, he responds: "I'm not a scientist." Scott is also not a doctor, engineer, computer programmer, personal trainer or a bus driver. Really, it's amazing he even has the confidence to walk into the office in the morning. The governor did visit last month with some climate scientists. He began the meeting by making it clear that he did not intend to go anywhere near the word causes. After the group had pulled out their maps and projections -- including the one that shows much of Miami-Dade County underwater by 2048 -- Scott asked them questions. Which were, according to The Miami Herald, "to explain their backgrounds (sic), describe the courses they taught, and where students in their academic fields get jobs" (*The New York Times*, September 25, 2014).15   "I'm much happier living in the Sydney place," he says, "because you're liberated from this great human feedlot. It is very hard to make a moral choice when you're living in a society where everything is delivered down a pipe to you. So even for me, it's a greater effort to go out and do that, whereas if you set yourself up from the start where that just becomes part of the way you live, I think that's much easier." …But he doesn't believe solutions only lie with individuals. When he visits Ottawa, Flannery will be meeting with a number of politicians, including Environment Minister Rona Ambrose. "This new [Ottawa] government threatening to pull out of Kyoto, I think it would be immensely damaging and regrettable for a country like Canada to do that," he says, noting that Kyoto needs all the support it can get over the next few years if it is to have any hope of succeeding. After all, Australia and the United States have still not signed on. (Neither has Monaco nor Lichtenstein.) India and China are due to sign on in the second round of

talks in 2012, but would be far less likely to do so if they see any free riders who have pulled out since the first round or failed to ratify the treaty. "There is a very profound question here for a country the size of Canada that will have a global impact. And I think to some extent the world is watching Canada to see what'll happen" (*The Globe & Mail*, March 28, 2006).

16   The environmental battle over Alberta's oil sands is going global, forcing the industry to respond to new attacks on its record and putting fresh pressure on Ottawa. The Calgary-based industry is accustomed to defending its image in North America, but it now faces a multifront (sic) war. That growing global opposition is highlighted by its role in today's federal election in Norway, where the state-owned oil company's plans for the oil sands have sparked controversy. As well, a documentary that premiered in Switzerland and is now playing at the Toronto International Film Festival depicts the projects' devastating environmental impact; and a delegation of Chinese journalists is planning a visit to the scarred landscape of northeastern Alberta. At the same time, U.S. activists are continuing their attacks in Washington, scheduling a news conference this week ahead of Prime Minister Stephen Harper's visit with President Barack Obama to highlight the dramatic increase in emissions that would occur if oil sands production is expanded as planned. The industry expects the anti-oil sands campaigns will heighten in the runup (sic) to the international climate change conference in Copenhagen in December, which aims to replace the Kyoto Protocol with a new, binding international treaty to control emissions. Critics are seeking to discourage foreign investment and force Canada to make more-aggressive commitments on climate change by targeting what has become a symbol of Canada's failure to cut emissions: Alberta's massive, open-pit bitumen mines. The backlash goes beyond some adverse publicity. Global companies such StatoilHydro ASA or Royal Dutch Shell PLC are encountering growing pressure in their home countries to revisit plans to invest in the oil sands, while Ottawa will have to table a credible climate-change plan - including real limits on oil sands emissions - or face international censure and perhaps even barriers to trade (*The Globe & Mail*, September 14, 2009).

17   Advocates of stringent curbs on greenhouse gas emissions sued the federal government on Wednesday, arguing that key agencies had failed in their duty to protect the earth's atmosphere as a public trust to be guarded for future generations. Similar lawsuits are to be filed against states around the country, according to the plaintiffs, a coalition of groups concerned about climate change called Our Children's Trust… …Mr. Gerrard said that by filing such lawsuits, environmentalists were "trying to use all available options in view of the failure of Congress" to act on greenhouse

gas emissions. The House approved a sweeping bill to limit such emissions in 2009, but a more cautious effort died in the Senate last year. And the recently elected Republican majority in the House is threatening to strip the E.P.A. of regulatory powers related to global warming. Lisa Heinzerling, an environmental law expert at Georgetown University, said of the new suit, "Part of this is keeping the issue alive in lots of different settings and having all the branches, including the courts, continually react to it" (*The New York Times*, May 5, 2011).

18 John D. Rockefeller built a vast fortune on oil. Now his heirs are abandoning fossil fuels... …In recent years, 180 institutions -- including philanthropies, religious organizations, pension funds and local governments -- as well as hundreds of wealthy individual investors have pledged to sell assets tied to fossil fuel companies from their portfolios and to invest in cleaner alternatives. (*The New York Times*, September 22, 2014).

19 A new report by the environmental data company CDP has found that at least 29 companies, some with close ties to Republicans, including Exxon Mobil, Walmart and American Electric Power, are incorporating a price on carbon into their long-term financial plans. But unlike the five big oil companies -- Exxon Mobil, ConocoPhillips, Chevron, BP and Shell, all major contributors to the Republican party -- Koch Industries, a conglomerate that has played a major role in pushing Republicans away from action on climate change, is ramping up an already-aggressive campaign against climate policy -- specifically against any tax or price on carbon (*The New York Times*, May 22, 2014).

VITA

Adam Michael Straub

Candidate for the Degree of

Master of Science

Thesis: THE INFLUENCE OF POWER IN CLIMATE CHANGE MEDIA: FRAMING STRATEGIES AND FIELD DYNAMICS OF INSTITUTIONAL ACTORS, 1990-2015

Major Field: Sociology

Biographical:

Education:

Completed the requirements for the Master of Science in Sociology at Oklahoma State University, Stillwater, Oklahoma in July, 2017.

Completed the requirements for the Master of Science in Higher Education at Walden University, Minneapolis, Minnesota in April, 2013.

Completed the requirements for the Bachelor of Arts in Sociology at Millersville State University of Pennsylvania, Millersville, Pennsylvania in 2017.

Experience:

Graduate Research Assistant – Oklahoma Experimental Program to Stimulate Competitive Research, August 2016-May 2018.

Graduate Teaching Assistant – Oklahoma State University, Department of Sociology, August 2015-May 2016

Professional Memberships:

American Sociological Association
American Association of Geographers
Kappa Delta Pi