SOCIAL MOVEMENT HETEROGENEITY IN PUBLIC POLICY FRAMING: A MULTI-STAKEHOLDER ANALYSIS OF THE KEYSTONE XL PIPELINE

A dissertation presented

by

David T. A. Wesley

to

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In partial fulfillment of the requirements for the degree of Doctor of Philosophy

Northeastern University
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ABSTRACT OF DISSERTATION

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ABSTRACT

In 2011, stakeholders with differing objectives formed an alliance to oppose the Keystone XL heavy oil pipeline. The alliance, which came to be known as “Tar Sands Action,” implemented various strategies, some of which were more successful than others. Tar Sands Action was a largely heterogeneous alliance that included indigenous tribes, environmentalists, ranchers, landowners, and trade unions, making it one of the more diverse social movement organizations in history. Each of these stakeholder categories had distinct demographic structures, representing an array of racial, ethnic, educational, occupational, and political backgrounds. Participants also had differing policy objectives that included combating climate change and protecting jobs, agricultural interests, water resources, wildlife, and human health.

The current dissertation examines the Tar Sands Action movement to understand how heterogeneous social movement organizations mobilize supporters, maintain alliances, and create effective frames to achieve policy objectives. A multi-stakeholder analysis of the development, evolution and communication of frames concerning the Keystone XL controversy provides insight into the role of alliances, direct action, and the news media in challenging hegemonic frames.

Previous research has ignored the potential value that SMO heterogeneity provides by treating social movements as culturally homogenous. However, diversity has been shown to affect performance in business organizations. The current study demonstrates that under some circumstances, diversity can also improve policy outcomes. Moreover, policy frames are shown to be more effective in sustaining news media and public interest through a process the author
calls dynamic frame sequencing (DFS). DFS refers to a process implementing different stakeholder frames at strategically opportune moments.

Finally, Tar Sands Action was one of the first SMOs to rely heavily on social media to build alliances, disseminate information, and mobilize support. This study adds to a growing body of research that considers the emerging role of social media in protest movements.
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Chapter 1: Introduction

In 2011, stakeholders with divergent objectives formed an alliance to oppose Keystone XL under the banner *Tar Sand Action*. Over the course of a year, Tar Sands Action and its allies implemented various strategies, some of which were more successful than others. The current dissertation examines the Tar Sands Action campaign to understand how heterogeneous social movement organizations (SMOs) create effective frames to achieve policy objectives. A multi-stakeholder analysis of the development, evolution and communication of frames concerning the Keystone XL controversy will provide insight into the role of alliances, direct action, and the news media in challenging hegemonic frames. The author proposes that effective heterogeneous SMOs use dynamic frame sequencing (DFS) to strengthen alliances and create resonance with diverse audiences.

Previous research has ignored the potential value that SMO heterogeneity provides by treating organizations as culturally homogenous. It is thought that shared culture increases movement success by enabling cooperation and allowing ideas to “[flow] freely through jointly created structures and generated energy for change” (van Wijk et al., 2013). However, studies have shown that diversity can affect performance in other types of organizations. For example, research in business organizations has discovered that cultural diversity can be both beneficial and harmful to organizational performance and that outcomes often depend on the backgrounds of team members and their willingness to value different perspectives (DiStefano and Maznevski, 2000).

Although DiStefano and Maznevski used national culture as a key variable in their study, cultural diversity can also be based on age and gender (Wegge et al., 2008), race (Richard,
2000), ethnicity (McLeod et al., 1996), education level (Bledstein, 1976), and occupation (Van Maanen and Barley, 1984, Glomseth et al., 2007). On these dimensions, Tar Sands Action was far more diverse than SMOs that are formed around culture-bound issues, such as racial equality, religious values, or worker safety. Moreover, diverse stakeholders within the Tar Sands Action movement often had differing policy objectives, including protecting agricultural interests (ranchers) and water resources (ranchers and residents), improving human health (indigenous communities), reversing climate change (environmentalists), and creating jobs (Canadian trade unions).

Tar Sands Action was also one of the first SMOs to rely heavily on social media to build alliances, disseminate information, and mobilize support. Therefore, this study will consider the emerging role of social media as an important tool for forming and maintaining alliances among diverse stakeholders and mobilizing support in framing contests.

The Dynamic Approach to Framing and Hegemony

Recent research on framing processes has focused primarily on collective action frames (Benford and Snow, 2000), often ignoring the role of other stakeholders, particularly policymakers and industry. Policymakers are characteristically portrayed as targets of collective action rather than participants who play an active role in framing and counterframing activities.

Carragee and Roefs (2006) assert that most studies fail to consider the impact of political power in framing contests. They note,

By failing to consider political and social power adequately, some contemporary trends in framing research severely diminish the scope of scholarship on the production, character, and influence of media frames. These trends provide a theoretically and conceptually impoverished
definition of framing in several ways. They reduce frames to story topics, attributes, and issue positions, and neglect frame sponsorship and the asymmetries in power that influence the ability of sponsors to shape the news agenda. They also isolate frames as content features to study their influence and thereby neglect why particular frames dominate news discourse. (Carragee and Roefs, 2006)

In the current study, these potential shortcomings are addressed by examining in detail the development of each stakeholder’s frames. Moreover, the investigation of frame development provides insight into why some frames are more successful than others in influencing policymakers, news media, and the general public. As such, this study seeks to go beyond merely examining “the interaction between social movements and the news media” (Carragee and Roefs, 2006), by also exploring interactions between industry stakeholders, policymakers, social movements, government agencies and regulators.

Carragee and Roefs refer to this methodology as the “dynamic approach to framing and hegemony.” It focuses primarily on the evolution of framing contests and the countermovement strategies of elites “when confronted with ideological challenges organized by social movements” and treats frames not as static isolated concepts, but as dynamic and evolving aspects of stakeholder interactions and contests.

Frames have several purposes. They align participants with certain ideologies and beliefs (Hall, 1982, Oliver and Johnston, 2000), they challenge existing beliefs (Snow et al., 1986), and they create new perceptions of reality (McAdam et al., 1996). As such, frames are important in the development of social movements that, by definition, seek to challenge the status quo. They are also important in countermovement efforts by elites who seek to protect an existing world view or reshape it in ways that minimize the potential impact of challengers (Meyer and Staggenborg, 1996).
Heterogeneous Antecedents in the Environmental Movement

Often existing frames are adapted to new circumstances. Climate change has been linked to a host of industries, ranging from coal power to automotive production (Stern and Treasury, 2007). Environmental activists who seek progressive energy policies frame their positions around themes of corporate greed and political power (Ravetz, 2004) and then apply those themes to new causes, such as bitumen extraction and distribution, hydraulic fracturing, and offshore drilling.

Environmental concerns may give rise to heterogeneous social movements when they affect diverse populations. For instance, in the 1970s, Native American tribes brought multiple lawsuits against companies for the destruction caused by natural resource extraction on native lands. In 1975, twenty-two tribes agreed to form the Council of Energy Resources (CERT) and established an office in Washington where they could begin lobbying the federal government for protection of native interests. Tribes also began working with outside organizations with the experience and power to bring about change. They included officials from the Organization of the Petroleum Exporting Countries (OPEC)\(^1\) and NGOs, like Friends of the Earth (Nelkin, 1981), which had been seeking to “explore new themes, new coalitions, and new environmental issues” (Gottlieb, 2005).

In the 1970s, rural white farmers, ranchers and fishers set aside racial differences to join forces with indigenous tribes in protecting natural resources from a “perceived outside threat.”

A significant number of rural whites came to see Native American sovereignty and treaty rights as a legal tool to protect their shared space.

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from a common “outsider” enemy and redefined their community of interest as including their Native neighbors (Grossman, 2005).

The uniting of tribes, environmentalists, and rural whites created a perfect storm of environmental activism in the American west. By combining these interests, public stakeholders were able to increase awareness of issues and convince their state and federal representatives to introduce legislation that protected rural communities. The addition of rural white farmers and environmentalists added political and economic resources that often prove effective in political lobbying (Kingdon, 2002). Much of the regulation that came out of these lobbying efforts was introduced by congressional representatives from rural states, where farmers and ranchers have considerable influence.

The environmental movement borrowed much of its strategy from the civil rights and anti-war movements of the 1960s. These social movements were the training ground for a new generation of activists who would apply the knowledge gained from protests, sit-ins, and related activities to environmental issues. According to Dunlap (1992), the “civil rights and anti-war movements had shown that community organizing, demonstrations, civil disobedience, and political education could lead to changes in government policy and programs.”

However, unlike the civil rights and anti-war movements, environmental challenges faced diverse segments of the population. By the 1970s, social conditions were ripe for American voters to support sweeping new environmental legislation. An often cited influence was the publication of Rachel Carson’s *Silent Spring* in 1962 documenting the harms caused by pesticides. This had “an alarming effect on public consciousness” (Glotfelty, 2000).
Environmental causes had taken root across the country, inspired by the efforts of Ralph Nader, Pete Seeger, and other activists. New environmental organizations, such as Friends of the Earth (founded in 1969) and Greenpeace (founded in 1971), joined established organizations like the Sierra Club and Audubon Society to fight the perceived threats created by under-regulated corporations. Together, they helped move government toward enacting legislation that restricted the harms causes by private and public corporations, including the National Environmental Policy Act (NEPA) of 1970, the Endangered Species Act of 1973, and the National Forest Management Act of 1976.

The environmental movement’s early success could often be attributed to media coverage of prominent events. During the 1970s, several environmental disasters brought natural resource companies considerable unwanted media attention. They included the Buffalo Creek Flood in West Virginia, in which “numerous communities were virtually obliterated” after a tailings dam burst (Church, 1974) and series of dam failures across several states between 1974 and 1975 causing the destruction of fisheries and endangering human health (Wohl, 2000). Other high profile events in the 1970s included the contamination of Love Canal, NY with toxic waste, the Three Mile Island nuclear accident, and the Los Angeles, California smog crisis.

**News Media and New Media**

Kingdon (2002) notes that media often plays an important role in setting the government agenda. “If energy is receiving a lot of press play, for instance, people will cite energy prominently among their candidates for the ‘most important problem’ facing the country.” Due to the historic importance of news events in shaping environmental policy, media coverage of
Keystone XL topics will be used as a proxy for the potential policy impact of various frames and the ability of stakeholders to dominate discussions.

However, in today’s social media connected world, news media outlets are relying more on information collected by citizens posting videos and comments on Twitter, Facebook, and blog sites. Shang and Zhang (2012) note that traditional news organizations not only use social media to gather information, but also to verify the accuracy of articles before they are printed in newspapers or broadcast on television. Journalists post draft articles on the news organization’s website or blog site and then invite comments, which are then reviewed to discover ways to improve news reports, “making blogs a mainstay of journalistic practice.”

Assuming that Kindgon and others are correct about the influence of news media on policymakers, the use of social media in newsgathering suggests that social media could have an important indirect influence on policymakers. Essentially, social media activism reaches policymakers through newsgathering organizations which filter the content and insert their biases.

News organizations also use social media to disseminate news content (Reed, 2011). Social media activists then repost or retweet articles that support their positions or in order to invite criticism of opposing views.

Finally, the ability of native journalists and activists to directly engage audiences through social media has diminished the influence of traditional news media. At the same time, Starr (2012) argues that social media has made traditional media economically unviable, thereby exposing news outlets to potential manipulation by economically powerful partisan forces. The contradiction between the greater freedom of expression available on the Internet and the
declining freedom of the press is reshaping the role of news media in framing contests. Therefore, any examination of news media coverage in framing contests must consider the role of social media in mitigating outcomes.

Industry Antecedents

The oil industry also adapted existing frames centered on energy security and economic development to new situations. For more than a decade, the oil industry has sought to undermine climate change activists by attacking the science behind global warming (Le Menestrel and de Bettignies, 2002). Although recently this approach has become less effective as extreme weather events increase in frequency, industry promoters nevertheless generated considerable climate change skepticism among the American public. Most climatologists agree that anthropogenic climate change is a serious problem, but dissenters have received greater media coverage in proportion to their numbers, particularly in the United States (Antilla, 2005). Moreover, according to Dunlap and McCright (2010), those who manufactured this uncertainty had limited climate research experience and instead spent most of their time critiquing scientific publications on behalf of the conservative think tanks, coal and oil industry corporations, and trade associations that funded their activities.²

In this way, industry plays important roles both in the development of frames and in the ensuing struggles over public discourse dominance. These framing contests are crucial to understanding why some frames resonate and endure more than others. Therefore, the author

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² Dunlap and McCright note that ExxonMobil, Peabody Coal, the Western Fuels Association and the American Petroleum Institute provided direct funding to “individual contrarian scientists.”
plans to treat corporations, lobby groups, policymakers, and government agencies as active participants in the development of the Keystone XL frames that will be examined in the following chapters.

Policy Antecedents

At dispute is the proposed Keystone XL pipeline, an expensive and highly controversial project that, if approved, would carry unprecedented amounts of diluted bitumen from Alberta to refineries in the U.S. Gulf Coast.

Pipelines have long been controversial. For instance, the creation of TransCanada pipelines in 1956 has been described as “the stormiest episode in Canadian parliamentary history” (Kilbourn, 1970). In the late 1940s and early 1950s, American and Canadian petroleum companies sought to create a network of natural gas pipelines from Alberta to the western United States. However, at the time, “65,000 gas wells were in operation owned by 11,000 firms and individuals scattered through many parts of the United States” (Department of the Interior, 1953), with some lines capable of supplying highly populated regions of Eastern Canada. American producers from Texas and elsewhere sought protection from Canadian competition, convincing U.S. regulators to recommend to President Eisenhower that Canadian pipelines were not in the best interests of the country. As a result, Eisenhower chose not to issue the presidential permit needed to build a cross-border pipeline.

The controversy that gave rise to TransCanada Pipelines is itself a case study in framing contests. Petroleum companies and the Canadian and Alberta governments were troubled at the prospect of being cut off from the American market. Moreover in Canada, the prospect of
American gas companies supplying residents of Ontario and Quebec became politically unpopular. Therefore, the Canadian government chose to subsidize TransCanada to supply Eastern Canada directly from Alberta by creating what at the time would be the world’s longest pipeline. “There are other reasons for studying the history of Trans-Canada Pipe Lines however,” explained Canadian historian William Kilbourn.

Any account of its long struggle to be born inevitably raises most of the classic issues in Canada’s survival as a nation: American economic influence and the nature of Canadian-American relations; the debate between north-south continentalism and east-west nationalism; the questions of transportation and national unity, of energy and national growth, of control over natural resources and their exploitation; the latent conflict between western producer and eastern consumer… the problem of public versus private enterprise…the connections between business and politics and the role of regulatory bodies between them; and the place of popular feelings, pressure groups and the press in the difficult matter of making decisions on complex issues of great national importance.
(Kilbourn, 1970)

A half century later, some of the same issues dominated the Keystone XL debate. In other ways, Keystone XL differed from the controversy that led to the creation of TransCanada. For instance, the intervening rise of the environmental movement in the 1970s brought new stakeholders into framing contests and the development of computer mediated communication, such as email, discussion boards, and social media added new dimensions that impacted frame development, stakeholder mobilization, and alliance building.

**Frame Development in Heterogeneous Social Movements**

Numerous stakeholders presented diverse, and often conflicting, frames in an effort to dominate news media stories and policymaker discussions. Most discussions centered on climate change, jobs, and the economy. Yet, claims linked to property rights, wildlife protection,
agricultural sufficiency, energy independence, national security, human rights, water resources, indigenous rights, and human health also shaped stakeholder frames.

Keystone XL specific claims can be broadly categorized into themes social injustice, economic benefits, and environmental harms in a manner similar to what Benford and Snow (2000) refer to as “master frames.” Rarely does one see so many collective action frames and master frames centered on one issue, and as such, Keystone XL presents a rare opportunity to observe the interaction of diverse frames and stakeholders, as well as the inevitable tension of multiple intersecting contests.

Traditionally, the news media has played a major role in framing contests. Corporations and lobby groups spend considerable resources on public relations and media outreach. Cook (1998) observes that “newsmaking becomes of central importance, not merely in calculating how chief executives spend their time but in assessing how they make decisions and seek to make policy.” In fact, many organizations determine the success of framing contests by examining news media coverage, despite a lack of evidence that news stories translate into public acceptance (Gamson et al., 1992).

Here, news media coverage will be examined in the context of policymaker and government agency discussions to reveal potential interaction effects. A close examination of news stories provides insight into the evolution and dominance of various frames, the connection between political power and frame dominance, and the impact of social media in challenging the hegemonic frames identified in news stories about Keystone XL.
Dynamic Frame Sequencing

A key aim of this study is to introduce the theory of dynamic frame sequencing (DFS). DFS proposes that that SMOs might be more effective if they strategically develop and present different frames at opportune time periods instead of seeking to have one or more favored frames dominate the discussion throughout the campaign, often at the expense of less powerful SMO stakeholders. DFS broadens the appeal of SMOs by recognizing the value of dissimilar interests and backgrounds and by allowing frames to resonate with more diverse audiences. It also permits seemingly unconnected stakeholders to form and maintain alliances for a perceived common good.

Most studies of social movements treat SMOs as homogenous collective cultures (Johnston, 1995). For instance, the feminist movement was said to be driven by “a distinct women’s culture” (Taylor and Whittier, 1999). The emphasis on collective culture has led researchers to focus on what Benford (1997) refers to as “dichotomist conceptions” that “constrain theoretical and empirical development in the study of social movements.” Although the collective aspect of social movements can be helpful at one level of analysis, Melucci (1995) observes that researchers who treat social movements as homogenous entities are likely to miss various complex interactions that occur within movements.

By recognizing social movement heterogeneity, DFS builds on the cultural theories presented in Swidler’s 1986 seminal paper titled *Culture in Action*. She observed that “culture is not a unified system that pushes action in a consistent direction. Rather, it is more like a ‘tool kit’ or repertoire from which actors select differing pieces for constructing lines of action” (Swidler, 1986). Therefore, individuals should alter their strategies to conform to varying circumstances,
“choosing actions one at a time as efficient means to given ends.” Heterogeneous SMOs are better equipped to adapt to changing circumstances because their “toolkit” of possible frames is larger than relatively homogeneous SMOs.

At the organizational level, SMO decision-making and strategies are complicated in coalitions as diverse as Tar Sands Action, which brought together environmentalists, ranchers, indigenous tribes, college students, and trade unions. Although cultural diversity exists in religious and values-based movements, they are less pronounced. Therefore, in homogenous SMOs, decision-making is simplified and internal conflicts are few. One way heterogeneous SMOs may be able to minimize internal framing contests is to develop cultural toolkits of their own that embrace the different ways reality can be portrayed. In so doing, potentially competing frames can be turned into complementors that challenge hegemonic frames and broaden the movement’s overall public appeal.

**Challenge and Opportunity**

Despite the obvious appeal of DFS as a movement strategy, implementation could prove problematic, even for the most astute movement leaders. Throughout history, multicultural societies have benefited from social and technological innovations that lead to increased trade, prosperity, and general wellbeing (Westwood and Low, 2003). They have also frequently been centers of ethnic conflict, wars, and genocide (Kuper, 1983). At a more micro level, the productive and destructive qualities accompanying cultural diversity can be observed in multicultural organizations. In a study of multicultural teams, DiStefano and Maznevski (2000) found that diverse teams did both better and worse than culturally homogenous teams. Poor
performing teams were rife with disputes as dominant team members sought to control the agenda, often demoralizing less powerful team members. In contrast, high performing multicultural teams recognized and valued cultural differences and then “leveraged their differences” to devise innovative solutions to problems. In practice, however, homogenous teams generally fared better than diverse teams, and among multicultural teams, destructive outcomes outnumbered constructive outcomes by a significant margin.

Similarly, most studies of heterogeneous SMOs found that tensions exist within alliances over which frames will dominate the agenda (Benford and Snow, 2000). The fact that previous social movement studies have not discussed the potential benefits that diversity brings to SMO alliances is not surprising, given that culturally homogeneous organizations are common and heterogeneous organizations are likely to suppress the frames of less powerful members (Tarrow, 2011). Even progressive organizations like Tar Sands Action are likely to engage in some internal frame suppression. Such internal struggles will be examined in depth in subsequent chapters. Under normal circumstance, one may expect weaker members of organizations to find it difficult to advance their frames, even when frame diversity could benefit stronger coalition members.

Nor are internal struggles confined to social movements. Industry alliances also participate in internal framing contests as companies and trade associations vie to win support for distinct concerns. TransCanada’s objective was simply to obtain a presidential permit to build and operate Keystone XL. However, the American Petroleum Institute (API) sought to use the controversy to promote broader oil interests and the Canadian government saw the conflict as a struggle over bitumen resource development.
In corporate settings, “functional background diversity is the key source for task conflict [between corporate partners] and has the greatest potential to influence performance” (Panteli and Sockalingam, 2005). Nevertheless, the fact that Keystone XL proponents had similar cultural (primarily older Caucasian males with business, law and engineering degrees) and organizational (oil industry) backgrounds would suggest that task conflict should be less pronounced.

**Collective Action Outcomes**

Social movement frames center on some perceived injustice. For instance, environmental frames can be viewed in terms of the injustice to animal and plant species directly impacted by industrial projects and in terms of the indirect harms to communities that must endure air and water pollution, droughts and storms, and rising seas. However, the assertion that only “collective action frames are injustice frames” (Garrison, 1992) is not particularly useful, because in a broader sense, *all* frames have injustice components, including those advanced by institutional elites.

The oil industry has long used economic frames to promote the idea that preventing any form of economic development is an injustice to the workers and communities that stand to benefit from new jobs and tax revenues. Similarly, energy security frames appeal to public fears that purchasing oil from the Middle East helps prop up totalitarian regimes and fund terrorist organizations (Yergin, 2006). Meanwhile, American troops from predominantly working class neighborhoods are put in harm’s way to keep the oil flowing (Klare, 2007).

The notion that social movement frames alone seek to address “some undesirable situation” (Gamson, 1995) is therefore untenable. Other scholars have recognized that “injustice
frames appear to be fairly ubiquitous” (Benford and Snow, 2000), but they too fail to recognize the injustice component in hegemonic frames. However, because Gamson (1995) is helpful in highlighting the importance of emotional and psychological appeals in successful frame development, for the current study the author has broadened the success criteria to encompass all stakeholders, including institutional elites.

Gamson identified three main characteristics of successful frames.

1. Injustice: The frame is highly emotional and arouses a sense of “moral indignation” in the intended audience.
2. Agency: The belief that action can bring about positive change through realistic and achievable objectives.
3. Identity: The frame must have a clear adversary who must be stopped

Each of these success factors will be examined in the evolution of Keystone XL framing contests.

The Role of Social Media and New Media in Framing Contests

At the time when Gamson and his colleagues conducted their seminal study on news media and frame hegemony, television reigned supreme and “fewer and bigger producers [were] saying less and less” (Gamson et al., 1992). Since then, new media have challenged television’s dominant role in supplying information and influencing public opinion. Liebowitz and Zentner (2012) showed that television viewing has been declining, particularly among younger viewers. The impact of new media on television viewing habits was most pronounced among 18 to 24 year olds and had the least influence on older Americans, who still relied on traditional media.
Moreover, when people under 25 watched television, they often did so online (Stockdale and Sauter, 2012), where traditional news networks competed with amateur journalists, independent filmmakers, and international content.

Tar Sands Action is one of the first important movements to use social media as a significant component of a larger new media strategy aimed at countering the ideological hegemony of the oil industry. Tar Sands Action used email, websites, and online social media to mobilize support and disseminate information. The oil industry and its political allies, particularly the Canadian government and the Republican Party in the United States, countered with their own new media strategy to challenge the anti-pipeline alliance, but this aspect of the industry strategy was largely a failure. Nevertheless, the oil industry proved adept at using traditional media and lobbying to win support for the pipeline.

Although social media has proven important in mobilizing support for social movements, its role in internal framing contests is unclear. Did social media somehow facilitate Tar Sands Action’s ability to balance stakeholder interests and facilitate successful DFS outcomes or was it incidental to the movement’s ability to achieve and maintain cultural and demographic diversity?

**Outline of the Dissertation**

This dissertation consists of three sections.

The first section, which includes chapters one through four, introduces the Keystone XL controversy and how it relates to previous research on policy frames and framing contests. Chapter 2 outlines various research methods that have been used to research policy frames and framing contests. It also explains the reasoning behind the methods chosen for this study. Data
sources, coding methods and software tools are also described. Chapter 3 introduces the Keystone XL controversy and provides background on key stakeholders including SMOs, industry, and government stakeholders. In chapter 4, the section concludes with a description of the evolving role of new media in social movements and how social media is reshaping the way stakeholders engage policymakers and the news media. The role of social media in building stakeholder alliances, disseminating information, and mobilizing support is critical to a modern understanding of framing contests and played a major role in the Tar Sands Action campaign.

The second section, which includes chapters five through seven, examines the various framing processes utilized by key stakeholders to achieve specific policy outcomes and how DFS may have influenced those outcomes. Chapter five examines the frame alignment processes of Keystone XL stakeholders and compares those processes to previous framing contests. Chapter six explains how SMO stakeholders reversed decades of effort by the oil industry and the Canadian government to rebrand “tar sands” as “oil sands.” Finally, chapter seven demonstrates how SMOs used DFS to amplify and broaden the frames used to discuss Keystone XL.

Research findings and analysis are presented in the third and final section. Chapter eight begins with a discussion of how the Keystone controversy arose and how diverse opponents united under the Tar Sands Action banner to successfully delay approval of the pipeline. Content analysis of policymaker and news media documents is presented to support DFS theory. Case studies and vignettes provide additional context that will help readers understand how Tar Sands Action leveraged diverse stakeholder interests. A similar analysis of the counterframing strategies of oil industry stakeholders can be found in chapter nine, along with an explanation of why the oil industry may have been less effective despite its vastly greater economic resources.
Case studies and content analysis of American and Canadian government documents are presented in chapters ten and eleven respectively. These chapters describe the vastly different roles played by government agencies and policymakers. Chapter eleven also explains why limited independence of Canadian agencies made them far less effective than their American counterparts in influencing policy and fulfilling their statutory mandates. The dissertation concludes in chapter twelve with a discussion of the implications of these findings for stakeholders, policymakers, and researchers.
Chapter 2: Research Methods

Activism by definition involves various forms of group conflict. One of the pitfalls of research into group conflict is “the tendency of research to deal only with successful pressure campaigns…in political contests there are as many failures as there are successes” (Schattschneider, 1975). To correctly identify key elements of framing contests, current research must consider the distinct factors that allow activists to successfully use frames to achieve policy outcomes and how they differ from those who are unable to achieve meaningful change.

Researchers must avoid *a posteriori* selection of only successful campaigns. The current study seeks to minimize the pitfalls of selection bias by focusing on a stakeholder analysis of an ongoing environmental campaign in which the ultimate outcome is unknown.

Garrett (2006) notes that research on the role of information and communication technology in activism and social movements include “[c]ase studies, surveys, content analysis, simulation, and network analysis.” However, most studies suffer because they rely too heavily on a single method and could benefit from a multi-method approach.

The most popular research method has been the case study. A case study is a descriptive look at one or more organizations, actions, or products, making it “ideal for many types of investigations [that] can be used in combination with other methods” (Tellis, 1997). They are particularly valuable in initial stages of research when the number of available samples may be limited or when the researcher is focused on formulating hypotheses. However, the use of cases and examples “in hypothesis testing situations is always debatable” (Crano and Brewer, 2002).

Another hypothesis generating method that is closely related to case method is content analysis. Like case method, content analysis is primarily descriptive. However, the way data is
collected and described varies considerably from one researcher to the next, with no real consensus on how content analysis should be undertaken. Crano and Brewer (2002) observe that “[s]ome researchers allow no inference in their observations: only observed events (or behaviors) are coded,” while others “require the observer to make inferences about the motivations or intentions that underlie the observed event.”

The more inferential approaches are thought to provide a richer, more meaningful picture of the event under study; this richness often is bought at the cost of lowered reliability and validity. This same dispute is evident in the realm of content analysis, where some researchers insist that the technique be applied only to the manifest content of the materials under study, and others allow some degree of inference making, based on the content and the context in which it occurs. (Crano and Brewer, 2002)

When applied to digital media, researchers review communications in email messages, websites, discussion boards, news feeds, ebooks, and blogs to identify patterns and describe social interactions (Donk, 2004). They then identify the characteristics and objectives of participants, preferred methods of interaction, apparent effectiveness of online communication tools, and outcomes.

Case studies often involve quotes. In the current study, direct quotes fall into three categories:

- Senior level executives and public officials who do not have an expectation of privacy
- Quotes from widely published sources, such as television broadcasts and newspaper articles
- Other individuals in which only non-identifying information is presented
Content Analysis

Analysis of social media content will provide insight into how the Keystone XL Pipeline debate has changed over time. In a broader sense, it could also provide clues into the ways social media and online framing contests affect the political process and determine policy outcomes. Content analysis focuses on the message itself, rather than the person producing the message or its effect on the intended audience. Therefore, content analysis is useful in examining trends and patterns, but has limited predictive ability.

In many areas of research, data is generated by the types of questions researchers ask. For example, subjects may answer questions in a survey, or they may provide opinions during interviews. Researchers may codify certain behaviors and convert observations to numerical data. In contrast, content analysis looks at verbal and written content that has already been generated. The researcher’s job is to ask relevant questions about existing communications and turn those questions into meaningful analysis.

The current study includes both quantitative and qualitative content analysis, with the quantitative informing the qualitative. For instance, when examining content trends in online media, news stories and policy documents, it is helpful to read the source documents to understand what is being said. When the news media content focuses on the economic benefits of the pipeline, one could easily come to the false conclusion that oil industry frames dominated the discussion. By examining the stories, one can see that many of the stories were challenging, rather than accepting, hegemonic frames. Similarly, a decline in policymaker discussion of climate change could suggest several possibilities. The most obvious conclusion would be that policymakers are less interested in global warming. Again, the researcher would be making false
conclusions based on a superficial quantitative analysis. A closer examination of the actual
discussion would reveal that policymakers became preoccupied with other Keystone XL topics
resulting in a relative decline in climate discussions and that some policymakers were
deliberately suppressing discussion of climate changes as part of a counterframing effort.
Therefore, both qualitative and quantitative analyses should be viewed as necessary and
complementary.

Content analysis in the current study will examine verbal and written communications
generated online through social networking sites, video sites, email lists, blogs, online news
programs, and websites. Historically, written communications dominated Internet-based
activism. However, improvements in bandwidth and the proliferation of digital video recorders
have made video sharing sites like YouTube increasingly important in mobilization and
communication.

Content analysis of social media data will be achieved through direct observation of
archival documents and online discussions and through the selective use of social media
monitoring software. The study will measure utilization of various social media tools (such as
Facebook, Twitter, blogs, etc.), keywords, and influence.

It will also involve monitoring of email and other forms of communication. Data
collected through these methods can be subjected to a variety of statistical analysis techniques to
reveal connections between social media usage and policy issue framing by news media,
policymakers and government agencies. However, qualitative researchers have discouraged
reliance on statistical analysis due to small sample sizes and non-randomized data (Ishak and
Bakar, 2012). Although the current study uses larger sample sizes than most qualitative studies,
the focus will remain descriptive. As such, any meaningful relationships that are uncovered will be sufficiently clear to draw conclusions without reliance on statistical significance.

Social media monitoring software is capable of capturing pipeline discussion data over time, which can then be subjected to analysis that could provide insights into changes in online framing and how social networks influence mobilization, public opinion, and ultimately public policies. A comparison of keywords used in online discussions can be used to measure whether issues are viewed favorably or negatively by Internet users. The author will then be able to compare online data to external events, such as protests, major news events, and public policy decisions.

A more complete stakeholder analysis will also include stakeholders who choose not to directly use social media and other forms of computer-mediated communications to influence public policy. Business executives, protesters, and subjects of news media stories may be unfamiliar with social media tools or choose not to use them. Why are these stakeholders excluded from the social media ecosystem? What role do they play in influencing in public policy? What alternative approaches do they use to achieve policy objectives?

These supplemental views of stakeholders not involved in social media were obtained through direct observation, interviews, and attending public events, such as conferences, trade meetings, organizing sessions, and panels. Case study data was derived from published documents, conference presentations, public hearings, and personal interviews with stakeholders and senior level executives and officials. Previously unpublished data was collected using IRB guidelines (see Appendix 2-A).
Databases and Social Media Monitoring

Researchers typically employ software tools that allow them to group data in meaningful ways (Nichols et al., 2008). Companies, such as Visible Technologies, offer corporate customers visualization tools that employ metadata. For example, Visible Intelligence is a software tool that provides a “dashboard” that allows users to visualize a variety of data based around keywords, discussions, and metadata. Although such tools have mainly been used by companies to analyze consumer sentiment and brand value, they can be adapted by researchers to analyze social trends and evaluate the effectiveness of social media campaigns.

News articles were compiled from a search of “Keystone XL pipeline” in Lexis Nexis Academic, an online database of more than 10,000 sources, including US and international newspapers, trade journals, television news transcripts, financial reports, and legal resources. For the current study, results were limited to major publications in each country or category. Canadian news sources included leading dailies such as the National Post, the Globe & Mail, the Montreal Gazette, and the Toronto Star. Similarly, US news sources included major national papers such as the New York Times, Newsday, the Wall Street Journal, the Washington Post, the Christian Science Monitor, USA Today, and the Los Angeles Times. Outside of the United States and Canada, news media did not begin covering the story until 2011. Nevertheless, the inclusion of foreign English language news helps to provide some perspective on the way the issue is perceived in countries that do not have a direct stake in the outcome. Major English language newspapers from Australia, the UK, New Zealand, Korea, and Thailand were included in the sample. Finally, the author looked at oil industry trade journals, such as Inside Energy and the Oil & Gas Journal.
Coding

I analyzed a sample of social media content generated during a three month period from December 2011 to February 2012 that contained the phrase “Keystone XL.” This period is the peak of the social media campaign against Keystone XL that culminated in a faceoff between President Obama and the Republican controlled House of Representatives. The dataset included 6,796 posts from online news sites, bookmarking sites, Twitter, blogs, micro-blogs, and discussion boards. Posts were collected using Visible Technology TruCast social media monitoring software, which examines social media content from across the Internet.

More than 95 percent of posts came from the United States, followed by Canada and Europe. However, many non-US social media participants utilize US-based social media sites, such as Twitter.com, and use American-based email addresses, such as Gmail.com. Therefore, the number of US users is likely overestimated due to the number of Canadian and European users who appear to be US-based in Internet usage statistics.

Although TruCast was deemed the most effective solution for collecting social media content, it had some limitations. TruCast is designed to provide consumer goods and services companies with brand engagement metrics. As a result, its ability to provide meaningful analysis for academic research is incomplete. A company representative acknowledged TruCast’s limitations, although more appropriate research tools are under development. Therefore, for the current project, TruCast was only used for the data collection stage. Collected posts were then exported to Microsoft Excel readable CSV files for analysis with QSR Nvivo 9, a software package designed for sophisticated content analysis research.
TruCast also has some minor data collection limitations. For example, as part of a privacy arrangement with Facebook, TruCast was not permitted to export Facebook posts for external processing and analysis. Instead, Facebook posts were downloaded separately from the “walls” of high profile stakeholders, such as Bold Nebraska, Tar Sands Action, and the US Chamber of Commerce and then added to Nvivo separately.

Although not a limitation, another issue that the author had with TruCast was the large volume of posts available. Several categories of social media sites produced tens of thousands of posts on Keystone XL. For example, over one three month period, more than 12,000 blog posts and 31,000 Twitter posts focused on Keystone XL. Although Twitter messages are designed to be very short, blog posts can vary from a few lines to several pages in length. As a result, the total volume of data available through TruCast exceeded Nvivo 9’s processing abilities, which limits data files to 4 gigabytes. Fortunately, TruCast offers a proprietary randomization option prior to document export. Therefore, the author chose to use this software randomization to select a random sample of 1,000 posts from high volume categories.

Government documents were collected by downloading Adobe Portable Document Format (PDF) files from official government websites. Limiting the samples to PDF files had several purposes. First, it made the data more manageable. Including all document formats in the sample would have exceeding the processing ability of the NVivo software. It would have also been impossible to code the many thousands of documents available within a reasonable time period. For example, a Google search of .GOV websites produced more than 47,000 documents. This does not include foreign domains, such as .GC.CA (Government of Canada), which had

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3 Cross referencing and matrix coding requires that all data to be imported into a single NVivo “project” file, which is limited to 4 gigabytes in size. NVivo 10 is expected to increase this limitation to 10 gigabytes.
more than 1,000 documents. Moreover, these documents are presented in multiple formats, necessitating manual coding for dates, type of document, type of stakeholder, etc.

By limiting documents to PDF files, the author was able to create a purposive sample of approximately 1,600 U.S. and Canadian documents covering the time period of the Keystone and Keystone XL controversies. PDF was selected over other document formats, such as HTML, as the preferred format for official documents. Today, “many governmental and educational institutions have chosen PDF as their official document standard” for their greater security and ability to retain original typesetting and graphics (Castiglione et al., 2010). Consequently, the PDF files extracted from government websites are more likely to be representative of official government policies. This form of purposive sampling is also consistent with the grounded theory approach, in which sampling decisions “are a function of the research question and the ongoing theory development” and are informed by a review of relevant literature (Hutchison et al., 2010).

PDF files require special handling before they can be useable in content analysis. Many PDF files were originally created from scanned copies of correspondence and reports. Scanned files are often saved as image formats that cannot be read by NVivo. Therefore, all PDF files were converted to text readable files using optical character recognition (OCR) tools in Adobe Acrobat X, the leading software for working with PDF files. After OCR completion, the files were checked for accuracy and imported into NVivo where they were manually coded for date, stakeholder category, demographic data, and other identifying features. Once coded, the documents were available for content queries and analysis.
Blog posts, Facebook walls, and other social media documents often contain “reposts” of other people’s ideas and works. In most cases, these were coded under the presenting organization’s categories and characteristics rather than those belonging to the original authors. The reason for this is simple. Organizations that repost videos and articles are interested in conveying that information in a way that influences their readers and followers, and ultimately policymakers. Therefore, by adopting these ideas, the conveying organization’s is essentially using them as their own and the reader instantly associates the idea being presented with the organization that presents the information. As Vicery (2009) notes, “sharing articles via Facebook is a way for some individuals to express their own political ideologies.” Since this study is interested in the sharers’ ideologies and frames, it makes more sense to code those documents as though they were authored by the person or organization posting them.

For example, if a New York Times journalist writes an article about the oil industry, and the Sierra Club reposts a summary of the article on its website, then for the purpose of coding, that article summary no longer belongs to the New York Times, but to the Sierra Club. The associated text would then be coded under categories such as environmentalist, non-profit, and anti-pipeline instead of under respective categories that would normally be associated with a major newspaper, such as journalist, for-profit, and neutral. Similarly, dates were coded by posting date, not original publication date.

Finally, the author coded documents by date and grouped them into four distinct stages in the Keystone XL project history. The first stage included all discussion of the Keystone pipeline prior to June 2011. During this stage, Keystone XL deviates little from the standard review
process for pipelines. Any controversy during this period appears limited to local concerns by stakeholders located near the pipeline route.

The second period begins with the Tar Sands Action social media campaign in June 2011 and ends with direct action in late August 2011. The third period begins in September 2011 with an oil industry response to environmental activists and ends with a decision by President Obama in November 2011 to further delay approval of the permit. The final period begins in December 2011 with Republican lawmakers seeking to overturn the president’s decision. Each period is marked by distinct frames and dominated by different stakeholders. By examining the role of social media in framing and reframing issues during these distinct time periods, the author is able to differentiate stakeholder responses, link explicit actions to specific decisions and outcomes, and provide a timeline of power and influence for stakeholders involved in framing contests.

**Analytical Tools**

Researchers have benefited from new online data collection tools that provide “a rich source of empirical data about social and political behavior” (Margetts, 2009). For example, social media monitoring software collects real time data on how stakeholders are discussing and disseminating information in their effort to achieve policy objectives. Margetts argues that new automated tools that collect data on social network usage are not only desired, but “central” to understanding online behavior, all but requiring “methodological innovation in public policy research.” “By generating new data, the Internet provides the opportunity to understand areas of life and test theories of policymaking that we have lacked the data and research tools to test hitherto” (Margetts, 2009).
The development of new data collection and analysis tools does not mean that traditional methods do not have a place in social media research. Mainstream media content and policymaker communications reveal how specific events, actions, and communications tools influence the way issues are framed in public discourse. For example, an analysis of newspaper articles that discuss Keystone XL can reveal temporal shifts in the language used to frame issues and serves as a barometer of public sentiment. The adoption of particular frames by news correspondents can then be compared to actions of stakeholders over specific time periods.

Articles can also be ranked by authority, with newspapers like the Wall Street Journal and New York Times having more influence than regional or local newspapers and stakeholder specific publications, such as trade journals and newsletters. This is a more effective measure of social media effectiveness than simply assessing policy decisions, which can be influenced by exogenous factors. To undertake this analysis, the author chose to use QSR NVivo 9 software, which is recognized as particularly suited to a grounded theory approach to content analysis (Hutchison et al., 2010).

**Issuecrawler**

One software tool used by scholars to examine online coalitions, also known as “virtual policy networks” (VPNs), is “issuecrawler.” Bruns (2007) describes Issuecrawler as follows:

The crawler gathers the links present in the starting Web pages, and then searches the pages which these links point to, to in turn identify their outlinks. To further narrow down these results to the core network related to the crawl, the crawler also performs what is described as ‘co-link analysis’: from all links discovered during the crawl it filters out only those which are reciprocal at least to some extent – that is, it identifies sites which are linked to by at least two of the starting points and which
can therefore be considered to be at least part of a loosely interconnected network of Websites. (Bruns, 2007).

Issuecrawler uses website links to provide a snapshot of how Tar Sands Action is connected to other organization.

**QSR NVivo**

Imported documents were coded into nodes using “properties and dimensions… discovered in the data” (Hutchison et al., 2010). For example, documents were examined and then placed into categories that best described their purpose, such as political and policy documents, technical documents, advertisements, public hearings, legal opinions and briefs, etc.

Political documents were those directed to, or sent by, politicians and public servants with the aim of influencing or justifying a policy decision. Political documents may also seek to reverse or overturn existing policy.

Policy documents conveyed official government positions. Although policy documents are often the product of political processes, they are different from political documents, as they do not seek to influence or support a position that has not yet been decided. For example, a letter by an environmentalist to a government agency that appeals to values, such as the importance of protecting watersheds from potential oil spills, would be a political document. A statement by the government agency that explains the government’s role in protecting a watershed and an oil pipeline company’s duty to minimize the risk of an oil spill would be a policy document.

Technical documents focused on matters of fact and did not primarily seek to influence policymakers or justify policymaker decisions. They could include financial reports,
environmental statements, engineering specifications, notices of hearings, application forms, maps, and other documents created for informational purposes.

If a pipeline company creates an advertisement explaining how a pipeline will increase security and create new jobs, that document would be considered political. If the pipeline company creates another advertisement documenting where a proposed pipeline will be located and what residents should do in case of an emergency, the document is considered technical in nature. Although corporations may influence government policy, perhaps even to the point of writing entire sections of policy documents, only those documents officially issued by a government agency or state-owned enterprise, such as a state-owned utility, would be considered policy.

Legal documents were those that focused on a legal argument or decision. They included legal briefs, court decisions, affidavits, and testimony of a legal nature. Testimonies that focused on technical issues were classified as technical documents.

To understand how policy framing changes with social media activity, one must look at social media, news, and policy documents during different time periods. Although most documents contained date and time information, there was no standard format. Moreover, while some documents had very clear date and time stamps, others were vaguer. In some cases, government policy documents did not have any date or time information. However, the author was able to encode most of these documents by examining metadata that often included a time stamp of when the document was created. Metadata is essentially the online equivalent of a library index card, which contains information about the subject and location of an object in a library. For example, a picture may be tagged with the date, location, camera type, and other
technical data when the photograph is taken. Metadata has proven useful in content analysis, because it “is structured information that describes, explains, locates, or otherwise makes it easier to retrieve, use, or manage an information resource. Metadata is often called data about data or information about information” (Chan and Hodges, 2007).

Researchers use metadata to categorize content for later analysis. This is particularly useful as the amount of information on the Internet has grown, and the analysis of that information becomes more complex. Researchers then employ software tools, such as NVivo to group metadata in meaningful ways (Nichols et al., 2008).

To accommodate these varying formats, each document had to be manually coded. The author chose to use month and day as appropriately narrow to identify trends. The author initially wanted to include demographic data, such as gender and age, but during the coding process found that demographic details were missing from documents, particularly for social media posts. In many cases, the author was able to identify other important characteristics, such as education, profession, and political affiliation. This data was particularly useful in identifying how social and political forces shaped the way individuals adopted particular frames. The author was also able to generalize demographic characteristics from direct observations and images of people in Facebook and blog posts.
Cluster Analysis

The Jaccard similarity coefficient\(^4\) was used to compare coding between stakeholders on topics relevant to this study. For example, stakeholders were coded by the types of words they used to describe Keystone XL (i.e. tar sands vs. oil sands), the types of issues mentioned (i.e. climate change vs. job creation), political affiliation (i.e. Republican vs. Democrat), and whether the topics discussed were political or technical in nature. Figure 2.1 shows some stakeholders grouped as one might anticipate. For example, indigenous stakeholders share similar concerns about the land, water, and health as ranchers, and the State Department approaches issues in much the same way as other government agencies.

Figure 2.1: Node Clusters

**Nodes Clustered by Coding similarity**

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\(^4\) Jaccard’s Index compares the number of matching notes in two samples. The number found in one sample is then divided by the number in the other sample and the result is multiplied by 100 to give a range of 0 (least similar) to 1 (most similar). QSR NVivo creates clusters using a hierarchical clustering algorithm based on Jaccard’s Index (\(J(A, B) = \frac{|A \cap B|}{|A \cup B|}\)).
On the other hand, some less intuitive clusters are also evident. For instance, environmentalists show a similarity to politicians, both of which are clustered with journalists. Also, oil interests (pipeline companies, oil companies, industry lobbyists, etc.) appear closely matched with government agencies. Such similarities could be the result of existing similarities or, because the data includes documents produced during and after the social media campaign, the results could reflect the influence of activist stakeholders. Are government agencies adopting oil industry frames in policy documents, or have these similarities always existed? Similarly, does the closeness of environmentalists to policymakers and journalists reflect a successful social media campaign or does it simply reflect prior affiliations? To answer these questions, one needs to examine the content within documents and compare them to archival records.

Google Books N-gram Viewer

An N-gram is a string of words of “N” number that can be subjected to computer analysis. For example, a single word is considered to be a 1-gram. A two word phrase is a 2-gram and so on. The current study analyzed bigrams (2-grams), such as “oil sands” and “tar sands.”

In the early 1990s, scholars began to develop N-gram models by employing optical character recognition (OCR) software to scan, catalog, and analyze documents (Brown et al., 1992, Cavnar and Trenkle, 1994). Then, beginning in 2004, Google undertook a project to scan and archive all of the world’s books and journals, using new technologies that allowed “mass digitization” of books without resorting to the laborious task of having to lay each page flat on a scanner (Coyle, 2006). To date, more than 20 million books have been added to the “Google Books” online database (Jockers et al., 2012).
In December 2010, Google launched its N-gram viewer, which allows end users to run word frequency analyses on a subset of 5 million books from the Google Books online library that were published between 1500 and 2008. A visualization tool then presents a frequency chart that one can use to compare how usage of specific terms and phrases changes over time. The tool is also able to generate raw data that can be downloaded and manipulated using statistical software and other tools.

Harvard scholars Jean Baptiste Michel and Lieberman Aiden worked with the Google Books Team to develop the Google N-Gram Viewer. They describe its function as follows:

Usage frequency is computed by dividing the number of instances of the n-gram in a given year by the total number of words in the corpus in that year. For instance, in 1861, the 1-gram “slavery” appeared in the corpus 21,460 times, on 11,687 pages of 1208 books. The corpus contains 386,434,758 words from 1861; thus, the frequency is $5.5 \times 10^{-5}$. The use of “slavery” peaked during the Civil War (early 1860s) and then again during the civil rights movement (1955–1968). (Michel et al., 2011a)

N-Grams have been used by scholars to conduct “research in areas such as document representation and content analysis” (Zhai et al., 2011) and to gain “insight into textual data that might otherwise go unnoticed” (Soper and Turel, 2012).

I employed Google’s Web N-gram service to conduct historical content analysis of published works related to bitumen exploration, extraction, and processing. The current study is believed to be the first to examine framing by the petroleum industry and related stakeholders using N-gram tools. By analyzing the use of specific terms, such as “oil sands,” the author was able to provide needed historical context that will help one understand how these terms were used prior to the implementation of social media campaigns aimed at reframing policy issues.
Google’s N-gram tool is ideal for measuring the gradual evolution of language, communications, and culture, but it is less useful when one wants to examine a sample of documents representative of specific stakeholders, such as government regulators. It is also limited in its ability to measure shifts that occur within short time frames. For instance, Google’s smallest unit of measure is one year, whereas the current study focuses primarily on changes that occurred month to month. Nevertheless, Google’s N-gram tool provided valuable background on social and policy trends that are fundamental to understanding the results of this study.

Limitations

A clear limitation of this study is that it focuses on a specific issue and therefore has a narrow scope. Although this study cannot determine whether the observations are generalizable to other framing contests, it contributes to a growing corpus of studies testing these observations under varying circumstances. Social networking tools are still in their infancy, and therefore researchers have few studies to help them develop broad generalizations. Therefore, the current study will contribute to a better understanding of framing contests in the Facebook era.

Another limitation is in measuring the effectiveness of new media compared to other engagement strategies. One cannot easily separate the impact of electronic communications from other factors that may have an impact on policy outcomes, since new media only represents one part of the overall mobilization and communications strategy. Nevertheless, by including other factors in the discussion, one can better visualize the role of new media in framing contests and public policy development.
The measurement of success outcomes would require a clear definition of what success is, and what it means to framing contests. For some, success is a measure of realized objectives. However, this definition means different things to different people, even among those working within the same coalition. For some Nebraska ranchers, success might simply involve moving the pipeline somewhere else where it won’t affect their property and livestock. For environmentalists, success might involve the complete rejection of the pipeline. However, even if the pipeline is never built, environmentalists will not have achieved their real objective, which is to reduce dependence on fossil fuels in a major way. If TransCanada builds a different pipeline to the west coast and exports the oil to China, the rejection of Keystone XL might have absolutely no impact. Again, this makes success difficult to measure.

Finally, rapid changes in technology could render the new media tools discussed in this study obsolete. New tools and new social structures could arise that will change the dynamics in which stakeholder groups influence policy. Moreover, new laws and regulations could impact Internet usage and the ability of social movements to use online tools to bring about social and policy change. Nevertheless, it is likely that these tools will continue to be used and that any changes that might take place over the near term will have a minor impact on framing contests as discussed in this study.
Chapter 3: Stakeholders

A review of online documents, news stories, and social media posts about the Keystone XL pipeline reveals hundreds of stakeholders at the local, state, federal, and international level. They include ranchers, farmers and landowners, indigenous tribes, trade unions, academics, politicians, government regulators, environmentalists, and concerned citizens. Of these, about 50 stakeholder organizations were consistently active in Keystone XL discussions (see Appendix 3-A).

Many of these organizations played secondary roles in framing the debate and organizing support. Therefore, the author limited the following discussion to key stakeholders from each category. They are defined by their leadership role and higher profile. The chapter begins by providing background on the Keystone XL pipeline and then proceeds to a discussion of the roles and objectives of key stakeholders engaged in framing contests.

Context and Background

To understand stakeholder interests, one must first appreciate Alberta’s bitumen deposits as an important global source of fossil fuel and their potential impact on the environment. Bitumen was discovered in Alberta in the late 18th century, but was not recognized as a key source of energy until the early 20th century, when the Athabasca region was discovered to contain “the world’s largest reserve of economically recoverable oil” (Bellows and Bohme, 1963).

During World War II, the Canadian military established a base in the region and built a pipeline to supply oil to troops. Although bitumen was considered a vital alternative fuel source
during the war (Baum, 1943), the cost was prohibitively expensive (more than USD$100 per barrel), to warrant large scale production. Nevertheless, after the war, major oil companies began to develop smaller scale projects in the region.

The extraction process, which involves pumping hot water deep underground to separate bitumen, was first developed in 1882 by Dr. Robert Bell, director of the Geological and Natural History Survey of Canada. Bell’s process was improved in the 1920s by researchers at the University of Alberta who developed the underlying technology utilized in modern bitumen extraction (Hein, 2000).

Interest in bitumen as an alternative source of petroleum increased throughout the latter half of the 20th century, as Canadian and U.S. oil companies invested in exploration and development. However, high production costs made extraction uneconomical until oil prices reached record levels beginning in 2004. That year, Shell Canada, which held interests in the region since the 1960s, produced a record 188,000 barrels per day (MBD) and announced plans to further double production by 2010 (EIG, 2004). Although production costs have been declining due to improved technology, bituminous oil extraction remains highly capital intensive, costing on average twice as much as conventional crude. Moreover, the extra energy consumed in the extraction, processing, and delivery of bitumen results in carbon emissions that “are 4 to 6 and even 10 times higher… depending on the project” (Saniere et al., 2004).

Oil Industry Stakeholders

Several oil companies have major interests in the Athabasca region, including Shell Canada, ExxonMobil, ConocoPhillips, Suncor, and Syncrude. ConocoPhillips, which is the third
largest integrated oil company in the United States with annual revenues of nearly $200 billion, has played a leading role in the development of the Keystone pipeline system.

In Canada, ConocoPhillips held major interests in natural gas and bitumen, including one million acres of land in Athabasca “estimated to contain more than 15 billion net barrels of resources, making ConocoPhillips the holder of one of the largest land and resource positions in the region.” In 2011, the company extracted 59 MBD of liquefied bitumen, with production expected to increase by a compound 15 percent per year over the next ten years.

However, as Hamilton (2008) notes, the ability to increase bitumen production is often hampered by “water, natural gas, pipeline, labor, and capital constraints.” This can have a major impact on oil spot prices, which in turn affects profitability. Despite the high extraction and processing costs associated with Alberta bitumen, its value on the open market was much lower than traditional crude (see Table 4.1).

Table 4.1: Crude Oil Spot Prices (February 14, 2012)

<table>
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<tr>
<th>Crude Blend</th>
<th>Price (US$ per barrel)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brent North Sea</td>
<td>$117.99</td>
</tr>
<tr>
<td>West Texas Intermediate (Cushing)</td>
<td>$98.24</td>
</tr>
<tr>
<td>Light Louisiana Sweet</td>
<td>$117.24</td>
</tr>
<tr>
<td>Bakken UHC</td>
<td>$70.74</td>
</tr>
<tr>
<td>West Canada Select</td>
<td>$65.24</td>
</tr>
<tr>
<td>Edmonton Syncrude Sweet</td>
<td>$75.24</td>
</tr>
</tbody>
</table>

Source: Howstreet.com


One way to increase the profitability of bitumen was to alleviate delivery bottlenecks that reduced the value of Alberta crude by as much as $10 per barrel. Therefore, future growth in bituminous crude extraction in the Athabasca region will depend heavily on the oil industry’s ability to deliver products to refineries and overseas markets, primarily through the development of an extensive network of pipelines.

ConocoPhillips invested in pipelines as one way to ensure delivery of its products to global markets. In 2005, ConocoPhillips entered into an agreement with TransCanada Pipelines to transport up to 435,000 barrels per day of bituminous crude to refineries in the Midwestern United States in the first phase of the Keystone pipeline system (Madway, 2005).

Rick George, Vice President of Suncor Energy, explained that his company, which also held a major stake in the Athabasca region, took a diversified approach to crude delivery.

Keystone XL is more about the future and more about de-bottlenecking the system… We’re exploring all kinds of opportunities. We believe Enbridge’s gateway pipeline to be equally important, especially from a Canadian nationalist viewpoint.7 We will be looking at reversing line 9 in terms of getting western crudes into Montreal. We’re looking at things like rail as well. And so listen, there are lots of options out there (Suncor, 2011).

Although Keystone XL was only one project among many, the outcome of the Keystone XL controversy could impact pipeline policy and have wide reaching implications for Canadian oil production.

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7 The proposed Enbridge Gateway pipeline would extend westward to the deep sea port of Prince Rupert, British Columbia, where bituminous crude would be loaded onto tankers for export to refineries in Southeast Asia. Enbridge Gateway faced fierce opposition by indigenous tribes and fishers whose livelihoods were threatened by potential coastal oil spills.
TransCanada Corporation

Calgary-based TransCanada Corporation was created in 1998 from the merger of two of Canada’s largest energy companies, NOVA Corporation and TransCanada Pipelines. TransCanada specialized in the delivery of natural gas from the Canadian province of Alberta to markets across North America.

In 2010, TransCanada owned more than 40,000 miles of natural gas pipelines and more than 2,000 miles of crude oil pipelines. The company also owned natural gas storage facilities and several power generating plants that provided 11,700 megawatts of power generation (TransCanada, 2010).

The idea for the Keystone pipeline was initiated in 2003 by the Canadian Association of Petroleum Producers (CAPP), an industry association that represents Canadian oil and gas interests. The industry desperately needed to reduce bottlenecks that prevented bituminous crude from reaching foreign markets. CAPP wanted TransCanada to convert an existing natural gas pipeline to carry heavy oil to U.S. Midwestern refineries. Robert Jones, Vice-President at TransCanada Corporation, recalled receiving a telephone call from a CAPP representative to discuss TransCanada’s interest in transporting heavy crude.

He represented a number of CAPP members. It trickled through the organization to me, because I was the only person in business development who had any crude oil experience. I called him back and we discussed the concept of using pipelines already built to move crude oil being developed in the oil sands. That’s how it all began. (TransCanada, 2010)

On February 9, 2005, TransCanada Corporation announced a $1.7 billion project “to transport approximately 435,000 barrels per day of diluted bitumen (Dilbit) from Alberta to Illinois. TransCanada further announced plans to meet with the Canadian Association of
Petroleum Producers “to gauge additional interest and support for the Keystone project,” and “with stakeholders including communities, government representatives and landowners along the proposed route.”

Keystone would be the first conversion of a major pipeline from natural gas to heavy oil usage, as well as the company’s first project involving crude oil. After reviewing the proposal, Canada’s National Energy Board (NEB) approved the conversion in February 2007. The 537 mile existing natural gas pipeline had to be purged of natural gas, inspected and, if necessary, repaired. In addition, new heavy oil pumping stations had to be installed along the line and corrosion protection systems were installed on both new and existing lines. Finally, 1,379 miles of new pipe had to be constructed to create “a bullet line that brings the crude oil non-stop from Canada through North Dakota, South Dakota, Nebraska, Kansas, Missouri and Illinois to market hubs in the U.S. Midwest,” much of it along existing pipeline routes (Zadery and Woloschuk, 2011). Although the new pipeline was built to withstand the higher pressures of heavy crude, with an ability to operate at pressures up to nearly 10,000 kPa, the converted line could not exceed 6,000 kPa.

TransCanada installed 16 pumping stations and added an additional 232 miles of pipeline needed to bring crude oil to US markets. The U.S. portion of the Keystone Pipeline covered more than 1,000 miles from North Dakota to Patoka, Illinois, crossing the states of South Dakota, Kansas, and Missouri. The U.S. Forest Service began reviewing the first phase of the U.S. leg in May 2006 (Mewett, 2009).

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Keystone required a presidential permit to cross international boundaries. As a result, the U.S. State Department took the lead in reviewing the social, economic, and environmental impact of the project. After two years of review, a presidential permit was issued in March 2008 on the recommendation of the State Department.

In July 2008, TransCanada proposed Phase II of Keystone, commonly known as Keystone XL, a $7 billion 1,700 mile expansion that would carry heavy crude directly from Alberta to Gulf Coast markets and have a transport capacity of up to 1.4 million barrels of Dilbit per day. Although phases I and II were often thought of as a unified network, they would share only a small segment of pipeline (see Appendix 3-B). When both lines were taken into account, they had “the potential to move approximately one-third of total Canadian exports to the U.S., 10 per cent of total U.S. imports and almost 250,000 bbl/d of domestic U.S.-produced oil” (TransCanada, 2012).

By the time President Obama rejected Keystone XL in early 2012, TransCanada had already spent nearly $2 billion on the project. The State Department invited TransCanada to submit a new application that addressed concerns over the proposed route. The new route was expected to add another $1.6 billion to the overall cost of the project (Olsen et al., 2011).

Enbridge Energy Partners

Enbridge, Inc., another large pipeline company with interests in the Athabasca region, planned a competing pipeline to Keystone XL by linking existing cross-border lines not subject to State Department review and oversight. An extension from Illinois to the Gulf Coast could
deliver large volumes of Canadian Dilbit by mid-2013, thereby easing some of the industry’s delivery constraints (Olsen et al., 2011).

Enbridge also planned to build a pipeline from Alberta to the west coast of Canada, where crude could be loaded onto tanker ships for export. The Northern Gateway Pipeline faced considerable opposition by environmentalists, indigenous groups, and fishers and was dubbed the Canadian Keystone by its detractors.

However, Enbridge faced other challenges after a devastating spill of 819,000 gallons of bituminous crude in Michigan’s Kalamazoo River on July 26, 2010. As of April 2012, parts of the river remain closed despite continuous cleanup efforts that began almost immediately after the spill was contained on July 28, 2010. A subsequent investigation by the NTSB found a “culture of deviance” for covering up flaws in the pipeline and for failing to follow safety protocols. For example, control room staff ignored leak alarms repeatedly over a 17 hour period, did not inform local law enforcement and early responders of the risk of a leak (911 operators began receiving calls within an hour of the spill, but were unaware of the existence of pipelines in the area), and continued to pump more oil into the line when the pressure dropped, thereby exacerbating the disaster. When the leak was finally discovered, Enbridge did not have a spill response plan and the closest responders were in another state (Hersman, 2012).

The Enbridge spill was important because it challenged the oil industry’s claims that pipelines were safe and that bituminous crude was no more harmful than conventional crude. In fact, the heavy crude posed unique challenges to cleanup crews. They were “not prepared to deal with oil that sinks,” explained Pipeline Safety Trust President Carl Weimer. It was events like this that made oil sands “everyone’s favorite” target, Weimer explained, even though for most
activists the concerns were “not about pipelines, but about other issues” (Black et al., 2012). It also showed that safety mechanisms that ensure safe operation can be easily undermined by employees who choose to ignore safety protocols or cover up serious flaws that might prove costly to repair. The NTSB expressed frustration that pipeline operators often chose to ignore government regulations that were enacted to ensure the safety of the pipeline network, as noted in the opening remarks by NTSB Chairman Deborah Hersman during the Enbridge hearing.

Last year, we were in this room talking about PG & E and the explosion in San Bruno, California, that killed eight people and injured 58 more. Today, we meet to talk about Enbridge and significant environmental damage in Marshall, Michigan, with more than 840,000 gallons of oil released and record cleanup costs. In both cases, we found problems with integrity management programs, control centers, public awareness programs, and emergency response.

While our findings raise red flags about the safety of these two companies, they should also force us to ask hard questions of this vital industry. With more than 2.5 million miles of pipeline running through this country – enough to circle the Earth one hundred times – we have to ask, “Are these companies representative of others?” If the answer is yes, we can expect to be back here again discussing the same issues with a different company. The only unknowns are when, where, and how much damage. (Hersman, 2012)

The Enbridge pipeline spill became an issue for some Keystone XL opponents who asserted that similar spills were bound to occur along the proposed route. At the API Pipeline Conference, industry executives seemed far more concerned about the policy and regulatory implications of the Enbridge spill than by the Keystone XL controversy. Most saw Keystone XL opposition as a specific campaign that had limited scope beyond TransCanada and its partners. In contrast, the Enbridge pipeline, Deep Water Horizon and the San Bruno, California accidents were pushing policymakers to impose far stricter regulations and significantly stiffer penalties on pipeline operators and oil companies.
Government Agencies

In 2004, President George Bush issued Executive Order 13337 delegating authority to the Secretary of State “to receive all applications for Presidential permits… for the construction, connection, operation, or maintenance, at the borders of the United States, of facilities for the exportation or importation of petroleum, petroleum products, coal, of other fuels to or from a foreign country” (Bush, 2004). As a result, it was the Secretary of State’s duty to ensure that any regulatory, environmental, and security concerns were adequately addressed prior to issuing a permit.

According to a congressional research service report, the State Department “must request input from ‘cooperating agencies,’ which include any agency with jurisdiction by law or with special expertise regarding any environmental impact associated with the project.”

Cooperating agencies for the Keystone XL project (for the pipeline’s first Presidential Permit application) were the U.S. Environmental Protection Agency (EPA); the Department of Transportation’s Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS); the Department of the Interior’s Bureau of Land Management, U.S. Fish and Wildlife Service, and National Park Service; the U.S. Army Corps of Engineers; the U.S. Department of Agriculture’s Farm Service Agency, Natural Resources Conservation Service, and Rural Utilities Service; the Department of Energy’s Western Area Power Administration; and state environmental agencies. (Parfomak et al., 2012)

U.S. State Department

Normally, pipeline permits are issued by the Pipeline and Hazardous Materials Safety Administration, a division of the U.S. Department of Transportation. However, once pipelines or
other utilities (transmission lines, telecom, etc.) cross international boundaries, they become the purview of the State Department.

After TransCanada submitted its permit application in November 2008, it became the State Department’s responsibility to conduct an Environmental Impact Study (EIS). The State Department coordinated its efforts with other federal and state agencies. It also reviewed studies conducted by TransCanada and its partners, consulted scholars and industry experts, and held public hearings.

The State Department hired environmental consulting firm Cardno ENTRIX to conduct public hearings on its behalf and to coordinate data collection for the EIS. Although some environmentalists questioned the decision to hire Cardno ENTRIX because of the company’s previous work with oil companies, including TransCanada, a subsequent investigation by the Office of the Inspector General (OIG) found “no evidence that TransCanada (the applicant) had improperly influenced the Department’s selection of Cardno Entrix as the Keystone XL EIS third-party contractor” (Geisel, 2012). However, the “OIG also determined that the Department’s limited technical resources, expertise, and experience impacted the implementation of the [National Environmental Policy Act] process.” To remedy this deficiency in expertise, the State Department had to rely heavily on other government agencies such as the EPA, Fish and Wildlife, and corresponding state agencies (The EIS process is outlined in Appendix 3-C). It also relied on contractors and consultants, such as Cardno ENTRIX, which had expertise in pipelines and environmental issues.
U.S. Fish and Wildlife Service (USFWS)

The USFWS took an active role in evaluating the environmental impact of Keystone XL. The agency spent approximately two years conducting detailed research on the proposed pipeline route and its potential impact on native and migratory species. The agency also issued detailed guidelines on environmental practices ranging from protecting insect habitats to ensuring the application of the correct seed mix in soil reclamation.

Although, like other agencies, the USFWS relied heavily on environmental consultants hired by TransCanada to assess the environmental impact of Keystone XL, the agency also took a critical approach to the technical documentation it received from TransCanada and its subcontractors.

Keystone XL was expected to impact several endangered species. They including migratory birds (interior least terns, whooping cranes, mountain plovers and piping plovers), plants (western prairie fringed orchid), and insects (ABB). The USFWS took the lead in “providing conservation measures” to ensure that endangered species would not be harmed by Keystone XL or its construction.

The Environmental Protection Agency (EPA)

Congress created the United States Environmental Protection Agency in 1970 to enforce the National Environmental Policy Act (NEPA), conduct research, and develop new policies to protect the environment and improve air quality. Since its founding, the EPA has expanded its role to include a wide range of environment concerns ranging from water quality to protecting
endangered species. In 2011, it also began to regulate greenhouse gas emissions under the Clean Air Act.

EPA regulation covered the entire range of oil industry activities from extraction to end user consumption. The EPA had a direct role in pipeline regulation under its Spill Prevention, Control, and Countermeasure (SPCC) rule, which included “requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines.” Under the SPCC rule, the EPA established programs to “help ensure that facilities and organizations take steps to prevent oil spills, chemical accidents, and other emergencies, implement planning and preparedness requirements, and respond to environmental emergencies” (EPA, 2012).

**Pipeline and Hazardous Materials Safety Administration (PHMSA)**

PHMSA is a division of the U.S. Department of Transportation (DOT) that was created in 2004 under the Norman Y. Mineta Research and Special Programs Improvement Act. PHMSA described its mission as protecting “people and the environment from the risks inherent in transportation of hazardous materials – by pipeline and other modes of transportation” (PHMSA, 2012). It was the lead regulator overseeing the construction and maintenance of “the nation’s 2.6 million miles of natural gas and hazardous liquid pipelines.”

PHMSA’s role usually begins once a permit has been issued and construction begins on a pipeline and it ends when the pipeline is removed from service. For Keystone XL, the State Department asked PHMSA to review and provide feedback on parts of the EIS that related to pipeline operation and safety. Specifically, PHMSA provided technical feedback on matters such
as pipe coatings, construction codes, safety inspections and testing. The purpose was to ensure that the pipeline met requirements to prevent corrosion and leakage. It also responded to specific concerns raised by the general public in hearings and letters (Gilliam, 2012).

**Social Movement Organizations**

Opposition to Keystone XL began shortly after the pipeline was first proposed. Trade unions took the lead in challenging TransCanada’s plans, followed by ranchers and landowners who might be affected by right-of-way concerns, environmentalists who were concerned about climate change and oil spills, and by indigenous groups who raised concerns about the health impact bitumen extraction was having on local native communities and the destruction of wildlife habitat in the Athabasca region.

**Communications, Energy and Paperworkers Union of Canada**

One of the earliest documented opponents to the Keystone pipeline was the Communications, Energy and Paperworkers Union of Canada (CEP). The CEP was “Canada’s largest union of energy industry workers, with some 35,000 members employed in oil and gas extraction, transportation, refining, and conversion in the petrochemical and plastics sectors.”

On September 21, 2007, TransCanada received preliminary approval from Canada’s National Energy Board (NEB) to begin construction of the Keystone Pipeline. The CEP immediately appealed the decision on the grounds that the project would “exclusively serve U.S.

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10 Source: Communications, Energy and Paperworkers Union of Canada (oldsite.cep.ca/cep_on_line/keystone/shrybman_e.html Accessed April 9, 2012)
markets” by exporting unrefined crude for processing in the U.S., instead of expanding refining capacity in Canada.\(^\text{12}\) By this time, projected capital costs were revised upward to $5.2 billion, partially reflecting “the increased size and scope of the project,” which was now expected to transport upwards of 590,000 barrels of oil per day and reach as far as Cushing, Oklahoma.\(^\text{13}\)

The union opposed Keystone and several other pipelines on the grounds that exporting unprocessed bitumen would result in a loss of up to 18,000 Canadian jobs that would be created by processing crude in Canadian refineries. The union demanded that the Canadian government endorse policies that created Canadian jobs, improved energy security, and fulfilled climate change obligations. It also called for the Canadian parliament to enact legislation that would restrict the exportation of unprocessed crude.

More recently, the CEP focused less on jobs and more on the concerns of Canadian indigenous communities and environmentalists seeking to block the Enbridge Northern Gateway pipeline, which would carry crude west across northern Canada to the port of Prince Rupert, British Columbia. This mountainous and sparsely inhabited region was home to a number of Canadian native Indian tribes who had experience winning policy concessions on issues such as native land claims and self-government.

In March 2012, Jim Britton, CEP’s Western Region Vice President joined with Bill McKibben of 350.org to address indigenous protesters in Vancouver, British Columbia. He expressed the union’s opposition to bituminous crude oil pipelines that would threaten the local ecology and contribute to climate change. “We are Canada’s energy union and we stand with you


on this issue,” he told a crowd of activists from tribes across British Columbia. “We do not support Enbridge. We do not support Northern Gateway. This isn’t just about oil. This is about us. This is about our communities” (Cuffe, 2012).

American Labor

Unlike their Canadian counterparts, many American labor unions overwhelmingly supported the pipeline. Whereas Canadian trade unions saw Keystone XL as exporting jobs, American trade unions viewed the pipeline as a way to create union jobs in occupations such as transportation, construction, and pipefitting. Leading the charge was the United Association, self-described as “a multi-craft union whose members are engaged in the fabrication, installation and servicing of piping systems” (UA, 2011).

In one hearing, a union member gave an emotional plea. “I don’t have a slick speech,” he told State Department and Cardno ENTRIX representatives. “I don’t have anything written in front of me. All I know is to state it from the heart. I need this job. My family needs this job. My brothers and sisters need this job” (Hoffman, 2011). Other union representatives spoke of the quality of the workmanship of their members and offered assurances that construction quality would all but eliminate any chance of an oil spill.

American labor traditionally aligned itself with the Democratic Party, but when Keystone XL became a partisan issue in late 2011, unions found themselves on the side of Republicans, often parroting Republican Party positions on the risk of importing oil from hostile regimes in the Middle East, the need to invest in America, and the importance of the oil industry to the U.S. economy. However, despite the rhetoric, trade unions clearly focused on job creation as their
primary concern. Even in states like Nebraska, where grassroots opposition to the pipeline was strong across many segments of society, trade unions gave their unwavering support to TransCanada.

**The Pipeline Safety Trust**

The Pipeline Safety Trust is a non-profit advocacy organization created following an explosion along the Olympic Pipeline in Washington State that killed three children in 1999. Its mission was to promote “fuel transportation safety through education and advocacy.”

In 2009, the Trust sent a letter to federal regulators in which it raised a number of concerns about the safety of Keystone XL. Among them were concerns that a gas pipeline would be used to carry heavy crude oil and that it might be permitted to operate at pressures that exceeded design limitations. Bitumen transportation created its own special problems, according to the trust.

Liquid pipelines, especially batch type liquid operations, such as that associated with synthetic crude or bitumen blends from tar sands, can be much more susceptible to cycle fatigue related anomaly failure introduced by operating pressure cycling, even on newer, tougher pipe steels.

(Weimer, 2009)

Following the July 2010 Enbridge pipeline rupture near Marshall, Michigan, the Trust took a visibly stronger position against Keystone XL. In a 2011 report coauthored with the Natural Resources Defense Council (NRDC), it raised a number of safety and environmental concerns, including some that were not directly related to pipeline safety, such as climate change. The

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report began by focusing not only on pipeline safety, but on the harms caused by bitumen extraction.

While the impacts of tar sands production are well known—destruction of Boreal forests and wetlands, high levels of greenhouse gas pollution, and immense amounts of toxic waste—less well known is the increased risk and potential harm that can be caused by transporting the raw form of tar sands oil (bitumen) through pipelines to refineries in the United States. (Swift et al., 2011)

Nevertheless, the Trust’s primary focus remained on preventing spills and other accidents through stricter regulations and monitoring. According to the report, Canadian and US pipeline regulations, which were designed for the transportation of natural gas and conventional crude oil, were inadequate to meet “the unique safety requirements” of bitumen. It went on to call for a ban on all new bitumen pipeline construction until “safety and spill response standards are adopted.”

**Tar Sands Action/350.org**

Tar Sands Action and its parent organization, 350.org, were founded by environmental activist and Middlebury College professor Bill McKibben. McKibben is best known for his 1989 book *The End of Nature*, which was written when he was only 27 years old and brought “into open debate the major questions about global warming, oceanic change, atmospheric chemistry, bioengineering, industrial pollution, and population pressure” and their longer term impact on the planet (Luke, 2005).

In 2006, McKibben organized a five day walk in his home state of Vermont as a way to raise awareness of global warming. That event prompted McKibben and several of his students to launch 350.org in 2008. The name “350 is the number that leading scientists say is the safe
upper limit for carbon dioxide—measured in ‘Parts Per Million’ in our atmosphere… to avoid runaway climate change.”

McKibben’s 350.org sponsored a number of high priority campaigns, one of which was Tar Sands Action. Tar Sands Action was created in June 2011 to bring together diverse stakeholders opposed to the Keystone XL pipeline.

Nominally, the goal of Tar Sands Action was to stop the Keystone XL pipeline on behalf of all the stakeholders who saw the potential harms from the project. However, as an organization sponsored by 350.org, climate change often dominated the discussion. Tar Sands Action made it abundantly clear that it opposed the pipeline primarily on the grounds that bitumen extraction must be stopped. The organization sought objectives that went far beyond one specific project by helping focus attention on climate change and the harms caused by fossil fuels. The central importance of climate change in the Keystone XL debate becomes readily apparent in the Issuecrawler map of Keystone XL activism (see Chapter 4), where key opposition stakeholders are connected to climate related organizations.

The focus on climate change also limited the options for negotiating a solution with pipeline proponents, such as oil companies and the Canadian government. Oil company executives told me that they felt helpless to do anything about an issue over which they have no control. In the oil industry meetings that the author attended, executives and regulators seemed much more concerned about pipeline spills and explosions over which they would be held accountable than over the impact their industry had on climate change.

Farmers and Ranchers

Keystone XL’s proposed route transited a large number of farms and ranches in Canada and the United States. Most farmers and ranchers saw the pipeline as an immediate threat to the land and water that they depended on for their livelihood and were not convinced by the contingency and compensation plans offered by TransCanada.

In some cases, landowner interests were represented by agricultural industry associations. However, the majority of landowners appeared to represent themselves and did not actively participate in social movement organizations. Republican ranchers found themselves in a difficult political position after Republican Party representatives began to label anyone opposed to Keystone XL as part of “a fringe minority” of socialists and environmentalists (Gillespie, 2012). In Nebraska, the feeling of powerlessness that many ranchers expressed in public hearings only began to change when a local activist launched Bold Nebraska, a protest movement that sought to protect the interests of ranchers through public awareness and direct action against TransCanada. Nevertheless, the alliance between ranchers and environmentalists was tenuous at best.

Bold Nebraska

Jane Kleeb founded Bold Nebraska in 2010 as a grassroots progressive political organization. Shortly after she learned about TransCanada’s plans to route Keystone XL through the Nebraska Sandhills, she began organizing opposition to the pipeline. Stopping Keystone XL quickly took over as the organization’s primary mission. Kleeb traveled to rural communities near the pipeline route to meet with residents face-to-face and through community meetings.
Although most Nebraskans were Republican, Kleeb says that her efforts to stop the pipeline received broad support.

> We’re not an oil pipeline state. We’re an [agricultural] state. And having this massive oil pipeline – and on top of it tar sands, which was this foreign thing – was counterintuitive to everything we know about our state. We have all of these amazing wetlands and ecotourism sites with the Sandhills cranes. And then we have these massive Sandhills, where the majority of our ranchers and our cattle are, and the Ogallala aquifer. I think because it was so counter to the identity of our state – which is corn and cattle – that was one reason [why Nebraskans were concerned].

(Mark, 2012, quoting Kleeb)

**Conclusion**

One cannot hope to capture the interests of all Keystone XL stakeholders in a few pages. The aforementioned participants represent key individuals and groups involved in Keystone. In the following chapters, the author will examine the different types of frames employed by significant stakeholders before, during, and after, the Tar Sands Action campaign. The author will also examine what, if any, connection these frames have to the development of government policy.

All of the environmentalists, government regulators, politicians, and oil industry executives whom the author met over the course of this study appeared sincere in their convictions, although what they said in private sometimes conflicted with their public statements. For instance, industry executives and government regulators publicly praised each other as partners who have a common goal of protecting the environment, creating economic opportunities and increasing pipeline safety. Yet, behind the scenes, tension between government and industry was clearly present. In private, oil industry executives expressed their dislike of the
proscriptive measures and increasingly complex compliance and reporting requirements of government.

Industry leaders clearly wanted more flexibility in government regulations, including an acknowledgement that some regulations are not appropriate for all oil and pipeline companies. They were also frustrated by what appeared to be penalties levied on the entire industry as a result of the actions of a few irresponsible operators. At the same time, government officials sometimes questioned the sincerity of industry executives in their commitment to reducing accidents and increasing transparency.

Ranchers viewed the oil industry as putting profits before people and environmental activists were concerned about apparent collusion between government and industry. For policymakers, balancing conflicting views and objectives is often impossible. Instead, they must decide who will be the winners and losers. The current research looks at the role of framing contests in this delicate balancing act.
Chapter 4: The Role of Social Media in Framing Contests

Tar Sands Action differed from earlier environmental campaigns in its extensive use of social media to mobilize support, create alliances, and disseminate information. The advent of online social networks facilitated the creation of new activist organizations that use the Internet to promote a social agenda. Meanwhile, existing organizations are adapting to the new reality of online social media, which is reshaping the way society functions. Organizations, both new and old, are increasingly impacted by online social networking sites like LinkedIn, Twitter, and Facebook. Some have embraced these new tools to reach more people in more ways, while others have resisted change.

Online social media has the potential to bring about change more rapidly than at any time in history. It forces governments to be more transparent and challenges the rules of secrecy and privacy. As private actions become subjected to increasing public scrutiny, organizations can no longer expect anything that they do or say to remain private and confidential.

This chapter examines the evolution of computer mediated communications and its growing importance for social movements, beginning with the traditional role of social movements and how this role has changed to reflect the challenges and opportunities of the Internet generation. The role of social media in framing contests is considered, with an emphasis on how SMOs use social media to achieve policy objectives.

Virtual Communities

Feenberg (1991) distinguishes between two types of computer systems. The first are management information systems that primarily function as command and control centers. Their
hierarchical design facilitates control over labor and production through automation and their primary purpose is to solve practical and functional problems. The second type is the democratically designed system. These systems “respond to the communicative dimension of the computer” and they facilitate “the self-organization of human communities.” It is this communicative dimension of computing that is transforming social relationships and forcing organizations to rethink the way they approach specific issues.

The earliest virtual communities were scientific collaborations between researchers at various universities and government laboratories. The advent of the World Wide Web widened access to virtual communities to include the general public. Today’s virtual communities encompass nearly everyone who has access to the Internet – approximately two billion people in 2010 (Abdulkareem, 2010).

Ahuja and Galvin (2003) separate members of virtual communities into two categories, newcomers and established members. Newcomers are information seekers who may have limited knowledge in the group’s field of interest. The ability of a group to attract new members requires the group to provide the information sought by new members. “One means might be a simple database of group information available that can be viewed by group members, i.e., answers to Frequently Asked Questions” (Ahuja and Galvin, 2003).

Virtual groups should also have designated members who are available to answer the questions of new members. Larger groups may have members who specialize in certain topics and any questions by newcomers would be directed to these specialists. In contrast to newcomers, experienced users are less driven by information seeking, but instead depend on online networks for social support. This distinction between newcomers and “core” members is
particularly true for communities centered on topics of a highly technical nature (Mathwick et al., 2008).

The ability of heterogeneous social movements to attract diverse stakeholders and foment alliances is dependent on the ability of movement leaders to bridge the gap between core members and newcomers. For instance, 350.org was founded by university students who were astute users of social media and used their knowledge of online communities to build support for their organization, despite a lack of funds to undertake traditional campaign drives.

Core 350.org organizers also engaged SMOs that represented peripheral stakeholders, such as Bold Nebraska (ranchers and farmers) and the Indigenous Environmental Network (IEN). Leaders of these organizations were invited to protests and leadership meetings in Washington, D.C. and Nebraska where face-to-face interaction helped build trust and allowed core organizers to understand how the concerns of peripheral stakeholders. As will be demonstrated in later chapters, these trust building activities were prerequisite to Tar Sands Action’s ability to leverage its stakeholder diversity and implement DFS activities.

Almost by definition, early supporters of 350.org were core users of social media. However, Tar Sands Action had to reach beyond student activists to embrace ranchers and indigenous peoples, many of whom had limited knowledge of the Internet, not to mention social networks. For instance, one recent study found that “the vast majority of ranchers indicated they would not be interested in internet-provided forms of information” (Johnson et al., 2011). On the other hand, Native American tribes generally have high rates of Internet use and a strong web presence (Dyson, 2011, Fish, 2011). Therefore, one would expect indigenous participants, such as the IEN, to integrate more easily into Tar Sands Action than ranchers and farmers.
Successful outreach requires developers of social networking software to focus on social aspects of site design and less on technical aspects. Although the design of the computer interface is important to the user experience, users also need to feel welcome on the site and they need to trust the site (Harrison, 2008). Trust has become more important as more people meet each other for the first time online (Isbister et al., 2000). Therefore, the human dimension can be as important as technology for SMO leaders who seek to build heterogeneous support and mobilize diverse stakeholders. Tar Sands Action facilitated outreach and trust-building through organized online and offline activities that will be discussed in later chapters.

A Brief History of Internet Activism

One of the first activist coalitions to arise from the Internet was the Zapatista (EZLN) uprising in Mexico in the mid-1990s. In 1993, the leftist rebel organization disseminated news about the uprising through its Listserv.\textsuperscript{16} The use of the Internet proved instrumental in winning international recognition for the Zapatista cause.

During 1994, few Mexican officials had any awareness that the EZLN and sympathetic NGOs were developing a strong presence on the Internet by means of e-mail lists, computer conferencing systems, and Web pages that were often accessed by hundreds, perhaps thousands, of activists in North America and around the world. Eventually, these officials began to learn what the NGOs already knew – that a new model of conflict was emerging, one in which the use of the new information technologies reflected the rise of radically new approaches to organization, doctrine, and strategy (Ronfeldt, 1998).

Although the Internet was only one of many tools that the Zapatistas used to promote their cause, it proved to be the most effective at winning international support and attracting

\textsuperscript{16} A Listserv is subscription-based automated email program that sends news updates to the email addresses of members.
mainstream media. It was also one of first successful uses of amateur journalism, often referred to as “native reporting” (Atton, 2003).

The Internet allows anyone with an inexpensive camera and computer access to post blogs that compete directly with mainstream news. A few years after Zapatistas used native reporting to publicize their uprising, East Timorese used native reporting to provide information to supporters around the world. Activist websites relayed the information that only a few years earlier had been controlled by the Indonesian government. According to Cardoso and Neto (2004) “[t]he ability to use technologies to access and process information more rapidly and to interconnect people around the world in real-time frames enabled the [East Timor Independence] movement to reach its objectives.” In fact, indigenous communities around the globe were among the first to recognize the value of the Internet as a means to strengthen their communities, to protect their cultural heritage and to advocate for indigenous rights (Dyson, 2011).17

The growth in amateur journalism is perhaps epitomized by Wikileaks.org, a website founded in 2006 where people can anonymously post documents of public interest about corporations, governments, and individuals. Wikileaks has since grown to a “network of thousands motivated by a shared hacktivist culture and ethic” (Ludlow, 2010) and is used by mainstream media as a source of information about current affairs. Moreover, unlike traditional media which can often be silenced by critics, Wikileaks’ worldwide network of activist supporters ensures that if the site were to be closed by some government authority, its affiliates would quickly resurrect the site in another location. The distributed nature of the Internet makes

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17 For instance, NativeNet was established in 1989 as a bulletin board dedicated to native culture and identity and Native American Indian Resources was established in 1994 as one of the first Native American websites.
it harder for organizations to keep secrets (Pike, 2010) and easier to protect sources (Pilger, 2010).

In Mexico, officials were slow to react to changes in technology. In Italy, authorities took direct action against online dissent. For example, in 2001, Italian police seized the computers of Netstrike, an antiglobalization group that supported a variety of causes, including the Zapatista uprising (Jordan, 2002). In a separate action, Italian police destroyed the computers of another antiglobalization group known as Indymedia (Juris, 2005). However, supporters immediately set up mirrors in other countries, where they were beyond the reach of Italian law.18

The futility of the police action in Italy was an early sign of the difficulties authorities would face when seeking to regulate speech on the Internet. Instead, authorities have attempted to use public opinion to weaken support for activist organizations seen as potential threats. For example, Vegh (2005) believes that authorities have used the September 11, 2001 attacks to win media support in portraying cyberactivists as terrorists. An analysis of newspaper articles before and after September 11 revealed a major shift in terminology from “hacking incidents” to “cyberterrorism.” Although part of the shift can be explained by a greater concern for authentic cyberterrorist threats, in some cases activist organizations were simply being relabeled as terrorists (Vegh, 2005).

This use of language to reframe public opinion was also central to the Keystone XL controversy. For instance, this study will examine how Tar Sands Action leveraged social media to successfully reverse decades of industry efforts to reframe “tar sands” (the traditional term for

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18 A mirror is an exact copy of the files, structure, and format of a website. Mirrors have multiple purposes, such as preventing data loss during catastrophic events, speeding up access to websites by making content available near users, reducing the load on individual servers, and providing continuous service during localized network disruptions.
bitumen deposits) as “oil sands,” which the oil industry believed to be a more benign term that emphasizes a valuable end product (oil).

As the Internet has become mainstream and accessible, activists without strong technical backgrounds have increasingly embraced online tools that help to promote their causes, thereby calling into question earlier views that held technological civilization to be “incompatible with mass participation” (Feenberg, 1991). Prior to the advent of the World Wide Web, some scholars believed that automation and computerization would reduce the need for education and skill development. Consequently, civilization as a whole would be less qualified to participate in the “active citizenship” required by democratic societies. These scholars argued that democratic principles were undermined by the corporations that control the technology and destroy the structures that are “indispensable to a more participatory way of life.”

In contrast, Mark Zuckerberg, CEO of Facebook, believes that social media creates more transparency and more participation.

When there is more openness, with everyone being able to express their opinion very quickly, more of the economy starts to operate like a gift economy. It puts the onus on companies and organizations to be [better], more trustworthy. It’s really changing the way governments work. A more transparent world creates a better-governed world and a fairer world. (Kirkpatrick, 2010, quoting Zuckerberg)

Juris (2005) similarly argues that “digital networks provide the technological infrastructure for the emergence of contemporary network based social movement forms” because they significantly enhance “the speed, flexibility, and global reach of information flows, allowing for communication at a distance in real time.”

Historically, “officialdom’s most important instrument of power [was] the transformation of official information into secret information” (Weber et al., 1994). Political power depended on
limiting the wide availability of information (Stone, 1988). Secrets helped to limit oversight of
government agencies, gave companies advantages over their competitors, and provided countries
with a strategic advantage over enemies. Secrets also gave elites an advantage in framing
contests by limiting the ability of social movements to challenge “the facts” disseminated by
lobbyists and industry associations.

Historically, the high cost of technology and communications gave large corporations and
governments private access to resources that were beyond the means of SMOs. This contributed
to a power imbalance in framing contests. Recently, the Internet has helped to democratize
communications media and has made analytical tools widely available to anyone with Internet
access. For instance, in 2011, Facebook and Google spent $1.1 billion and $13 billion on
operating expenses respectively (Cook, 2012), yet the technology resources created through such
investments were freely available to anyone. This democratization of communications and
information resources significantly closes the power gap between corporations with substantial
fiscal means and non-profits with very limited funds.

Today, the ability of business and political organizations to maintain power imbalances
by monopolizing information is becoming increasingly limited (Miller and Sidney, 2007).
Wikileaks is perhaps the best known organization to employ social media to expose government
and corporate secrets. However, the use of computer mediated communications to disclose
secrets is not new. In 1998, Robert Lane created a website called fordworldnews.com, where he
posted private details about Ford Motor Company’s employment practices and automobile
prototypes. When Ford tried to obtain a restraining order, the United States District Court for the
Eastern District of Michigan held that prior restraint would violate Lane’s First Amendment
The decision helped to protect Internet journalists and bloggers from prosecution except when information posed “a grave threat to a critical government interest.”

In the Keystone XL Pipeline dispute, anti-pipeline activists used government and industry documents to publicize the risk of spills and other hazards. For example, in September 2011, the New York Times republished data compiled by the Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration (PHMSA) in a chart that appeared to show that spill risks were much higher than pipeline companies were willing to admit (see Appendix 4-A). In a recent presentation to oil industry executives, PHMSA Associate Director Jeff Wiese pointed to the publication of this data as an example of the challenge of public communication during a period of unprecedented Internet access. “The worst discharge locations are on the Internet, and that’s not helpful to anyone,” he said (Black et al., 2012). Tar Sands Action and its allies also used government studies made available on the Internet to challenge the jobs claims and proposed economic benefits promoted by the API. Likewise, when industry claimed that pipelines were safe and spills were rare, Tar Sands Action was able to refute such assurances through native journalism that provided first hand documentation of pipeline ruptures and their effects on the environment and communities. Particularly dramatic was amateur footage of an Exxon Dilbit pipeline spill in early 2013 that showed a river of thick black liquid running through a residential neighborhood in Arkansas.

The Internet and social media appear to be important facilitators of DFS because they allow SMOs to use both native (amateur) journalism and information dissemination to present the diverse frames and issues that make a successful DFS campaign. This is particularly true in

19 See Ford Motor Co. v. Lane, 67 F. Supp. 2d 745 - Dist. Court, ED Michigan 1999
the United States where government agency transparency ensures that unbiased government agency reviews are publicly available for use by SMOs. For instance, Tar Sands Action was able to utilize government agency and industry studies of pipeline safety and environmental impacts to counter some of the claims made by industry stakeholders. The ability of news media to independently verify the accuracy of stakeholder claims can also further support SMO campaigns.

**Internet Coalitions and Policy Networks**

The speed of Internet communications provides activists with “new opportunities for capabilities” that did not previously exist and allows them to better utilize limited resources (Leizerov, 2000). Moreover, online networks bring together loosely-bound organizations from around the world in ways that allow them to more effectively address common grievances. Such networks are typically connected to a central hub, which disseminates information to affiliated websites and organizations (Fu and Chen, 2008).

Cooperation in the form of alliances is often critical to the achievement of successful political outcomes (Stone, 1988). Insofar as the Internet facilitates the formation and coordination of alliances, it has the potential to increase the power of organizations with common objectives, even in highly diverse SMOs like Tar Sands Action.

Organizations that join Internet mediated alliances need not agree on every issue in order to achieve a common objective. Weible and Sabatier (2007) classify beliefs into three levels.

1. **Fundamental beliefs** – These are the core values of the individual, which are difficult to change.
2. Policy beliefs – These include the individual’s perception of the policy problems and how best to solve them. Although they are informed by one’s core values, they are more amenable to change than one’s fundamental beliefs.

3. Policy preferences – The most amenable to change are those beliefs centered on the most appropriate tools and methods for implementation.

Therefore, as long as they are working toward the same policy goal, activists from participating organizations may disagree on fundamental values and ideologies, which can be difficult to change. It should be no surprise that coalitions form between groups with very different values when they seek to achieve a common goal. For example, the rise of the environmental movement in the 1970s saw coalitions form between environmental activists and private interest groups, including native tribes who had an interest in land reform and white ranchers who had an interest in protecting their crops and livestock from mining contaminants.

The author used Issuecrawler to map a virtual policy network for Tar Sands Action (Tarsandsaction.org), a website operated by 350.org that functioned as the central coordinating hub for Keystone XL opposition (see Appendix 4-B). The map clearly shows strong connections to environmental organizations such as Greenpeace, Friends of the Earth, and the NRDC, as well as climate change organizations and government agencies responsible for monitoring the impact of climate change. Given 350.org’s mandate to promote policies that limit climate change, such ties were not unexpected. The central importance of Twitter, Facebook, and Vimeo (a video sharing site) within the network was also expected. One surprising finding was that the Tar Sands Action VPN lacked connections to pipeline opponents focused on non-climate issues, such as health, safety, labor, and land-use issues. This finding suggests that the concerns of trade
unions, indigenous groups, and ranchers are likely to be underrepresented in Keystone XL protests and policy actions. Alternatively, it could reflect the more limited online presence of peripheral stakeholders. Either way, the VPN demonstrates the potential barriers that organizers need to overcome in order to balance the needs of core and peripheral stakeholders and to leverage DFS in framing contests.

**The Role of Facebook**

Beginning around 2005, social networking sites began to take the place of previous forms of online communities, such as bulletin boards, newsgroups, and discussion boards. What distinguishes social networking sites like Facebook and MySpace from other types of online communities is the inclusion of different types of user generated multimedia content, such as videos, photos, and music. Personal profiles on these sites become “personal collections of annotated media objects” (Skågeby, 2009).

Facebook is the undisputed leader in online social networking and the most popular destination on the Internet (Harvey, 2010). In 2006, Facebook itself became the subject of protests when it created a behavioral software program that generated custom news feeds that informed people of the activities of their friends. Within days of its launch, hundreds of thousands of Facebook users joined groups protesting the news feeds, such as “Students Against Facebook Newsfeed,” which gained 750,000 members and called for protests at the Facebook campus (Kirkpatrick, 2010). Users complained that the news feed violated their privacy by informing others of their activities without their permission. Facebook acquiesced by introducing new privacy controls. Ironically, the newsfeed feature became an important tool for activist
organizations to reach potential supporters. For example, a group called “Save Darfur” gained thousands of members through Facebook newsfeeds.

An often cited example of Facebook activism was the case of Oscar Morales, who created a Facebook group called “Un Millón de Voces Contra Las FARC” (A Million Voices Against FARC) to protest killings and kidnappings by a Colombian guerilla group known as Fuerzas Armadas Revolucionarias de Colombia – Ejército del Pueblo (People’s Army of the Revolutionary Armed Forces of Colombia). In the first few weeks, the new group attracted more than 260,000 members, eventually leading to a worldwide protest against FARC on February 4, 2008 in 27 Colombian cities and 104 cities in other countries. In Colombia alone, more than 4.8 million people participated in the protest (Tapscott, 1998).

The ability of these campaigns to quickly mobilize broad support for their causes suggests that social networks can be a powerful tool for SMOs. In The Emergence of the Relationship Economy, social media strategist Jay Deragon asserts that social networks are transforming the political landscape by giving power back to the people. He writes,

By joining social networking sites, we, the people, begin creating the news; we, the people, are the ones who are generating waves of change; we, the people, are the constituents the politicians want to reach, and we, the people on the social networks, have the means and the venue to do all these things! Social networks are the best way to further a cause – because like-minded individuals are going to be listening to what others in their networks are saying. (Allen, 2008)

As intuitive as these observations may appear to be, given the growth of protest groups on Facebook and other social networking sites, few studies have actually measured if these groups are having a real and lasting impact. Nor can one assume that “social networks are the best way to further a cause” until one compares the ability of social media to mobilize public
support with more traditional forms of mobilization, such as door-to-door canvassing, television and print advertising, and membership drives. Although the latter is beyond the scope of the current study, the impact of Tar Sands Action on news media and policymakers will help to inform future research on the role of social media in framing contests.

Tom Watson, founder of onPhilanthropy.com, observes that social networking sites like Facebook make it easy for members to identify causes that they support, but that that support does not always translate into meaningful action. For many, joining an online cause is a way to demonstrate to their friends the types of causes they support and to receive news updates (Watson, 2009). In terms of financial support, Watson found that Facebook members who joined online activist communities contributed between one and two cents on average to causes they have joined online. This average held true for causes as diverse as cancer research (Brigham and Women’s Hospital) and human rights in the Darfur region of Africa (Save Darfur).

As more organizations begin to use social media to reach potential supporters, they are finding the medium more challenging as they compete for the attention of Internet users. Therefore, it should come as no surprise that the vast majority of social media campaigns fail to meet their objectives (Smith, 2010). Moreover, it is no longer an inexpensive alternative to traditional campaigns. According to unpublished research by Harvard Business School’s Anita Elberse, successful social media campaigns that use video services like YouTube typically have large budgets for cross promotion through traditional media. The correlation between online reach and spending on television advertising was particularly strong (cited by Gomez, 2010). This would suggest that large organizations like Greenpeace and Amnesty International will continue to have more success than smaller organizations with limited budgets. Moreover, large
organizations will likely reach more potential supporters if they use traditional media to promote their online activities.

Nevertheless, large budgets alone are not sufficient for social media success. As the author will demonstrate in the current study, some organizations are far more effective than others at using social media tools to mobilize support and in sustaining interest in issues after specific objectives have been achieved or cease to be important. They were also far more effective than corporations, governments, and lobby groups with vastly superior financial resources. Some of the success can be attributed to the acumen of social media literate organizers, but the ability to leverage stakeholder diversity also appears to be an important contributor.

Most oil industry executives interviewed for this study conceded that environmentalists were using social media more effectively than oil companies. Alex Pourbaix, President of TransCanada Pipelines, told me that he believed that the delays in issuing permits for Keystone XL were “totally driven by social media.” He also explained that his company has started to take the threat of social media more seriously. “We now have a group of 22 year olds who work just on social media, but the industry is too slow to respond,” he noted.

Online social networks also invite opposing viewpoints that can undermine the efforts of social movements. In the entertainment industry, the risks of social media have been clearly demonstrated. For example, when NBC launched the television show titled “The Marriage Ref,” social networking sites were filled with negative comments. The following week, The Marriage Ref dropped 21 percent in the ratings and continued to decline in each subsequent episode. New
York Times journalist Brian Stelter believed that online discussions played an important role in the program’s poor performance.  

Losing control of the discussion is a major concern for organizations wishing to use social media. When organizations engage in social media, they no longer have the last say about the issues that are important to them. Questions about openness revolve around how much control should be relinquished to social media users.

Tar Sands Action’s Facebook page on Keystone XL invited both negative and favorable comments. For example, a December 13, 2011 Facebook wall post by Tar Sands Action about a dispute between the US House of Representatives and the State Department over the proposed delay in approving the pipeline resulted in more than 50 comments. Of those, at least 16 comments were in favor of the pipeline, including several from Facebook contributor Peter Burgess. In his wall posts, Burgess provided links to newspaper articles and scientific studies that supported the argument that Keystone XL’s impact on global carbon emissions, deforestation, and potential oil spills would be minimal and that activists were deliberately overestimating the project’s impact. Nevertheless, the large number of online contributors ensured that any pro-pipeline comments that appeared on the Facebook pages of Tar Sands Action and its supporters were swiftly countered by pipeline opponents.

The same could not be said for oil industry pages, which lacked the grass roots support for community based responses to statements by detractors. In some cases, such as YouTube promotional videos, industry sponsors prohibited viewers from posting comments. However, by limiting discussion, the public relations firms hired by the oil industry significantly reduced the

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reach of the videos, because comments are one way that social media content extends its reach. When someone posts a comment, that person’s friends also see the post and can respond. In this manner, popular content often goes “viral.” Limiting discussion also creates an impression that the person posting the content is concerned that the content will not be well received. This undermines both the effectiveness and credibility of much more expensive oil industry video posts. For instance, Energy Tomorrow, a pro-Keystone campaign funded by the American Petroleum Institute posted several high production value videos on YouTube, but most had fewer than 1,000 viewers and the most watched video (Driving Oil Sands)\textsuperscript{21} had fewer than 5,000 views. In comparison, many of the low budget videos posted by Tar Sands Action surpassed 10,000 views.

Bill McKibben, founder of Tar Sands Action and 350.org, was proud of the fact that he was able to create a social media-based campaign with only a few thousand dollars in startup funds. In November 2012, he told an audience of Northeastern University students and faculty that he did not believe that the oil industry’s investment in new media will be effective. He noted how Exxon spent millions of dollars on their website “and it is no better than ours.” “We couldn’t have organized 350.org the way we did before the Internet,” he said. “In fact, we couldn’t have organized it at all.”

To emphasize the perceived power of social media in promoting awareness of climate change, McKibben used the example of an editorial about Keystone XL that he wrote for Rolling Stone magazine in the summer of 2012, an issue that featured popular teen idol Justin Bieber on the cover. Shortly after publication, the editor called McKibben and told him that “something

\textsuperscript{21} Available at http://www.youtube.com/watch?v=16hkX3F8igM, accessed April 29, 2013
strange has happened. Your piece has ten times more likes on Facebook than Justin Bieber’s” (McKibben, 2012a).

**Social Network Theories**

Social networks can be analyzed in a number of ways. The most basic form of analysis is the formation of groupings, such as families, cliques, and political parties. However, social networks can also be analyzed on the basis of content. This form of analysis focuses on the meaning of the relationships between individuals and groups, the strength of the relationship, and whether or not the relationship is reciprocated. It further seeks to measure the quality of the relationship in terms of intensity and durability (Scott, 2000).

Social network quality is not unlike Weible and Sabatier’s policy belief structure in which relationships based on fundamental beliefs (values) prove more enduring and difficult to change than relationships based on policy beliefs and preferences (issues). For example, various environmental groups may band together to fight a pipeline project. Their shared belief in the importance of environmental preservation could allow the social network structure to be maintained beyond the anti-pipeline campaign. On the other hand, the relationship between environmentalists and ranchers is more tenuous because it focuses on a single policy issue. As such, the coalition is unlikely to endure once the pipeline recedes in importance, unless ranchers can be convinced that global warming is directly harming agricultural output. Finally, indigenous tribes seeking to preserve their ancestral lands are likely to share some interests with environmentalists that go beyond the Keystone XL Pipeline, but do not necessarily extend to protecting the global environmental (see Figure 4.1). For example, both groups seek to halt
destruction of Alberta’s boreal forest, but indigenous tribes would have less of an interest in reducing coal mining in China or in promoting alternative energy. Similarly, environmentalists may not share an interest in native land claims or land use compensation.

Early studies into social networks identified the ties between people as strong, weak, and absent (Granovetter, 1973). Absent ties included negligible relationships between individuals. Such individuals may know each other, but their contact is superficial. Neither can weak and strong ties be neatly confined to their respective categories, as there are various degrees of interaction within these categories. For example, a person may have strong ties to a close relative and a co-worker, yet intuitively one expects those relationships differ in strength.

Figure 4.1: Venn Diagram of Anti-Pipeline Coalition Interests

Keystone XL

Environmentalists (Global warming)

Water quality

Ranchers (Agricultural productivity)

Indigenous Tribes (Culture, traditions and family)

Land use compensation and eminent domain

Preservation of ancestral lands and forests
Granovetter (1973) hypothesized that the more interaction two individuals have with each other, the stronger the tie will become. Furthermore, the strength of the ties between other individuals connected to these two people will also increase due to the higher level of interaction between circles of friends. This creates a closed loop problem in which information flows within the group but does not disseminate further afield. Granovetter believed that weak ties were more important in influencing broad opinions and trends by connecting individuals with others outside their strong tie group.

For example, if an environmentalist shares a study on global warming with close colleagues, and they share the evidence with their close colleagues, the information will remain within the closed network of the environmentalist’s close friends and colleagues. However, if the same person shares the information with an anthropologist who is studying how climate change affects human migration patterns, the study will become wider known, in this case among both environmentalists and anthropologists. The weak tie between the environmentalist and the anthropologist helps to spread the knowledge to other groups of people. In other words, strong ties result in encapsulated closed networks while weak ties facilitate bridges between individuals and groups with diverse interests and goals.

If Granovetter’s theory were to hold true in social movements that utilize online social networks, one would expect more effective outcomes from coalitions formed between diverse groups with a shared interest. For example, the rise of the environmental movement in the 1970s, was largely successful because of coalitions between environmentalists, ranchers, and indigenous tribes. Similarly, opponents of the Keystone XL Pipeline included environmentalists,

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22 This closed network phenomenon is encapsulated in the idiom “preaching to the converted.”
ranchers and residents from the State of Nebraska, Canadian indigenous tribes, and others. The weak ties between these groups helped to spread knowledge of the issues beyond those environmentalists who see the Alberta oil sands as a “carbon bomb” that will significantly accelerate global climate change.

Granovetter’s belief that weak ties are more important in bridging networks and building broad support is important for DFS theory, as it counter-intuitively suggests that heterogeneous SMOs that do not share fundamental beliefs can be more effective in building broad support than encapsulated SMOs. However, because weak networks are less likely to be sustained longer term, heterogeneous SMOs must act rapidly to achieve desired outcomes prior to the departure of peripheral stakeholders.

Mobility is one of the more important variables in creating what Granovetter refers to as “bridging ties.” As a person moves from one organization to another, such as when one changes jobs, bridging ties are created between the person’s former organization and the new organization. These weak ties facilitate the diffusion of information between linked organizations, often through meetings and conferences (Granovetter, 1973). In the current study, one finds Canadian indigenous leaders traveling to Nebraska to meet with ranchers and activists representing a variety of interests converging on Washington for anti-pipeline protests. Bridge building may help organizations like 350.org to mobilize support when new issues arise that affect diverse stakeholders. For instance, 350.org, labor, and indigenous tribes have coordinated opposition to the Northern Gateway Pipeline in British Columbia, Canada.

In the current study, the coalitions that formed between stakeholder groups under the Tar Sands Action umbrella appeared to increase awareness of a variety of concerns. Ranchers
became more aware of the climate impact of bitumen consumption, while climate change activists became more aware of the damage caused by oil spills and the ability of pipeline companies to use eminent domain to gain right of way access. Both groups were introduced to the harms caused by the destruction of Alberta’s boreal forests and alleged downstream health effects of bitumen mining on nearby indigenous communities.

Although weak ties are important for spreading information, clustered (strong tie) networks may be more effective in influencing behavior. Centola (2010) conducted a controlled experiment in which participants were assigned to either a diffuse network with multiple weak ties or a clustered network with multiple strong ties. Members of strong tie clusters were more likely to adopt the behaviors of their connections than those in weak tie networks.

Centola’s findings have important implications for the current study by demonstrating that spreading information and changing behavior involve very different mechanisms. Whereas weak tie networks help to disseminate knowledge that may influence policymakers and public opinion, close-knit communities with strong-tie connections may be more effective in mobilizing individuals to take specific actions such as joining an online social network and participating in protests or letter writing campaigns. Intuitively this makes sense, as the flow of information is often like the transmission of disease (Centola, 2010). For highly contagious diseases to spread, the number and range of contacts is more important than the degree of contact between individuals in a network. In contrast, Centola and Macy (2007) argue that “complex contagions,” such as participation in high risk activism, require “multiple sources of confirmation or reinforcement.”

[The optimal topology for the spread of collective action may depend on the costs and risks of participation and thus on the relative importance of]
information versus social reinforcement in mobilizing action. For students trying to organize a protest under a totalitarian regime, or for a movement facing state oppression, simply having information about a collective action will be insufficient to convince people to join. (Centola and Macy, 2007)

The effectiveness of online social networks may depend on the fact that “platforms of social media are built around weak ties” (Gladwell, 2010). However, Gladwell disagrees that weak ties increase the effectiveness of social movements as a result of their broad reaching influence. He notes that in the past, the most effective activists were those who had strong ties to members of the organization.23 Even actions that appear to be spontaneous are subject to this “strong-tie phenomena” in which participants are recruited by friends, acquaintances, and family members. Tools such as Facebook and Twitter are able to aggregate contacts with people that one will never meet in person. Although such contacts are valuable for sharing news and ideas, “weak ties seldom lead to high-risk activism,” claims Gladwell. Instead, the types of activism facilitated by weak tie relationships are those that do not ask much of participants – anything that “doesn’t involve financial or personal risk.” For a specific example, Gladwell turns to the “Save Darfur” Facebook group, which had more than one million members. Joining the group was easy, but few took the next step to actually do anything.

The most effective activist organizations Gladwell looked at were hierarchical in nature. In contrast, social media is widely believed to be self-organized and lacking in strong leadership or central authority figures. “Decisions are made through consensus, and the ties that bind people to the group are loose” (Gladwell, 2010).

23 In his analysis of activist organizations, Gladwell includes terrorist groups, such as the Red Brigades and the mujahedeen in Afghanistan.
By disparaging the weak tie phenomenon commonly observed in online social networks, Gladwell implies that social capital is somehow a finite resource. In his view, the expansion of social media facilitated weak ties diminishes existing strong tie connections that allow participants of social movements to accept financial or personal risk. However, if DFS theory proves valid, weak ties created through online social networks should facilitate the growth of advocacy coalitions without harming existing strong tie connections. Groups within coalitions continue to act in a traditional manner, with members taking whatever risks to achieve a policy objective that the group perceives as beneficial. In Granovetter’s words, “weak ties may be considered to have bridging functions” that increase the “velocity of transmission” of information, ideas, values, and innovations.

Some scholars have suggested that the ties created through online social networks enable the creation of social movements that are self-organized and lacking the type of central authority traditionally required of organizations (Feenberg, 1991, Zhuo et al., 2011, Starbird and Palen, 2011). However, there is a growing body of evidence that suggests that the most successful online social movements usually rely on the efforts of a single person or a small group of dedicated individuals. The International Campaign to Ban Landmines (ICBL) successfully combined the efforts of approximately 1,400 NGOs to bring pressure on world governments to ban the use of landmines. Yet, the success of the campaign was mainly due to ICBL coordinator Jody Williams who “directed the NGOs from her home in Vermont by using information technologies, such as telephone, fax and the Internet” (Rutherford, 2000).

As discussed earlier, the Facebook campaign against terrorism in Colombia (Un Millón de Voces Contra Las FARC) came about mainly from the efforts of Oscar Morales (Kirkpatrick,
Similarly, a small group of Islamic leaders used the Internet to win support for a boycott against Danish goods after a Danish newspaper provocatively published unflattering cartoons of the Prophet Muhammad (Lane et al., 2010).

Contrary to Gladwell’s theory that social networks are self-organized and lack leadership, strong central leadership appears to be no less important in online social media activism than in traditional activism (Schussman and Earl, 2004). In much the same way as traditional activists, they “are often ‘reaching out’ to the community, engaging in relationship development and maintenance that contribute to the success of the group as a whole” (Huffaker, 2010). As Neumayer and Raffl (2008) observe, “Political activism can be enhanced by the use of social software, but outcome is dependent on its real physical actors.”

Surprisingly, Samuel (2010) agrees with much of Gladwell’s analysis, but she wonders if weak ties can help build strong ties.

The fact that social media is able to make effective use of weak ties shouldn’t preclude its application to “strong tie” activism, too. The challenge is to develop the methodologies, tools and culture that will nourish strong ties online as well as off. (Samuel, 2010)

Pell (2010) observes that social networks also include strong ties and that “it seems a bit foolish to separate our online and offline relationships into these defined buckets.” He sees social media as a tool that can be used by activists, much like the way a megaphone is used by leaders in protest marches. Social media are simply new forms of communications that can be used by activist organizations to organize activities and disseminate information, not unlike the way fax machines and telephones were used in the past. Perhaps an even better analogy is Gutenberg’s printing press, a tool which spawned the Protestant Reformation and countless revolutions. “In
Gutenberg amplified the human voice such that it could be heard around the world” (Hewitt, 2005).

In the current study, social media was far more important as a tool for mobilization than for simply disseminating information. A successful outcome depended largely on effective leadership, strong social ties, and a well-articulated mobilization strategy. Without all three of these conditions, online social movements are unlikely to achieve significant and lasting policy objectives. Moreover, 350.org organizers coordinated their activities with leaders of peripheral stakeholders. Bill McKibben explained the importance of coordinating leadership,

I knew just enough about the Alberta tar sands to know that the first person I should call when we started thinking about joining the protest was Tom Goldtooth, head of the Indigenous Environmental Network (IEN) and one of the most venerable and venerated environmental leaders in the country. I knew, vaguely, that he’d told me about this work before—even shown me pictures of the vast tribal lands and boreal forest wrecked by the early stages of mining for oil north of the border. (McKibben, 2011)

Similarly, Jane Kleeb of Bold Nebraska invited Bill McKibben to Nebraska to hear the concerns of ranchers prior to joining the Tar Sands Action coalition. She later credited the cooperation between leaders of different stakeholder groups for winning a delay in the State Department’s permitting of the pipeline (McGowan, 2011).

In each case, McKibben appeared to act as a bridge between 350.org and leaders of peripheral organizations (see Figure 4.2). This eventually led Tar Sands Action to adopt the diverse frames of participant organizations. Such organizational bridges also allow diverse stakeholders to learn about issues that affect other groups within the coalition. Without strong leadership, the type of coalition building needed for DFS implementation might be impossible.
Although the importance of a central figure like McKibben cannot be determined from one study, he appears to have played a critical coordinating role.

Figure 4.2: Organizational Leadership Connections
Movement Entrepreneurs

Lee (2009) suggests that the Internet may diminish the importance of traditional organizations as agents of social change. The institutional nature and bureaucratic modes of operation of traditional organizations make them less effective in online engagement. In their place, movement entrepreneurs have arisen who are motivated by personal grievances to organize toward collective action. As a result, the most effective traditional organizations employ movement entrepreneurs to personally engage potential supporters. This is known as a hybrid mobilization movement. In Lee’s analysis, it is the entrepreneurial social media activist who builds strong ties rather than individuals “embedded in a larger organization” who may feel less personally responsible for the social movement (Lee, 2009).

The movement leaders involved in the Tar Sands Action coalition appeared to fit Lee’s definition. By eschewing the bureaucracy of organizations like the Sierra Club and Greenpeace to create agile SMOs through social media, movement entrepreneurs like McKibben and Kleeb were more effective in mobilizing a broad array of supporters. Then, after Tar Sands Action appeared to be gaining traction, McKibben was able to win the support of more traditional organizations like the Sierra Club and the Pipeline Safety Trust.

Conclusion

Although social media is relatively young, it is part of the natural evolution of communication technologies that have been used over the centuries to improve the effectiveness and immediacy of collective action. Many of the characteristics of online activist communities mirror those of traditional social organizations. However, there are also important differences
that have caused some to question the effectiveness of online social media in promoting social causes. While some see social media as a tool to circumvent restrictions on free speech, to improve the speed of communication, to recruit to new members, and to create greater transparency, others disparage social media as weakening social ties and reducing the level of commitment that members have to the causes they profess to support.

There may be truth to both arguments. Some social movements appear to thrive on social networking, allowing organizations like 350.org to quickly mobilize large numbers of people around a central issue. More importantly, social media allows movement entrepreneurs to coordinate the activities of diverse stakeholders in ways that are necessary for DFS implementation. Although some traditional organizations appear to struggle with online tools, social media-facilitated coalitions can play complementary rather than conflicting roles. For instance, The Sierra Club welcomed 350.org’s role in combatting climate change and appeared supportive of McKibben’s efforts.

Research on social media-facilitated SMOs needs to identify the characteristics that make some online social movements more successful than others. Contrary to the widely held belief that online social movements are self-organized, successful organizations examined in this chapter had strong leadership that bridged the diverse interests of stakeholders. They were also able to combine online and offline activities. They used the Internet to create awareness, disseminate information, and raise funds, but they also used offline activities, such as meetings and protests, to build trust between members and increase commitment to the organization’s goals and ideals.
Chapter 5: Frame Alignment

Much of the research on framing contests has focused on social movements and public interest communities. What is lacking is a comparison of more diverse stakeholder interests. One would expect differences to exist between stakeholders, such as government agencies, professional associations, businesses, and social movements, if for no other reason than the fact that these types of organizations have very different organizational structures, missions, and objectives.

Frame Alignment Process

The dissertation utilizes a conceptual framework developed by Snow et al. (1986) known as the frame alignment process, which describes practices that social movement organizations employ to ensure that actions and objectives align with “individual interests, values, and beliefs.” Frame alignment is considered necessary to win public support and facilitate mobilization. Although Snow et al. only considered general mobilization, they recognize that the process will vary based on constituent group composition. The current study focuses on the different ways stakeholders frame issues specific to Keystone XL as a way to achieve specific public policy outcomes. It differs from earlier studies by considering non-SMO stakeholders, such as businesses and government agencies, all of which form part of a larger public policy ecosystem.

Categorizing different stakeholders according to interests, purpose, and structure facilitates a clearer understanding of how the frame alignment process varies by group and how these interests are tied to the unique policy objectives of each type of organization. For example, market principles and individual interest drive the activities of trade associations, businesses, and
other special interest groups, whereas NGOs and SMOs are typically motivated by “distinctive values associated with their work” (Iain, 1999). Such differences should result in distinct framing processes, and therefore the frame alignment process will differ based on the objectives and organizational structure of stakeholder organizations as they seek to build support.

The frame alignment process consists of four components, namely frame bridging, frame amplification, frame extension, and frame transformation (Snow et al., 1986). A closer inspection of each of these components allows one to identify differences in the framing process for various stakeholder coalitions and how they attempt to influence public policy frames and outcomes.

**Frame Bridging**

Frame bridging involves connecting the interests of various stakeholders to achieve a common outcome. For example, Keystone XL opponents have distinct longer term objectives, but are unified in the goal of stopping the pipeline. The goals of ranchers and indigenous inhabitants lack the appeal needed to tap into what Snow et al. refer to as the “unmobilized sentiment pool,” because the issues that concern them have a limited impact on the general population. On the other hand, environmentalists worry that Keystone XL will accelerate climate change, a frame that resonates with members of the public who are concerned about the impact that global warming will have on the planet (Norton and Leaman, 2004, Lorenzoni and Pidgeon, 2006).

As early as 1986, Snow et al. recognized that new computer based technologies were fundamentally changing the way frame bridging occurred. They noted how mobilization was
enhanced through the use of mailing lists to inform the media, supporters and the general public of direct actions. The advent of email lists in the 1990s and social media in the 2000s has increased both the reach and speed of such mobilization activities. The Internet has proven to be “an essential tool for disseminating information, organizing, and mobilizing,” particularly for “trans-border social movements” that promote human rights, equality, democracy, and environmentalism (Castells, 2000).

Despite the ability of new technology to facilitate bridging activities, competing interests will continue to inhibit mobilization and coalition building. In a study of environmental justice frames, Capek (1993) found that stakeholders were “not all sympathetic” to the official positions of organizations chosen to represent them. The current study builds on the existing literature by also considering how stakeholders used technology and social media to promote their own interests and objectives over those of other stakeholders, including potential allies.

In some cases, stakeholders have competing objectives within their own organizations. Ducks Unlimited is a hunting advocacy organization that also seeks to preserve wetlands that serve as habitat for ducks and geese. Ducks Unlimited pledged its support for the pipeline after TransCanada offered to contribute $2 million to the organization. However, the original pipeline route passes directly over one of the largest concentrations of wetlands in the world, and any spill along that route could have serious implications for wetland ecology.

Similarly, the Republican Party was divided on the issue. Republicans at the federal level sought expedited approval of the pipeline despite EPA and State Department concerns over potential environmental impacts. At the state level, however, many Nebraska Republicans were
initially opposed to the pipeline over concerns that it could threaten the state’s water supply and agricultural industries.

Similarly, labor unions were divided over the issue, with some unions supporting the pipeline and others opposing it. Unions that favored the pipeline represented members who would benefit from promised construction and maintenance jobs, while those opposed had members who might be harmed by the pipeline. For example, a union representing Canadian refinery workers was the first organization to oppose Keystone, before environmentalists and other stakeholders became involved in the dispute. Union members believed they would benefit from having oil processed in Canada instead of exporting unprocessed crude to the United States. Other unions opposed the pipeline on social and environmental grounds.

How do organizations convey frames that may conflict with member interests and priorities within organizations or conflict with the objectives of other organizations that have been traditional allies? What role do technology and social media play in facilitating frame bridging? Do new media play a role in resolving disputes over competing frames within organizations and how are they finally translated into official policy positions?

Later in this study, the author will demonstrate that organizations with effective new media strategies tend to do well in both external and internal framing contests, but heterogeneous SMOs can still amplify the frames of stakeholders who have less developed social media strategies. For example, Canadian labor unions had limited success opposing the pipelines using economic frames and gradually adopted climate change and environmental justice frames after aligning its interests with environmentalist and indigenous stakeholders, respectively. However,
by aligning with these dominant frames, they were also able to amplify their own frames focused on economic security and jobs.

**Frame Amplification**

Frame amplification is the process of gaining support by making problems relevant to potential stakeholders. According to Snow et al., frame amplification involves two components: values and beliefs. Value amplification uses fundamental values, such as social justice and democracy to mobilize support. During the 1980s, when Snow et al. published their study, nuclear war posed a serious threat to the future of the planet. The peace movement used democratic values to assert a right to be involved in discussions of nuclear weapons policy. Similarly, the anti-pipeline coalition emphasizes democratic values by asserting the will of the people over corporate interests and profit, reflecting similar concerns by other social movements, such as Occupy Wall Street.

Other stakeholders have appealed to nationalistic values. In Canada, trade unions opposed the exporting of valuable jobs, and in the United States, ranchers have complained about the ability of a foreign (Canadian) company to use eminent domain against U.S. landowners.

Belief amplification uses fundamental beliefs to amplify the framing of an issue. Here again, one can draw similarities between the peace movement and Tar Sands Action, as both appealed to the long term survival of the planet to emphasize the urgency of action. On its website, Tar Sands Action declared that “America’s top climate scientist says that fully exploiting the tar sands could mean ‘essentially game over for the climate’” (Tar Sands Action, 2011).
This apocalyptic imagery is often extended to specific issues. For example, environmentalists often described tar sands as a carbon bomb and Keystone XL as the fuse to that bomb. The advantage is that environmentalists create a sense of urgency around the issue. At the same time, frame amplification can also undermine credibility if opponents can demonstrate exaggeration and manipulation of data. For example, Media Matters published a popular video on YouTube that demonstrated how pipeline proponents, such as API, Fox News, and the US Chamber of Commerce significantly inflated the number of jobs that would be created.

Similarly, the oil industry sought to undermine environmentalist claims that Keystone XL would impact climate change by quoting studies that showed that even if all the bitumen in Alberta were consumed, it would increase global temperatures by less than one degree.24

Beyond jeopardizing credibility, frame amplification poses other risks for organizations. For instance, by labeling Canadian bitumen deposits as a “carbon bomb” that threatens to destroy the planet, environmentalists have ruled out the possibility of negotiating with the oil industry stakeholders, since one must assume that they will oppose any pipeline that transports diluted bitumen to global markets. Oil industry executives come to view Keystone XL opponents as intractable and, therefore, they rule out mediation and compromise. This weakens the position of stakeholders who oppose the pipeline on different grounds and who might want to seek a negotiated solution. For example, landowners who want to see the pipeline routed through less sensitive areas might be less likely to achieve their objectives if the oil industry sees negotiation as futile.

24 In the current study, the author is not seeking to examine the reliability of stakeholder claims, but to understand how they are presented in social media and how frame amplification changes the way news media and policymakers frame policy issues.
When various environmental groups band together to fight a pipeline project, their shared belief in the importance of environmental preservation helps to build network structures that can be maintained beyond specific issues, such as Keystone XL. Environmentalists who were mobilized to oppose Keystone have also become involved in protests against other pipelines. For instance, the New England chapter of Tar Sands Action, known as the Tar Sands Patriots have become involved in protests against the Enbridge Trailbreaker Pipeline that would carry diluted Bitumen from Alberta to Portland Maine. Some have also become involved in the Occupy Boston movement and in anti-fracking protests.

In contrast, the relationship between environmentalists and ranchers is more tenuous because it focuses on a single policy issue. Ranchers appealed to the belief of most Nebraska residents that the Sandhills Range is too important to risk an oil spill. Because of the belief that the Sandhills should be protected at any cost, most Nebraskans would oppose a pipeline through the Sandhills even if it were proven safe. By framing the issue in these ways, activists not only emphasize the urgency of the problem, but also the idea that there is no alternative but to halt government approval. However, it also means that the coalition is unlikely to endure once the pipeline recedes in importance, unless ranchers can be convinced through frame extension that global warming poses an imminent threat to agricultural output. This observation was confirmed when Nebraskans increased their support for Keystone XL after TransCanada agreed to an alternative route that would miss the Sandhills region.

TransCanada and its supporters have also engaged in values and belief amplification in an effort to win government and public support for the pipeline. For example, Canada is seen as a stable and safe alternative to Persian Gulf oil, thereby appealing to nationalist values during a
period of heightened tension between United States and the Middle East. Supporters have likewise sought to appeal to values such as free enterprise and the belief that alternative energy sources are too expensive and impractical to provide a viable alternative to fossil fuels. They contend that prohibiting the pipeline will hinder economic recovery during a period of high unemployment and could cause fuel prices to rise by constraining supply.

For instance, Alex Pourbaix of TransCanada recently emphasized the potential of Alberta oil sands to address pressing security and economic concerns. “We need to connect the huge demand in the US to this incredible supply in Canada,” he said (Pourbaix, 2012). “This is the largest infrastructure project in the US and it is all coming from private capital,” he added. Moreover, he claimed that Keystone XL will create 20,000 US jobs and generate half a billion dollars in tax revenue for federal and state governments, making TransCanada the largest property taxpayer in each state along the pipeline route except Texas.

“We are experiencing a once in a lifetime opportunity,” explained one industry executive who predicted the need for pipelines will double over the next few years, largely driven by growth in oil sands production. “Production north of the border is changing the dynamics of [oil pipeline] flows.” At the same time, he acknowledged that the industry was dealing with aging infrastructure, hostile public opinion, and increased regulation. “We have a lot of work ahead of us, as well as opportunities,” he added. Ultimately, he saw public outreach as paramount if the industry hoped to achieve its objectives.

Finally, stakeholders tried to deflate attempts by their opponents to amplify various frames. Environmentalists challenged the economic and security benefits of Keystone XL. Similarly, the oil industry attempted to minimize the impact bitumen has on climate. Some oil
industry executives went so far as to promote their own green credentials through investments in renewable energy and industry efforts to reduce the carbon footprint of bitumen production. For instance, Pourbaix noted that “innovation has reduced greenhouse gases [emitted from oil extraction and processing] by 50 percent over the past 10 years on a per barrel basis.”

For frame amplification to be successful, Snow et al. emphasize that potential supporters must believe that their actions will be able to influence government and corporate policies and regulations. “Optimism about the outcome of a collective action will thus enhance the probability of participation; pessimism will diminish it” (Snow et al., 1986). Stakeholders in the Keystone XL debate have different objectives, but the various objectives all appear to be achievable in some form. For Nebraska ranchers, the objective is to keep the pipeline away from the Sandhills Range and water supplies, for environmentalists it is to reduce bitumen extraction and encourage investment in safe alternative energy sources, such as wind, solar, and geothermal power. The recently announced decision to reroute the pipeline away from the Sandhills and some of the Ogallala Aquifer almost ensures a positive outcome for Nebraska residents. Small successes also encourage other opposition stakeholders to continue their efforts.

One of the main concerns raised by the State Department in its recent rejection of the Keystone XL permit was the routing of the pipeline through ecologically sensitive areas of Nebraska. Yet, this frame represents a minority within the opposition coalition. Nevertheless, the initial rejection of Keystone XL has encouraged climate activists to renew their efforts against TransCanada, Enbridge, and other oil industry stakeholders.
Frame Extension

Snow et al. (1986) note that “[m]ovement leaders frequently elaborate goals and activities so as to encompass auxiliary interests not obviously associated with the movement in hopes of enlarging its base.” Tar Sands Action was closely aligned with the interests of the Occupy Wall Street movement, which sought to end corporate influence in public policy decisions. At the same time, Tar Sands Action tried to win mainstream support through endorsements by celebrities, community leaders and respected scientists.

TransCanada endeavored to extend its frame through auxiliary interests in job creation, energy security, and lower gas prices during a prolonged economic recession. Content analysis of online postings and discussions help to further identify how stakeholders have sought to extend the conversation to auxiliary issues.

Finally, the adoption of extended frame language in news articles and government documents provides insights into the effectiveness of frame extension efforts through social media. Policy statements, including the State Department’s decision to delay approval of the pipeline, were analyzed to determine if frame extension played a role in determining policy outcomes.

Frame Transformation

Not all frames resonate with audiences in ways that allow for bridging and amplification. Those that do not align with the values and beliefs of potential supporters need to be reframed in ways that make the issue relevant. Snow et al. examined how spiritual movements transformed religious frames into personal development frames. Other transformations might include shifting
the perception of homelessness away from personal responsibility to sociopolitical blaming. If homelessness becomes a political issue, then constituents may feel empowered to do something about it.

Similarly, Tar Sands Action sought to transform the energy security debate into one over “dirty oil.” Instead of perceiving Alberta bitumen as a large and stable resource to meet future energy needs, it was reframed as a harmful source of fossil fuels that will result in more greenhouse gas emissions than comparable fossil fuels from the Middle East and other sources. The “good” of political stability and guaranteed access to oil is reframed as an “evil” of global destruction that is perpetuated by corporate greed and political corruption.

In the next chapter, frame transformation and articulation will be examined through the use of language. Specifically, the author will examine how industry and government purposely sought to eliminate the use of the term “tar sands” to describe bitumen deposits. The Canadian government and oil industry leaders preferred the term “oil sands” as a way to transform the public image of bitumen as a black sticky substance to something that has economic value and other benefits. Environmentalists sought to transform the discussion again by encouraging use of the traditional term “tar sands,” thereby creating an image of something that is dirty and smelly. Sometimes the word “dirty” was appended to “tar sands” to create a public image of “dirty tar sands.”

TransCanada Pipeline President Alex Pourbaix believed that environmentalists used sensational descriptions to scare farmers into thinking that pipelines are unsafe and that “tar sands” pose a greater risk than conventional crude. After the Enbridge pipeline spill near Marshall, Michigan, government regulators have also become more concerned that diluted bitumen may pose greater risks than conventional crude (see the “Policy Considerations” chapter for details).
Pipeline proponents refer to Alberta’s bitumen deposits as “oil sands,” a term that focuses on the end product and its usefulness as an energy source. Opponents, on the other hand, prefer the term “tar sands,” a long used term (even within the oil industry) to describe the dark sticky substance prior to processing. Beginning in 2011, the Tar Sands Action Campaign sought to reframe the discussion to focus instead on the “dirty, heavy, ugly stuff” (Swift et al., 2011). Both terms represent forms of frame articulation, a process in which stakeholders seek to connect language to specific aspects of reality (Benford and Snow, 2000). By comparing the use of these two terms over time, one can measure the influence of competing stakeholders in the public discourse over Keystone XL.

Carragee and Roefs (2006) assert that the “production of frames by movements is often ignored.” However, to fully understand the Keystone XL conflict, one must not only examine the production of frames by social movement participants, but also the origin, evolution, and influence of frames by other stakeholders seeking to shape the outcome of this debate.

Over a period of nearly 50 years, the oil industry, with the support (and frequently the sponsorship) of the Canadian government, successfully rebranded bitumen by convincing journalists, investors, regulators, and the general public that the correct term was not “tar sands,” but “oil sands.” Remarkably, over a period of a few months, the Tar Sands Action campaign undermined what had hitherto been a highly successful rebranding campaign. The current chapter examines the origin and evolution of these two terms and how activists successfully
challenged the frame hegemony of pipeline proponents by uniting diverse stakeholders under the mantra of Tar Sands Action.

Tar Sands or Oil Sands? A Historical Examination

The term “tar sands” was originally used by geologist Richard George McConnell in 1891 in the Annual Report of the Canadian Geological Survey (McConnell, 1891). By the 1920s, the Tar Sands of Alberta were generating significant interest as a potential bitumen source (Emmons, 1921).26

In contrast, “oil sands” initially described oil deposits in certain sandy areas, where the oil was extracted using traditional wells. For example, Harris (1891) refers to the “oil sands of Pennsylvania” in his Notes on the Geology of Southwestern New York. The term is not used to describe Alberta’s bitumen deposits until the 1930s, when attempts to extract and process the substance were begun in earnest (Sproule, 1938, Bourne, 1943). Even then, the term “oil sands” was rarely used to describe Alberta bitumen deposits.27 Today, the Canadian Association of Petroleum Producers (CAPP), an industry association that advocates on behalf of Alberta’s oil companies, prefers to use the term “oil sands” because “[t]ar sands sounds more sinister.”

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26 In The Geology of Petroleum, Emmons observed, “The interest shown in the fields of western Canada is due largely the presence of the tar sands on the Athabasca River. These constitute one of the largest deposits of asphalitic material, if not the largest. They crop out along the river for 100 miles and occupy an area estimated to cover 2,000 square miles or more… The sands which are saturated with asphaltum and heavy oil are said to contain 14 gallons of oil to the ton.” EMMONS, W. H. 1921. Geology of petroleum, McGraw-Hill book company, inc.

27 During World War II, Alberta’s bitumen deposits were seen as an important fuel source should oil imports be cut off by the Axis powers. Arthur Baum of the Saturday Evening Post wrote that the “tar sands in Alberta [were] the largest known deposit of oil in the world,” but added that the deposits were too deep, too difficult to extract, and too far from consumers to make a meaningful wartime impact BAUM, A. W. 1943. What Can We Use For Oil? Saturday Evening Post, 216, 18-46.
Nevertheless, CAPP recognizes that, although the two terms have become politicized, within the oil industry they are used interchangeably.28

One way to better understand the historical usage of language is through the Google Labs N-gram viewer, developed by Michel et al. (2011b) and the Google Books team.29 N-gram uses a catalog of more than 5.2 million scanned books that were primarily published between 1800 and 2000. Although N-gram includes only four percent of all the books ever published, the large sample can be used reliably and effectively to explore trends in language usage over long periods of time.

My own historical comparison of the use of the terms “tar sands” and “oil sands” in the N-gram viewer revealed that both terms have been used extensively since the 19th century. Usage of both terms increased considerably in the 1920s, 1940s, and in the late 1970s and early 1980s (see Figure 6.1), specifically during the pre-depression economic expansion, the Second World War, and the OPEC oil embargo, respectively.

The first peak in the usage of the term “oil sands” occurred between 1916 and 1924. However, during this period, “oil sands” did not refer to bitumen, but to “the rock in which the oil and gas accumulates” in traditional oil and gas fields, particularly in the south and Midwest regions of the United States (Logan, 1920). During this same period, the term “tar sands” was

28 On its website, CAPP quotes historian David Finch, who writes, “Until the 1960s, everyone called them the tar sands. At that point, primarily as a way of communicating more clearly what product would eventually come out of the bitumen, the Alberta government started calling them the oil sands. Both terms were used interchangeably until about ten years ago when this topic became politicized by the opponents of the way the bituminous sands were being developed. Tar sands sounds more sinister to the ear now. The proponents of the development seem to make it a point to always call them the oil sands. Politicization came with the relatively recent fights over all the complicated social, political, environmental and emotional issues that now surround this topic…In fact, the technically correct term is bituminous sands.” FINCH, D. 2011. Oil Sands or Tar Sands? [Online]. Available: www.capp.ca/canadaIndustry/oilSands/Energy-Economy/Pages/OilSands-or-TarSands.aspx [Accessed January 21, 2012 2012].

29 The N-gram Viewer is available at http://books.google.com/ngrams/ Accessed April 12, 2012
almost synonymous with the bitumen deposits in the Athabasca region of Alberta, Canada (Krieble and Seyer, 1921), and although bitumen was identified as a potential energy source, it was not associated with oil until much later. For example, a 1916 summary report for the Canada Department of Mines determined that “no liquid oils have been found [in the Athabasca River section of Alberta], although asphaltum and semiliquid maltha has been found in the tar sands” (Burroughs, 1920).

Figure 6.1: Historical Comparison of the Terms “oil sands” and “tar sands” Books Published Between 1860 and 2000

Another spike in usage occurred during the Second World War, which coincided with a shift in language associated with commercial exploitation of bitumen as an alternative fuel source. Although “oil sands” continued to be used to describe traditional oil and gas fields, it was also quickly becoming associated with Alberta bitumen and its potential use in a variety of essential end products. An August 1943 Popular Mechanics article titled “Mining Black Gold for Victory,” explained that “precious black gold…precious mineral rich oil sands” could become a “producer of vital war materials,” such as gasoline, diesel fuel, and rubber.
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A third spike in interest followed the oil embargo of 1973 and the resulting energy crisis.
By this time, the term “oil sands” almost exclusively referred to bitumen deposits in Alberta and
elsewhere. This period also saw the rise of the American environmental movement and for the
first time we can see “oil sands” literature focusing on the social and environmental impact of
bitumen extraction (for example, see Smith, 1980, Fanaki and Hoff, 1979, Bradshaw and
Chadwick, 1980).

Tar Sands or Oil Sands? Current Usage
Although business analysts, government agencies, and industry officials continued to
refer to Alberta bitumen as “tar sands” for some time, the term “oil sands” is now favored. For
example, an analysis of 251,287 U.S. diplomatic cables from December 1966 to February 2010
revealed 59 documents pertaining to bitumen extraction that used either of the terms. Ten of
these documents referred to “tar sands” production, while 49 referred to “oil sands.” Industry and
government officials who used the term “tar sands” were based outside of Canada. Among the
documents that discussed “oil sands” production, 30 diplomatic cables originated from the U.S.
embassy in Ottawa or consulates located in other Canadian cities.30 This suggests that efforts to
reframe Alberta’s bitumen deposits have been largely successful within Canada, but have been
less successful in other countries where, until recently, oil executives and government officials
continued to use traditional terminology.
Within the public policy arena, the way the issue is framed can mean a great deal. A
recent article that appeared in the Calgary Herald newspaper claimed that to “industry insiders,

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Relevant documents were downloaded from Wikileaks.org (www.cabledrum.net Accessed February 27, 2012)


using the term ‘tar sand’ is the equivalent of dropping the F-Bomb in church.” The article went on to quote Alberta’s Energy Minister Ron Liepert describing president Obama as naïve when he used the term “tar sands” in a discussion of Keystone XL, saying that it has a “negative connotation…that is absolutely false” (Healing, 2011).³¹

However, when the author spoke to Canadian pollster Angus McAllister about this issue, he told me that the opposite may be true, namely that the general public views “oil sands” less favorably than “tar sands.” “When I’ve done focus groups on this topic, I have found that people see ‘oil’ as an ethical issue – NOT ‘tar,’” McAllister explained in an email.

Oil spills, oil cartels, big oil, oil companies ripping them off at the pumps, foreign oil, snake oil, etc… are all lurking in the back of people’s minds when they think about oil. Tar spills, tar cartels, big tar, tar companies ripping them off, snake tar – not really a problem; tar n’ feather maybe. The issue for most people is not one of ‘grubbiness,’ but one of ‘ethics.’ Hence the term ‘dirty oil’ resonates with many. (McAllister, 2012)

In a privately commissioned 2011 study, McAllister surveyed 2,187 Canadians aged 18 and older from all regions of the country. In a split sample, McAllister asked Canadians about environmental issues of greatest concern, ranging from water quality to nuclear energy. Half of the sample was asked how concerned they were about the “development of the Alberta oil sands” and the other half was asked about the “development of the Alberta tar sands.”

More Canadians express concern about the oil sands, with 30 percent saying they are very concerned, while about one-in-four Canadians (24 percent) say they are very concerned about the tar sands. Both ways of describing the resource elicit less concern in 2011 than in 2009, but the drop is greater for oil sands (down nine points) than for tar sands (down six points). (McAllister, 2011)

³¹ Liepert was quoted as saying, “There is a difference because tar is a man-made substance. Man did not make what rests naturally in the Athabasca oil sands region and so it is clearly oil that is mixed with sand, not tar. But of course, from an environmentalist standpoint, the word tar has a very negative connotation so they’ve done a very good job of selling something that is absolutely false.” HEALING, D. P., SHAUN 2011. Obama's ‘T-Bomb’ ignites industry debate. Calgary Herald, April 08, 2011.
One could speculate that frame transformation contributed to the larger decline in concern about “oil sands.” However, it is important to keep in mind that this survey was done prior to the Keystone XL pipeline protests and social media campaigns that took place during the summer and fall of 2011. Nevertheless, the survey clearly indicates that the oil industry’s concern over the use of the term “tar sands” by anti-pipeline protesters may be misguided.

McAllister also conducted “focus groups and A/B testing for other terms used by industry.” He found that “oil patch” was interpreted by Canadians to mean “small local entrepreneurs,” and “tailings ponds” were viewed not as “massive toxic wastewater lakes,” but “as small family farm-sized ponds with dirt, pebbles, gravel leftover after oil is extracted” and were generally seen as “clean.” When shown images of bitumen mining operations, participants seemed less concerned. “It’s dirt. It is supposed to be dirty,” was a typical response. “Interestingly, the public appear more upset instead by images of steam and air emission blocking the sky. But these are rarely the images used [by environmental activists]”(McAllister, 2012).

Anti-pipeline activists have also tried to connect the term “tar sands” with climate change. However, Canadians appear to be less concerned about the impact of global warming in 2011 than about other environmental issues, says McAllister (see Figure 6.2).

In 2011 concern about global warming continues to decline as it has for the past six years. The issue has now been displaced by resource depletion as the top energy and resources issue…Concern about global warming has typically been higher among residents of major cities. However, in 2011, residents of Vancouver, Toronto and Montreal are no more concerned about global warming than those living in outlying areas. Women of all ages and men under 35 are consistently more concerned about global warming than men 35 and older. (McAllister, 2011)
Carragee and Roefs (2006) explain that frames need to resonate with the “broader political values” of the audience whom stakeholders are seeking to influence. McAllister’s polling data appear to suggest that the oil industry has failed to understand the values of its audience, and as such, has wasted considerable resources trying to influence the public in ways that may have no favorable impact on public opinion of bitumen extraction and transportation.

Figure 6.2: Canadian Concerns about Energy and Resources (2001 – 2011)

![Figure 6.2: Canadian Concerns about Energy and Resources (2001 – 2011)](chart.png)

Source: McAllister Opinion Research, used with permission

Although McAllister’s data calls into question the effectiveness of using the tar sands frame to influence public opinion, the terms “tar sands” and “oil sands” have nevertheless

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32 Question 4t. How concerned are you about the following issues? Depletion of natural resources; Use of fossil fuels, such as oil, gas and coal; Changes in our climate due to global warming; Nuclear Energy
become associated with anti-pipeline and pro-pipeline positions, respectively. As SMO coalitions formed during the summer and fall of 2011, the shift in language by coalition participants could be observed in official documents, web pages, and social media content.

The Communications, Energy and Paperworkers Union of Canada (CEP) was the first stakeholder organization to oppose Keystone. Union documents published online and distributed to policymakers focused on economic concerns and energy security, such as the potential loss of Canadian jobs from exporting unprocessed crude instead of refining it in Canada. Documents published in 2007 and 2008 exclusively referred to bitumen deposits as “oil sands.” For example, a backgrounder from September 2007 included six references to “oil sands” and no references to “tar sands.” Although climate change was mentioned, it was minor focus, limited to one sentence. Key points in that report were:

“The Keystone pipeline will
• exclusively serve U.S. markets;
• create permanent employment for very few Canadians;
• reduce energy security for Canadians; and
• likely hinder investment and job creation in the Canadian energy sector.”

A similar backgrounder from September 2011 adopted the environmentalist frame that referred to bitumen deposits as “tar sands” twice as frequently as “oil sands.” It also focused on the environmental impact more than energy security and jobs. The union’s official position in 2011 was that “expansion of the tar sands would have enormous impacts on the northern ecosystem of Alberta and the communities located there, but it would also put entirely out of reach any prospect that Canada might have of meeting greenhouse gas emission reduction

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objectives.” The CEP appeared to have shifted its framing to align with those of climate change environmentalists who played a central role in organizing opposition to the pipeline.

The recent shift in framing is also evident in academic literature. A search of Google Scholar articles from 2011 and 2012 produced 1,430 results containing the term “tar sands” in the title or abstract, versus 2,860 results for “oil sands.” The majority of “oil sands” articles addressed environmental and technical issues associated with bitumen extraction, particularly in Alberta. A smaller number addressed social and policy concerns. The reverse was true for “tar sands” articles, which focused mainly on social and policy issues, such as environmental justice and indigenous rights (see Appendix 6-A).

Although two of the “oil sands” articles from the sample appear to focus on the environmental harms associated with bitumen extraction (loss of peatland and declining caribou), they do so using neutral scientific language. On the other hand, “tar sands” articles are more often infused with politically charged language such as “genocide” and “threatens,” and focus on topical concerns of climate change and environmental justice.

When the same search is conducted on articles published a decade earlier, the results are very different. Although the proportion of articles that used the term “oil sands” (979) compared to “tar sands” (555) was similar in 2001 and 2002, both terms were used almost exclusively in scientific, technical, and environmental studies. Relevant social and policy research was practically non-existent. However, the relatively small number of articles that did address social concerns, such as indigenous land claims, global warming, and environmental justice, already favored the use of the term “tar sands” over “oil sands” in 2001.

34 Backgrounder: Keystone XL, Communications, Energy and Paperworkers Union of Canada, September, 2011
Nevertheless, in 2001 the term “tar sands” did not have the negative connotation that it has today. In fact, “tar sands” was more frequently used in oil and gas industry journals, such as the Journal of Canadian Petroleum, while “oil sands” was used more frequently in environmental journals. Some overlap also occurred where both terms were used in the same article.

The Google Scholar results reinforce the fact that the term “tar sands” has only fallen out of favor among petroleum engineers and scientists within the past decade, a period when environmental activists and social scientists increasingly embraced the term.

**News Media Frames**

Canadian and US news media have covered the Keystone pipeline since it was first announced. Most of the early stories were carried by regional newspapers, trade journals, and financial news sources that served readers who had a direct stake in the pipeline, such as ranchers, oil engineers, and investors.

At the national level, one sees a marked increase in the number of newspapers covering Keystone in 2011, corresponding with the increase in environmental activism. The US and Canada saw a significant increase in coverage during the fall of 2011, while international coverage declined over the same period. The increase in domestic coverage focused primarily on the Obama administration’s decision to delay review of the pipeline until 2013 and the subsequent showdown between the White House and Republican lawmakers who introduced legislation that would force the President to make a decision. Not surprising, industry and trade newspaper coverage remained constant as these journals typically focus more on technical issues than political concerns.
In January 2012, Media Matters for America, self-described as a “non-profit progressive research and information center dedicated to comprehensively monitoring, analyzing, and correcting conservative misinformation,” published an article titled, “The Press and the Pipeline.” In it, Media Matters claimed that its “analysis shows that as a whole, news coverage of the Keystone XL pipeline between August 1 and December 31 favored pipeline proponents” (Fitzsimmons and Fong, 2012), a conclusion that was based on the percentage of quotes by proponents and opponents in print and television news stories. If such a bias existed, one would expect news articles to also adopt the frame of pipeline proponents. Instead, my analysis of print media coverage found the opposite. When Media Matters for America published its story, more than 65 percent of Keystone XL articles appearing in major US publications used the “tar sands” frame that was favored by pipeline opponents (see Table 6.1).

Table 6.1: News Media Framing of the Issue

<table>
<thead>
<tr>
<th>Framing</th>
<th>Canada</th>
<th>United States</th>
<th>International</th>
<th>Industry &amp; Trade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>oil sands (%)</td>
<td>tar sands (%)</td>
<td>oil sands (%)</td>
<td>tar sands (%)</td>
</tr>
<tr>
<td></td>
<td>(N)</td>
<td>(%)</td>
<td>(N)</td>
<td>(%)</td>
</tr>
<tr>
<td>Prior to June 2011</td>
<td>42</td>
<td>92.1</td>
<td>7.9</td>
<td>267</td>
</tr>
<tr>
<td>Jun 2011 to Aug 2011</td>
<td>72</td>
<td>91.9</td>
<td>8.1</td>
<td>124</td>
</tr>
<tr>
<td>Sep 2011 to Nov 2011</td>
<td>132</td>
<td>84.3</td>
<td>15.7</td>
<td>389</td>
</tr>
<tr>
<td>Dec 2011 to Mar 2012</td>
<td>73</td>
<td>97.0</td>
<td>3.0</td>
<td>305</td>
</tr>
<tr>
<td>Total</td>
<td>319</td>
<td>90.7</td>
<td>9.3</td>
<td>1085</td>
</tr>
</tbody>
</table>

At the beginning of the campaign, only 21 percent of US news articles used the term “tar sands.” However, the percentage of references in news media coverage shifted from “oil sands” to “tar sands” throughout the anti-pipeline campaign, which suggests that activists were successful in influencing traditional news media to adopt their frame (see Figure 6.3).

On the other hand, in Canada the campaign appears to have had very little impact. In fact, it may have had a reverse effect as the percentage of articles favoring the oil industry frame increased from 92 percent to 97 percent. The exception is during the fall of 2011, when there is a temporary increase in the use of “tar sands.”

Figure 6.3: Framing of Keystone XL in American News Media Coverage

![Percent of Keystone XL News Articles](chart)

Most Canadian news articles examined for this study focused on the need to “convince Americans” of the value of Alberta oil sands. They also attempted to discredit opponents, by portraying them as a fringe “green movement.” For example, a National Post article dated February 14, 2012 portrayed the Canadian oil industry as victims of a powerful coalition of
environmental activist groups. The article titled *Greens scramble on new pipe front* claimed that “U.S. environmentalists [are] scrambling – again – to try to derail the proposal.”

Led by Mr. McKibben, the Natural Resources Defense Council, Friends of the Earth, the Sierra Club and others, the green movement circled the White House in November just days before the Obama administration announced it would delay a decision on Keystone XL until 2013. More than 1,000 environmental activists were arrested outside the White House in August during a two-week sit-in opposing Keystone XL. Natural Resources Minister Joe Oliver has blamed “environmental and other radical groups” for unfairly targeting Canada’s energy industry.

Although the amount of text examined during the December 2011 to March 2012 period was slightly higher for Canada (145,148 words) compared to the United States (113,769 words), Canadian newspapers raised environmental concerns far less frequently. Bill McKibben, for example, is only quoted in three articles during this period, all of which appeared to favor the oil industry. In a February 28 *Toronto Star* article titled *TransCanada eyes shorter pipeline*, Sheldon Alberts, Washington correspondent for Postmedia News,36 wrote about how the “urgently needed” pipeline “was assailed by environmentalist and other critics.”

Many Canadians appeared to accept the position of the oil industry, which denied that bitumen extraction will have a significant impact on the environment. When the author spoke with TransCanada President Alex Pourbaix in November 2012, he disputed Bill McKibben’s claim that exploiting Canadian oil sands is like lighting a carbon bomb. “It’s not even close,” he said. He went on to provide statistics suggesting that exploiting all the potential oil sands

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reserves would only have a very minor impact on global warming, contributing a fraction of one degree at most.

The near exclusive use of the term “oil sands” in Canadian news media is consistent with the media hegemony thesis that “powerful elites” influence news media frames (Carragee and Roefs, 2006). Canadian journalists were directed by their editors to use the frame advanced by oil companies and conservative politicians, without any explanation of why “oil sands” was preferred over the traditional and more accurate term, “tar sands.” Craig McInnes, a reporter for the Vancouver Sun, questioned his newspaper’s official policy to use “oil sands” in articles relating to bitumen extraction and transportation.

Writers in The Vancouver Sun, myself included, use the term oilsands, written as one word. It’s not a personal choice, but a decision taken somewhere over my head that is part of the uniform style guide that we are expected to follow… Oilsands is the preferred word used by the industry and jurisdictions that are benefiting from the jobs, spinoff industries and tax revenues from the development of the massive deposits. That is a change from the early years, when the deposits were almost universally called tarsands before environmental concerns were much of a consideration. (McInnes, 2013)

This raises the question as to why American newspapers were more sympathetic to pipeline opponents. Not only did they prefer the “tar sands” frame by nearly 2 to 1, they also quoted environmentalists and other pipeline opponents far more than their Canadian counterparts. For example, in the same December to March period, McKibben is mentioned 25 times in American newspapers. Those mentions were also framed more positively, either by quoting McKibben directly, or by focusing on accomplishments. For example, a December piece written by New York Times columnist Leslie Kaufman (Environmentalists Get Down to Earth), began by focusing on the environmental concerns raised by 350.org. “The earth is warming,
perhaps catastrophically, yet legislative efforts to cap carbon emissions collapsed in 2010,” wrote Kaufman. She then goes on to praise the work of McKibben.

MUCH of the credit for the success of the demonstrations has gone to a man not quite of the traditional green establishment: Bill McKibben, a journalist turned advocate. Mr. McKibben founded 350.org, a group that has attracted young people and propelled its message online and through mass protest.

When the Canadian press was questioning whether bitumen extraction would have a major impact on climate, American newspapers appeared to have accepted its impact on climate change. Some periodicals, such as *Rolling Stone* and *The Los Angeles Times*, even invited McKibben to write editorial pieces. In a February 26 article titled “Politics isn’t a dirty word,” Alec MacGillis of the *Washington Post* described the pipeline decision as “a political football.”

It involved a classic political trade-off between conflicting concerns: jobs and a secure new energy supply vs. the huge carbon emissions generated by Canadian tar sands and the environmental risks of the pipeline itself.

A number of possibilities could explain the differences in Canadian and American framing. Canadians have long been told of that oil sands represent a future of prosperity, whereas, prior to the Tar Sands Action campaign, most Americans were unaware of Canada’s role as the most significant supplier of petroleum to US refineries. In addition, Canadian government agencies lack the transparency of American agencies, thereby limiting the ability of Canadians to accurately assess economic and environmental impacts.

Coverage in international periodicals was sparse, but those newspapers that did cover the Keystone XL story increased their usage of the term “tar sands” from 30 percent at the beginning

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37 The role of transparency in frame hegemony and resonance is addressed later in the study. Canadian government transparency is discussed in Chapter 11.
of the Tar Sands Action campaign to 87 percent in early 2012. Nevertheless, most international news articles avoided taking sides in the issue, choosing instead to simply describe the events and the positions of various stakeholders. The author found only two articles in the December to March period that appeared to take sides. One was a January 2012 article in the *Sunday Times* of London that questioned the risk to the Ogallala aquifer, noting that “25,000 miles of pipeline already traverse that aquifer, with no harm to water supplies.” Yet even this article, which praised the idea of the United States obtaining its oil from “a friendly neighbor,” used the term “tar sands” rather than “oil sands.”

**Stakeholder Terminology Adoption**

Despite its historical use within the oil industry, the term “tar sands” has become infused with political meaning. It has been adopted by environmentalists, not only in documents, but also in public opinion campaigns and protests. Once 350.org, the lead organization opposing Keystone XL, adopted *Tar Sands Action* as the name of their Keystone opposition movement, any remaining neutrality vanished (see Figure 6.4).

Today, one can almost immediately identify whether someone is an opponent of Keystone XL (and often the oil industry as a whole) by their use of the term “tar sands.” Similarly, Internet searches of the terms “tar sands” and “oil sands” generally produce web results of opponents and proponents, respectively. For example, among the top 30 results from a Google search of the term “tar sands,” 19 were sites opposed to Bitumen extraction and/or the Keystone XL pipeline (see Appendix 6-C). The remaining 11 sites were neutral news and information sites, including one site by the U.S. Department of the Interior, Bureau of Land
Management that was generally favorable toward bitumen development, but also mentioned some of the concerns raised by opponents. The results were nearly reversed for the term “oil sands,” which yielded 18 sites hosted by oil companies, industry organizations, and the Canadian government, all of them promoting bitumen extraction and pipeline development. The remaining 12 sites consisted of 11 neutral news and information sites and one opposition site (oilsandstruth.org).

Figure 6.4: Banner for 350.org’s “Tar Sands Action” Website

Pipeline opponents also highlighted the perceived harms of bitumen by attaching adjectives such as “dirty” and “destructive” to the term “tar sands” or by using rhyming words like “scar sands.” Frame amplification is commonly used by SMOs to accent or highlight a specific message that needs to be communicated to policymakers, news media, and the general public (Benford and Snow, 2000). Amplification has also been shown to facilitate mobilization by signaling the relationship of target to specific environmental and social causes (Snow et al., 1986).

In the current study, the author analyzed 5,796 references to “tar sands” and “oil sands” in letters, emails, social media posts, government reports and websites to identify stakeholder framing biases (see Table 6.2). Outside of the State Department, government agencies nearly mirrored the oil industry. In 95.5% of official agency documents, the term “oil sands” was preferred over “tar sands.” State Department documents were somewhat more balanced with a 73.3 percent preference for “oil sands.” The author expected most of these references to be quotes from environmentalists and other opposition stakeholders. Surprisingly, the State Department often used the term “tar sands” in official reports and policy documents.

Ranchers and environmentalists took the opposite position, preferring the term “tar sands” in 94.1 percent and 91.6 percent of the documents analyzed, respectively. The almost unanimous use of the term “tar sands” by ranchers is not surprising given that ranchers were almost universally opposed to the pipeline, even in oil producing states like North Dakota and Montana.

Among the four oil industry documents that used the term “tar sands,” only one was written by an oil pipeline company, an Enbridge Northern Gateway report that included a quote from the New York Times in one of its footnotes. The remaining three references were written by regional trade associations with loose affiliations to oil companies.39 Outside of that single quote, not one industry document analyzed for this study used the term “tar sands.” Therefore, it is safe to say that the oil industry has completely rejected the traditional term “tar sands” to describe Alberta’s bitumen deposits.

39 The documents included an engineering study by the Montana Consumer Council and testimony in support of Keystone XL by the president of The South Dakota Retailers Association, largely focused on the economic benefits the pipeline would bring to the region.
Table 6.2: Stakeholder Framing of the Issue

<table>
<thead>
<tr>
<th>Framing</th>
<th>Oil Sands</th>
<th></th>
<th>Tar Sands</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N (%)</td>
<td>(%)</td>
<td>N (%)</td>
<td>(%)</td>
<td>N</td>
<td>(%)</td>
</tr>
<tr>
<td>State Department</td>
<td>1628</td>
<td>73.3</td>
<td>603</td>
<td>27.0</td>
<td>2231</td>
<td>38.5</td>
</tr>
<tr>
<td>Other Government Agency</td>
<td>1279</td>
<td>95.5</td>
<td>60</td>
<td>4.5</td>
<td>1339</td>
<td>23.1</td>
</tr>
<tr>
<td>Politician</td>
<td>564</td>
<td>63.7</td>
<td>322</td>
<td>36.3</td>
<td>886</td>
<td>15.3</td>
</tr>
<tr>
<td>Oil Industry</td>
<td>555</td>
<td>99.3</td>
<td>4</td>
<td>0.7</td>
<td>559</td>
<td>9.6</td>
</tr>
<tr>
<td>Environmentalist</td>
<td>57</td>
<td>8.4</td>
<td>625</td>
<td>91.6</td>
<td>682</td>
<td>11.8</td>
</tr>
<tr>
<td>Indigenous</td>
<td>11</td>
<td>28.2</td>
<td>28</td>
<td>71.8</td>
<td>39</td>
<td>0.7</td>
</tr>
<tr>
<td>Rancher</td>
<td>2</td>
<td>5.9</td>
<td>32</td>
<td>94.1</td>
<td>34</td>
<td>0.6</td>
</tr>
<tr>
<td>Trade Union</td>
<td>24</td>
<td>92.3</td>
<td>2</td>
<td>7.7</td>
<td>26</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4120</strong></td>
<td><strong>71.1</strong></td>
<td><strong>1676</strong></td>
<td><strong>28.9</strong></td>
<td><strong>5796</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

In much the same way as oil companies rejected the term “tar sands,” ranchers rejected the term “oil sands.” For example, they did not directly use the term “oil sands” in any of the documents reviewed for this study. Instead, the two references to “oil sands” were found in court documents submitted by lawyers representing Dakota Rural Action, a South Dakota-based agricultural trade association that represented small farmers and ranchers. Moreover, both legal documents used the phrase “tar or oil sands” in what appears to be an effort to avoid any confusion in terminology.

Aside from the State Department, government agencies rarely used the term “tar sands.” Among the 60 occurrences in government agency documents, 13 were quotes of environmentalists, politicians, and other third parties (see Table 6.3). The remaining occurrences were found in technical reports by state agencies. No other federal agency used the term “tar sands.” Canadian federal and provincial governments exclusively used the term “oil sands” as did most US federal agencies, such as the Fish and Wildlife Service and the Environmental Protection Agency.
The US State Department, as the lead agency reviewing the pipeline permit, produced the most documentation. For the current study, 122 State Department documents were reviewed, including environmental impact studies and other reports that numbered in the hundreds of pages. State Department documents also included a number of lengthy reports that yielded a high number of coding references.40

Table 6.3: Government Framing of the Issue

<table>
<thead>
<tr>
<th>Framing</th>
<th>Policymakers</th>
<th>State Department</th>
<th>Other Agencies</th>
<th>Total Gov't</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>oil sand</td>
<td>tar sand</td>
<td>oil sand</td>
<td>tar sand</td>
</tr>
<tr>
<td></td>
<td>(N) (%)</td>
<td>(N) (%)</td>
<td>(N) (%)</td>
<td>(N) (%)</td>
</tr>
<tr>
<td>Prior to June 2011</td>
<td>199 46.2</td>
<td>53.8</td>
<td>110 100.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Jun 2011 to Aug 2011</td>
<td>92 44.6</td>
<td>55.4</td>
<td>395 95.7</td>
<td>4.3</td>
</tr>
<tr>
<td>Sep 2011 to Nov 2011</td>
<td>175 90.3</td>
<td>9.7</td>
<td>16 93.8</td>
<td>6.3</td>
</tr>
<tr>
<td>Dec 2011 to Mar 2012</td>
<td>110 79.1</td>
<td>20.9</td>
<td>9 33.3</td>
<td>66.7</td>
</tr>
<tr>
<td>Total</td>
<td>576 65.6</td>
<td>34.4</td>
<td>1085 51.1</td>
<td>48.9</td>
</tr>
</tbody>
</table>

State Department officials clearly preferred the term “oil sands.” Excluding third party quotes discussed above, the occasional use of the term “tar sands” occurred most often in an environmental context, including “health effects,” “greenhouse gas emissions,” and the “corrosive nature of Canadian tar sands” that increases the risk of serious oil spills (Nagy, 2010). Although the percentage of documents that referred to “tar sands” increased over time, the number of available documents was too small to make any conclusion about shifting frames. For example, in the December 2011 to March 2012 period, only nine references occurred, six of which were “tar sands,” and all of which occurred in a single report by the State Department’s Office of the Inspector General.

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40 The sample of 122 documents included 29 reports that were over 100 pages in length, including Appendix G to the Environmental Impact Study (EIS) that was 1,679 pages long.
Prior to the Tar Sands Action campaign, policymaker framing of the issue was nearly evenly split among those who adopted the term “tar sands” and those that used the term “oil sands.” One also finds that “tar sands” is used primarily by Democrats who opposed the pipeline project on environmental and safety grounds, while “oil sands” is used by supporters, most often Republican, who focused on energy security and job creation. In documents coded for political affiliation, 90 percent of references by Democrats used the term “tar sands” compared to only 14 percent of Republicans. Moreover, when Republicans used the term “tar sands,” they almost exclusively did so when quoting opposition lawmakers.

One of the earliest and most vocal opponents in Congress was Rep. Henry Waxman of California. Among the sample of Keystone XL documents, the earliest reference by a lawmaker was a letter than Rep. Waxman wrote to Secretary of State Hillary Clinton on July 2, 2010, nearly six months before the creation of Tar Sands Action. “Dear Madam Secretary,” he begins.

I am writing to inform you of my concerns about the proposed Keystone XL pipeline to transport heavy crude oil from the Canadian tar sands in Alberta to the Gulf Coast. The State Department's decision on whether to permit this pipeline represents a critical choice about America's energy future. This pipeline is a multi-billion dollar investment to expand our reliance on the dirtiest source of transportation fuel currently available.

Once the campaign against Keystone XL began in earnest, Rep. Waxman continued to champion environment concerns. For example, in a June 15, 2011 meeting by the Subcommittee on Energy and Power, Rep. Waxman used increasingly colorful language to describe Keystone XL, adding words like “sludge” and “hazardous.” “[Keystone XL] would carry sludge made from Canadian tar sands through the middle of America,” he began. “My greatest concern is that Keystone makes us more reliant on the dirtiest source of fuel currently available. On a lifecycle
basis, tar sands emit far more carbon pollution than conventional oil…” He then went on to describe the risks of serious spills to “life, property, and the environment.”

Shortly afterward, in the fall of 2011, one can see a shift in policymaker framing in the opposite direction of protesters. Of the 175 references analyzed between September and November 2011, more than 90 percent used the term “oil sands.”

This primarily reflects the reaction of Canadian and Republican lawmakers to the social media campaign by Tar Sands Action. In Canada, Keystone XL suddenly became an important point of discussion in parliamentary meetings. For example, a November 15, 2011 meeting of the Standing Senate Committee on Energy, the Environment, and Natural Resources, members of the Canadian government focused on allegations of American news media bias and a conspiracy to funnel funds “being paid primarily from the United States through foundations coming into Canada and providing the financial wherewithal for…anti-pipeline and anti-oil sands and anti-development.” Some parliamentarians, such as Conservative Party Senator Daniel Lang, sought to portray the oil industry as victims of a powerful environmental lobby that has funneled in the “neighborhood of $200 million, if not more” into Canada in an effort to stop Keystone XL and the Northern Gateway Pipeline.

In the United States, Republican representatives sought to introduce legislation that would force the State Department to make a decision on Keystone XL rather than wait until 2013 to conduct an additional environmental review on a proposed alternate route that avoided ecologically sensitive areas. For example, Republican Senator Richard Lugar introduced Bill S.1932, dubbed the “North American Energy Security Act” which would direct “the President, acting through the Secretary of State, to grant a permit under Executive Order 13337.” At the
same time, Republican Rep. Denny Rehberg introduced an identical bill in the House of Representatives (H. R. 3537). These two bills focused on the economic and security benefits that Keystone would bring. It noted that “not only are United States companies major investors in Canadian oil sands, but many United States businesses throughout the United States benefit from supplying goods and services required for ongoing Canadian oil sands operations and expansion.”

During this period, Democratic lawmakers were surprisingly quiet about Keystone XL. One finds only scattered documents referring to “tar sands,” such as a December 15, 2011 report by the House Committee on Energy and Commerce Minority Staff titled, “The Anti-Environment Record of the U.S. House of Representatives 112th Congress, 1st Session,” a report prepared for Rep. Waxman that mostly repeated his comments from earlier letters and statements.

**Conclusion**

Despite the longstanding use of the term “tar sands” by the oil industry to describe Alberta’s bitumen deposits, in recent years it has become a politicized term associated with environmentalists and other oil industry opponents. During the Tar Sands Action campaign, one can see a steady increase in the use of “tar sands” by American newspapers. At the same time, one sees an increase in the use of “oil sands” by Canadian and American lawmakers who sought to discredit Keystone XL opponents.

In his discussion of anticorporate activism, Knight (2010) observes that “communication in the public sphere takes on a promotional aspect as it deals with the construction and circulation of identity and reputation…” Much of the success in reframing “oil sands” as “tar
sands” may be attributed to the branding efforts of 350.org, as it constructed its coalitions around the “Tar Sands Action” umbrella. Not only did Tar Sands Action become the face of the anti-pipeline movement, it extensively used the term “tar sands” in banners, news releases, photos, and online postings. Moreover, the effectiveness of the campaign demonstrates the importance of uniting diverse stakeholders around a single refrain in a way that resonates with supporters, but also recognizes the unique interests and contributions of each stakeholder group within the wider coalition. In this instance, the phrase “tar sands” became a symbol that represented the interests of opponents in much the same way as “oil sands” represented the interests of the oil industry and its political allies.

What distinguishes Tar Sands Action from less successful SMOs was its ability to maintain a consistent identity across stakeholders that held implications beyond the confines of Keystone XL. For 350.org, Keystone XL was a symbol of harmful climate policies. A movement called Keystone XL Action would not have had the same impact because it would not have aligned the interests of the movement with greater public concerns over global warming, it would have limited the scope of action to one specific project, and it would have limited the movement’s ability to focus on the source of the perceive problem. In contrast, Tar Sands Action provided the flexibility to target other projects and harms related to bitumen extraction. Keystone XL will eventually fade in importance, but by focusing on “tar sands” and climate change, 350.org has built a strategic capacity to redirect the resources of Tar Sands Action to other projects and sustain the movement over the longer term.

Tar Sands Action also seems to be the first major environmental effort to use social media effectively to reshape public discourse. Although it is difficult to determine causation,
both sides of the conflict have told me that they believed the social media campaign was critical to the outcome of the dispute and the decision by President Obama to reject the permit. There is no evidence from this study to dispute such claims, but the results do not support the belief that policymakers, including President Obama, were *directly* influenced by social media. At the same time, the increase in use of the term “oil sands” by policymakers does not indicate a shift in frame adoption, but rather reflects an increase in activity by pipeline proponents, particularly Republican lawmakers. For example, lawmakers who opposed Keystone prior to the social media campaign used the term “tar sands” consistently, both before and after the campaign. Similarly, Republican and Canadian politicians used the term “oil sands” both before and after the campaign.

On the other hand, the language used by government agencies did not change over time. Government agencies consistently preferred the term “oil sands” in official documents, both before and after the campaign. Prior to the Tar Sands Action campaign, the State Department did not use the term “tar sands” in any of its documentation. Although it might appear that the campaign resulted in some increase in use of the term, nearly all references to “tar sands” in more recent government documents were quotes from other stakeholders, including policymakers, environmentalists, and ranchers, or they were citations of non-governmental documents. Excluding quotes and citations, framing in government documents changed little over the course of the campaign.

Policymaker and government agency terminology preferences did not change as a result of the campaign. However, this does not mean that the campaign was not successful in influencing public policy. The fact that the campaign coincided with an enduring shift in media
language could imply a longer term *indirect* policy influence. Moreover, the sustained shift in language should be viewed as one of the more successful framing efforts by an SMO.

There is growing evidence that Canadian news media are also beginning to adopt the “tar sands” frame in stories that discuss Alberta bitumen. For instance, a Google News search conducted in February 2013 revealed news articles from *The National Post*, *The Toronto Star*, *The Vancouver Province*, and *Vancouver Observer* that used the term “tar sands.” The term “oil sands” is still preferred, but it is declining.

In subsequent chapters, the author will examine some of the campaign’s more direct impacts and the counterframing efforts of private and public sector Keystone XL proponents. The author will also examine social media and new media strategies and their roles in shaping the outcome of the dispute.
Chapter 7: Frame Amplification in a Heterogeneous Social Movement

Frame amplification is the process of gaining support by making problems relevant to potential stakeholders. Early opposition to Keystone focused primarily on economic concerns, such as the loss of Canadian jobs by exporting raw materials for refining in the United States or potential damage to the agricultural industry caused by oil spills. Although these were important issues to Canadian refinery workers and American ranchers, respectively, their impact on the general population was minimal.

Environmental organizations took little notice of the Keystone pipeline when it was first proposed. As a result, the pipeline was on a “fast track” for approval and construction. In a 2007 interview by the South Dakota Argus Leader newspaper, Sierra Club chapter president John Davidson had little to say other than to express a concern about the lack of public input into the approval process.

In South Dakota, opposition came not from the Sierra Club, but from a rural South Dakota water utility, WEB Water Development Association Inc. WEB managed over 6,000 miles of underground water pipelines that supplied farms, ranches, and small communities with fresh water. WEB general manager Curt Hohn attempted to build grass roots opposition to Keystone, citing concerns over the impact that a major spill might have on the state’s fresh water supply, but found few supporters. “Hohn might be a lonely critic amid the many supporters of the project,” observed journalist Peter Harriman, “but he is trying to rally support for sharp scrutiny of the TransCanada plan.”
He is raising questions about whether a huge, high-pressure daily pulse of crude oil an average of 4 feet under South Dakota's productive farmland, range and wet-lands is really all that safe. (Harriman, 2007)

As precedent, Hohn cited a 1979 spill in Bemidji, Minnesota that continues to threaten that region’s water supply decades after the event. Hohn never lived to see the devastating impact of the Enbridge spill in Marshall, Michigan. On November 13, 2010, Hohn passed away after a long battle with cancer, but by this time, environmentalists had begun their own grassroots opposition to the Keystone expansion.

Initially, Keystone XL generated more opposition than the original Keystone pipeline because it threatened the Sandhills region of Nebraska. The Sandhills wetlands were home to a number of unique wildlife species and migratory birds. They were also important for “recreation activities, particularly hunting and fur harvesting…[and] other recreation such as bird watching and nature photography” (LeGrange, 1997). According to Parfomak et al. (2012), the “[u]nique characteristics of the Sand Hills, including its high concentration of wetlands, extensive areas of very shallow groundwater, and its sensitive ecosystem, were identified as factors that resulted in increasing public concern over the proposed pipeline location.” At one point, a TransCanada advertisement at a University of Nebraska football game was jeered by the audience, prompting the university to terminate its advertising agreement with the pipeline company (Gemen, 2011).

Bold Nebraska led the campaign against Keystone XL by Nebraska landowners and concerned citizens. It launched a Facebook page on January 30, 2011 with a link to a September 2010 article published in the *Omaha World-Herald* titled “Midlands Voices: Supporters, critics debate TransCanada pipeline plan.” The article begins with a dramatic image of a barrel of black
oil pouring out over the heartland of America (see Appendix 7-A). The article highlighted a number of risks to Nebraska, including:

- “The fragile Sand Hills are subject to blowouts and plant disturbance…”
- “The Ogallala Aquifer provides drinking and irrigation water to most of Nebraska and is in danger of contamination from pipeline leaks, which would be difficult or impossible to clean up.”
- “Pipeline construction would disturb already-silted Nebraska rivers…”
- “The pipeline would go through the Rainwater Basin, home to huge spring and fall waterfowl migrations, with potential for contamination.”
- “Migrating birds would be endangered…”
- “Tar sands oil is considered to be an especially ‘dirty’ fuel…”
- “…greenhouse gas emissions that contribute to global warming and dangerous climate change.”
- “TransCanada has threatened landowners along the pipeline route with eminent domain proceedings…” (Moul, 2010)

Although climate change is mentioned in the article, it is given less space compared to land and water issues. Similarly, Bold Nebraska focused on issues important to landowners, ranchers, and other Nebraska residents. A keyword search of the top 100 words used on the Bold Nebraska Facebook page showed that health, land, and water were frequently discussed topics (see Table 7.1). Energy was also frequently mentioned, both to refute claims made by the oil industry that the pipeline will help America become “energy independent” and to propose “renewable energy” alternatives. Topics such as climate, global warming, and greenhouse gasses were not among top keywords.

Early in the campaign against Keystone XL, few people outside of Nebraska seemed concerned about the pipeline. After all, the United States currently has more than 2.6 million miles of pipelines crisscrossing every corner of the country. Most Americans were unaware of the extensive pipeline system, even when lines were installed close to their homes. For example, when an Enbridge pipeline carrying diluted bitumen ruptured near Marshall Michigan in July
2010, emergency responders received numerous 911 calls complaining of noxious smells. Neither the residents of the area nor the emergency responders knew that a major pipeline passed through their county. For 17 hours, Enbridge continued to pump Dilbit into Talmadge Creek before a utility crew noticed the spill.41

Table 7.1: Issue Word Frequency on the Bold Nebraska Facebook Page

<table>
<thead>
<tr>
<th>Word</th>
<th>Count</th>
<th>Weighted Percentage (%)</th>
</tr>
</thead>
<tbody>
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<tr>
<td>health</td>
<td>97</td>
<td>0.16</td>
</tr>
<tr>
<td>sandhills</td>
<td>72</td>
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</tr>
<tr>
<td>water</td>
<td>68</td>
<td>0.11</td>
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<tr>
<td>land</td>
<td>63</td>
<td>0.10</td>
</tr>
<tr>
<td>landowners</td>
<td>59</td>
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</tr>
</tbody>
</table>

Although the Enbridge pipeline rupture created the largest inland oil spill in United States history, few Americans learned about what happened on the night of July 26, 2010. At the time, the nation was still focused on the Deepwater Horizon explosion and the ongoing war in Afghanistan. Congressman Fred Upton, who represents the Michigan district where the spill occurred, was reelected in November 2012, despite advocating for oil interests, such as fast-tracking approval of the Keystone XL permit.42

When the author asked Bill McKibben about the impact of the Enbridge spill on the Keystone XL discussion, he explained that the spill was more important in Canada, where

41 “Enbridge Energy Partners LLP (Enbridge) reported a 30-inch pipeline ruptured on Monday, July 26, 2010, near Marshall, Michigan. The release, estimated at 819,000 gallons, entered Talmadge Creek and flowed into the Kalamazoo River, a Lake Michigan tributary. Heavy rains caused the river to overtop existing dams and carried oil 30 miles downstream on the Kalamazoo River.” Source: The Environmental Protection Agency (http://www.epa.gov/enbridgespill/ Accessed November 30, 2012)
42 In 2011, Upton received $185,000 in campaign contributions from the oil and gas industry Source: Open Secrets (http://www.opensecrets.org/politicians/summary.php?cid=N00004133#ind Accessed November 30, 2012)
Enbridge ran into opposition for its proposed Gateway pipeline to the West Coast. He also said that most Americans saw the Kalamazoo River as the “backwater” of the country, while the Deepwater Horizon explosion in the Gulf of Mexico was accompanied by the kind of dramatic video footage that captivates television news audiences.

**Indigenous Tribes**

The Indigenous Environmental Network (IEN) was the lead organization representing native interests in the anti-pipeline campaign. Established in 1990, IEN focused on “environmental and economic justice issues” affecting the indigenous peoples of North America. The IEN’s Canadian Indigenous Tar Sands Campaign described what it saw as the “slow industrial genocide” of the indigenous peoples of Alberta and British Columbia.

Like Nebraska’s citizens, indigenous peoples were concerned about the impact of tar sands on the land and water. Only Alberta’s native tribes were already facing issues affecting their health and wellbeing, such as the downstream effects of bitumen extraction on tribes living in the Athabasca River region. For example, members of Alberta’s Fort Chipewyan tribe appeared to suffer from unusually high rates of rare cancers. A physician from Fort McMurray Alberta who treated members of the tribe also noted “high rates of renal failure, lupus, and hyperthyroidism” (Nikiforuk, 2010).

However, on both the IEN website and Facebook page, climate appeared to be the main focus. On the IEN website main landing page, climate change articles featured prominently, while cancer and wildlife concerns were relegated to a side column. Not surprisingly, the IEN was also closely allied with climate change activists from Greenpeace and 350.org, and IEN
Director Clayton Thomas-Müller was hailed as a “climate hero” by Yes magazine. Similarly, IEN’s Facebook page focused more on climate concerns than other issues. In fact, climate concerns accounted for a higher percentage of the overall text than Tar Sands Action’s Facebook page (see Table 7.2).

The promotion of climate change over local environmental justice concerns may simply be part of an effort by the IEN to engage in what Benford and Snow (2000) refer to as “strategic fitting,” a process in which stakeholders accommodate different audiences to achieve greater frame diffusion. Strategic fitting allows weaker stakeholders to attach themselves to more powerful movements to oppose a perceived outside threat. However, strategic fitting also undermines dynamic frame sequencing, which seeks to build opposition by presenting different frames at strategically opportune moments.

Heterogeneous social movements can leverage DFS by maintaining a “toolkit” of frames that can publicized to correspond with outside events. For instance, climate change can be emphasized during severe weather events, water quality issues can be raised during pipeline ruptures and other spills, and concerns over disease can be raised when human activity-related health alerts are issued. By “fitting” their frames to the climate movement, the IEN is reducing its ability to participate in DFS implementation and, perhaps counter intuitively, may be undermining both their own cause and that of the climate movement.

Fortunately for pipeline opponents, the IEN did not completely subordinate its diverse concerns to the climate movement. For instance, Keystone XL begins to feature prominently on the IEN Facebook page beginning on January 24, 2011 with an announcement that Canadian indigenous communities were sending representatives to Nebraska “to help mobilize opposition
there.” However, unlike Bold Nebraska, which focused exclusively on Keystone XL, the IEN broadly opposed oil interests. The Deepwater Horizon accident, the Enbridge Northern Gateway Pipeline, and hydraulic fracturing, commonly known as fracking, all featured prominently in IEN campaigns.

The IEN’s broad interests are reflected in a word frequency analysis of its Facebook page, which reveals concern for water issues, land issues, oil spills, and nuclear energy.

<table>
<thead>
<tr>
<th>Word</th>
<th>Count</th>
<th>Weighted Percentage (%)</th>
</tr>
</thead>
<tbody>
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<td>climate</td>
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</tr>
<tr>
<td>water</td>
<td>293</td>
<td>0.25</td>
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<td>land</td>
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<td>spill</td>
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<td>earth</td>
<td>131</td>
<td>0.11</td>
</tr>
</tbody>
</table>

**Connecting “Tar Sands” to “Climate Change”**

When 350.org created Tar Sands Action, it set out to reframe Keystone to focus on an issue that affects everyone on the planet – climate change. Tarsandsaction.org was created on June 21, 2011 to promote protests against Keystone XL that were scheduled to occur in Washington, D.C. over the summer. The newly formed organization sought to unite different anti-pipeline interests in the hope of killing the project. On June 22, Tar Sands Action posted an announcement on its website titled, “A Call for Civil Disobedience on the Keystone XL Pipeline.”
Washington — Eleven veteran environmentalists on both sides of the border today called for demonstrations outside the White House later this summer to block the proposed Keystone XL pipeline from the tar sands of Alberta. “This is one issue where the president has total control—he has to grant or deny the necessary permits. Congress can’t get in the way” said Bill McKibben, author of the first book for a general audience on climate change. “It’s where Obama can get his environmental mojo back. But we need him to lead.”

McKibben later told me that he had become interested in Keystone XL after reading a report by climate scientist James Hansen titled “Silence is Deadly.” In it, Hansen claims that fully developing Alberta’s would be “game over” for the climate, a mantra that was often repeated by anti-pipeline activists throughout the campaign. In his report, Hansen (2011) wrote:

Although there are multiple objections to tar sands development and the pipeline, including destruction of the environment in Canada, and the likelihood of spills along the pipeline’s pathway, such objections, by themselves, are very unlikely to stop the project.

An overwhelming objection is that exploitation of tar sands would make it implausible to stabilize climate and avoid disastrous global climate impacts. The tar sands are estimated (e.g., see IPCC AR4 WG3 report) to contain at least 400 GtC (equivalent to about 200 ppm CO2). Easily available reserves of conventional oil and gas are enough to take atmospheric CO2 well above 400 ppm.

However, if emissions from coal are phased out over the next few decades and if unconventional fossil fuels are left in the ground, it is conceivable to stabilize climate. Phase out of emissions from coal is itself an enormous challenge. However, if the tar sands are thrown into the mix it is essentially game over. There is no practical way to capture the CO2 emitted while burning oil, which is used principally in vehicles.

On July 12, 2011, Tar Sands Action launched its Facebook page with pictures of protests at the Montana state capitol building by members of Rising Tide North America, a “climate crisis” protest group. It also featured an article in the Los Angeles Times titled, “Path appears clear for oil pipeline from Canada.” Like the debut article that appeared on Bold Nebraska’s
Facebook page, which focused on land and water issues, the Los Angeles Times article focused on a broad list of concerns, including climate change and pipeline safety. The article reads,

The oil Keystone XL would carry from Alberta is mined from soil rich in a tar-like petroleum called bitumen and refined to separate the heavy crude. The high-energy demand of mining and refining bitumen has increased greenhouse gas emissions, polluted water sources and harmed the region's boreal forests, environmentalists say…

Keystone XL would thread through the vast Ogallala aquifer, the main drinking water source for the U.S. Midwest. The Keystone I system has had a dozen leaks in the last year, stoking fears of a spill in the aquifer from the new pipeline. More environmental concerns arose this month after an ExxonMobil pipeline leaked up to 42,000 gallons into the Yellowstone River in Montana, under which Keystone XL would also run.

Not surprisingly, climate was the most frequently used issue word appearing on the Tar Sands Facebook page. It also accounted for a higher percentage of the total text compared to issue words on the Bold Nebraska page. Among the top 100 words, land and water concerns are entirely absent. The only word shared with Bold Nebraska is “energy” (see Table 7.3), which Tar Sands Action used in connection with “energy conservation,” “energy efficiency,” and “clean energy.”

Table 7.3: Issue Word Frequency on the Tar Sands Action Facebook Page

<table>
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<tr>
<th>Word</th>
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<th>Weighted Percentage (%)</th>
</tr>
</thead>
<tbody>
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<tr>
<td>Canada</td>
<td>71</td>
<td>0.23</td>
</tr>
<tr>
<td>energy</td>
<td>46</td>
<td>0.15</td>
</tr>
<tr>
<td>industry</td>
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<td>0.15</td>
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<tr>
<td>environmental</td>
<td>45</td>
<td>0.15</td>
</tr>
<tr>
<td>dirty</td>
<td>29</td>
<td>0.10</td>
</tr>
</tbody>
</table>
The Role of Public Policy in Climate Change Mitigation

The longer term focus of the campaign, whether through protests or social media, was to convince policymakers to gradually force oil companies out of business in much the same way that policymakers forced the hand of powerful tobacco companies through taxation, education, and smoking bans. Although political action has long been the approach favored by McKibben, Luke (2005) argues that McKibben’s “faith in politics alone rings false.”

[S]o many different administrative, ethical, legislative, and regulatory interventions over the past generation have been tried, and these have mostly failed completely or only slowed the rate of destruction. This is true because liberal democratic politics typically restricts itself to the domains of government, public administration, regulation, or civic management, which overlook too many sites and structures where the real damage continues to be done. (Luke, 2005)

Nevertheless, history has shown that government regulation can be effective in mitigating environmental harms. Park (2003) uses the example of CFCs and DDT to take aim at those who hold a “pessimistic view” of sustainability policies.

The goodness of technology is judged according to the prevalent knowledges at the time of introduction of that technology. DDT was good when we had not yet realized its harmful ecological effects. CFC was good when we had not known at all of its possible chemical reaction with stratospheric ozone. DDT is now banned in most parts of the world, and CFCs have been gradually replaced by HFCs. (Park, 2003)

The first step in banning DDT was the publication of Rachel Carson’s *Silent Spring* in 1962, which reframed the issue from one of technological progress to one of environmental harm. At the time, the Monsanto Company, which manufactured DDT, dismissed environmentalist concerns. “Pesticides involve the matter of tradeoffs,” Monsanto’s Chairman of the Board explained. “Their benefits far outweigh their perils. We in the pesticides business
should continue to keep increasing their benefits and keep minimizing their risks” (Forrestal, 1977). Nevertheless, DDT was banned in the United States in 1972 largely because Carson successfully reframed DDT from a health issue to an environmental issue (Pak, 2010).

In a similar vein, less harmful alternatives also exist in energy production, making it possible to transition away from fossil fuels, but first the issue must be framed in a way to create a sense of urgency among policymakers and their constituents. Tar Sands Action adopted this approach, using Keystone XL as a vehicle for reframing bitumen extraction from energy sufficiency to environmental harm.

**Social Media Strategies**

McKibben believed that social media could be an effective tool for political action and he made social media central to the Tar Sands Action campaign. “I like to tweet,” he explained.

> When I come across something particularly sweet or peculiarly depressing, I feel better once I’ve shared it on Twitter. Twitter was designed as an outlet for individuals, but we think it can also work for social movements. (McKibben, 2012b)

Tar Sands Action/350.org led two major social media campaigns titled “24 Hours to Stop Keystone XL” and a “Twitter Storm” to end fossil fuel subsidies. On February 12, 2012, 350.org launched the “Stop Keystone XL” campaign by asking supporters to fill in an online petition form asking congress to stop the pipeline. Organizers sent out emails, Facebook and Twitter posts, and Bill McKibben made appearances on radio and television programs in an effort to collect 500,000 posts in 24 hours. The campaign met that goal in only seven hours and went on to collect more than 800,000 virtual signatures (Lacey, 2012).
“Stop Keystone XL” was followed by a “Twitter Storm” on June 18, 2012 calling on millions of Twitter users around the world to demand that political leaders end fossil fuel subsidies. In an email to supporters, McKibben said, “Look – sending tweets and emails alone will not win this fight. But we can’t go to jail or hold rallies every day. This is an easy way to make a statement. A loud one, if we all work together” (McKibben, 2012b). The campaign won support from several celebrities and politicians, including former House Speaker Nancy Pelosi, who used the opportunity to berate her Republican political opponents for offering “more gifts to Big Oil” ahead of the 2012 U.S. federal election (Pelosi, 2012).

News Media Coverage

When Tar Sands Action became involved in the Keystone XL debate in the summer of 2011, organizers attempted to focus attention on climate concerns. Tar Sands Action’s first press release did not once mention land, water, and health concerns, or the Sandhills and Ogallala Aquifer, or cancer rates in downstream indigenous communities. Instead its focus was on greenhouse gas emissions and the potential “carbon bomb” buried under the Canadian boreal forest.

In US and international newspapers, one can see a sudden increase in climate change discussion in articles about Keystone XL following the creation of Tar Sands Action. Although Tar Sands Action is mentioned only once by name, many of these articles mirror the language of Tar Sands Action’s website and social media sites. For example, a New York Times editorial warns of a “climate change disaster” if Keystone XL is built (Profits Before Environment, August 31, 2011), and the Washington Post’s Juliet Eilperin writes that Keystone “has sparked
an outcry from environmentalists in both countries on the grounds that the extraction of oil will increase emissions linked to climate change” (Plan for Canada-to-Texas pipeline moves forward, August 27, 2011).

On the other hand, most news articles that connected climate change to Keystone XL do not appear until protests were staged at the White House in late August 2011. The subsequent arrests of high profile individuals, including actress Daryl Hannah, also generated interest in the topic. In this case, social media appears to be more effective as an organizing tool than in directly influencing news media or policymakers.

The largest social media action was the “24 Hours to Stop Keystone XL” campaign in February 2012. In a February 13 blog post, Bill McKibben wrote,

Beginning at noon today, every environmental group in the nation, not to mention great allies like MoveOn.org and CREDO Action, will come together for the most concentrated burst of environmental advocacy this millennia. We’re aiming to send half a million email messages to the Senate in the next 24 hours. And they’ll all have the same message: back up the President and make sure this pipeline doesn’t get built.

The post included links where people could “sign” a petition that would be carried in symbolic filing boxes to the U.S. Senate. Although the campaign claimed to have gathered more than 800,000 virtual signatures, it had very little impact on news coverage compared to the White House protests that took place during the previous summer (see Figure 7.1).
For Canadian newspapers, the connection between climate change and Keystone XL had become a newsworthy issue long before 350.org injected itself into the debate. Many Canadians were conflicted over the environmental harms and economic benefits of bitumen extraction and Canadian public opinion was nearly equally divided between supporters and opponents. Some Canadians also opposed Keystone on economic grounds. A Nanos Research poll of Canadians found that “a number of those unfavorable to the project were opposed to the export aspect, saying that the oil should remain in Canada instead. Many who voiced this opinion thought that Canada risked losing out on refinery jobs and the possibility of cheaper oil by exporting its raw resources to the United States” (Nanos and Thompson, 2012). The same poll found that nearly three quarters of Canadians felt that Canada was overly reliant on US markets and wanted to see

43 For the purpose of this study, climate change discussions were identified using aggregate keywords “climate change,” “global warming,” and “greenhouse” gas emissions.
a diversification strategy that would increase exports “to emerging markets of the Asia Pacific and other regions of the world.”

Nevertheless, most Canadians recognized that the United States would continue to be the primary consumer of Canadian petroleum for the foreseeable future. As such, Canadian newspapers tracked applicable US energy policy far more than their American counterparts. Bill McKibben told me that he did not learn about the potential impact of Keystone XL until January 2011. Yet, as early as the summer of 2010, one finds Canadian newspapers from every major city reporting on the efforts of Democratic Congressman Henry Waxman to block imports of “dirty oil” from Canada and EPA efforts to have climate change included in State Department’s environmental impact study of Keystone XL.

Whereas the start of the Tar Sands Action campaign coincided with a sharp increase in global media coverage of climate change issues, discussion of climate change decreased in Canadian newspapers. Instead, Canadian newspapers adopted the economic benefits and job creation frames. This shift in frame could also be viewed as a reaction to the social media campaign, as news articles increasingly took a negative stance toward “the environmental lobby” and “its campaign against Canadian oil” (Cattaneo, 2011).

Prior to the summer of 2011, awareness of Keystone XL outside of Canada was relatively low. That changed when 350.org launched its Tar Sands Action campaign on June 22, 2011. One suddenly notices a spike in newspaper coverage of climate change concerns as they relate to Keystone XL. Outside of North America, newspapers began to report the issue for the first time, with some firmly adopting the environmentalist frame. For example, environmental journalist Martin Lukacs wrote an article for London’s Guardian newspaper that used particularly colorful...
language. “[T]he pipeline is also a surefire recipe to overcook the planet,” he wrote, referencing the work of James Hansen. He went on to accuse the Canadian government of being “the foreign branch of the tar sands industry” (Lukacs, 2011). The Guardian has since continued to publish articles that are highly critical of Keystone XL and the Canadian government. Although most international newspapers took a more neutral position, they almost universally focused on the climate change concerns. For example, during the summer of 2011, not one international newspaper in my sample discussed job creation or potential economic benefits.

Many oil industry stakeholders were not well versed in the climate change concerns of environmentalists opposed to bitumen extraction. When Tar Sands Action entered the scene, oil industry journals increased their coverage of the topic and introduced their readers to key stakeholders and issues surrounding Keystone XL. Unlike some conservative leaning newspapers that tried to discredit climate change concerns, oil industry newspapers recognized that “production from oil sands needs energy that produces large amounts of greenhouse gases” (Watkins, 2011). At the same time, industry journals argued that stopping the Keystone XL pipeline was not the way to solve global warming. A Petroleum Economist editorial argued that it is not the pipeline “that causes climate change, just as McDonald’s isn’t the reason people are fat” (Petroleum Economist, 2011).

During his November 2012 visit to Northeastern University, Bill McKibben said that “[t]he act of doing the campaign is more important that the victory in some sense, because it raises awareness [of climate change].” The increase in news coverage of Keystone’s connection to climate change could be directly attributed to the social media campaign, as various news
articles quoted statements released on the Tar Sands Action website and related social media sites.

The effect proved short-lived however, as climate change coverage in newspaper articles about Keystone XL quickly dropped below levels seen before the campaign began. For example, prior to the social media campaign, climate change keywords accounted for 0.21 percent of the text in American newspaper articles that mention the pipeline. By the fall of 2011, coverage dropped to 0.19 percent, and by early 2012, climate change nearly disappeared from the discussion in every major newspaper market. Surprisingly, online news coverage of climate change in sites like Politico and Dailykos was even lower than traditional newspapers. An analysis of the top 1,000 online news articles mentioning Keystone XL for three months ending February 28, 2012 revealed 0.01 percent coverage of climate change keywords.

Typically, when one stakeholder takes a dominant role, it focuses attention away from issues important to less powerful stakeholders. Nevertheless, one can see a significant increase in media coverage of the Nebraska Sandhills in the wake of the Tar Sands Action campaign (see Figure 7.2). Coverage of Nebraska stakeholder concerns increased in North American and industry journals and continued to increase into the fall of 2011 when climate change issues no longer dominated the headlines. This is the first clear evidence that heterogeneous social movements may benefit from DFS implementation. By shifting focus, the anti-pipeline movement was able to maintain media interest longer than if the focus had been exclusively on climate change.

Nevertheless, coverage outside of North America remained virtually non-existent. In the entire dataset, there was only one reference to the Ogallala Aquifer in a January 22, 2012 edition
of the Sunday Times of London. One may speculate that the lack of international interest in the Sandhills region is based on the view that this is a local issue, whereas climate change is a global issue that affects international readers as much as Americans or Canadians.

Figure 7.2: News media coverage of Nebraska Sandhills and Ogallala Aquifer in Keystone XL articles

**Oil Industry Reaction**

In November 2012, Alex Pourbaix, President of TransCanada Energy and Oil Pipelines, said that he felt that his company was being unfairly targeted by environmentalists concerned about climate change, not pipelines. He also explained that environmentalists would never win wide public support in Canada because oil sands development has been a driver of economic
growth in that country. Activists who recognized this limitation sought to “attack the straws and slow down development,” he said (Pourbaix, 2012).  

Other industry representatives blamed social media for creating public doubt about the benefits of pipelines. At an April 2012 American Petroleum Institute pipeline conference in Phoenix, Arizona, the author spoke with industry and government leaders about how social media was affecting the industry. Two senior field managers from a leading pipeline company expressed frustration with the negative view that many people have about pipelines. One of them recalled how, many years ago, the response to a spill would have been to set the oil on fire and let it burn. Today, companies have elaborate spill response procedures, which are largely driven by increasingly strict federal regulations. “There has been a 180 degree turn in safety,” one of them said.

When their pipeline company experienced a “major release of product” in the 1990s, it nearly bankrupted the company. It proved to be a wakeup call and the company has since become a leader in pipeline safety. However, they told me that not all companies are as proactive and all it takes is a few high profile accidents to undermine public trust. “Are you going to comply with the letter of the law or the spirit of the law?” one of them asked rhetorically. “All it takes is for one operator to not act responsibly to upset the entire system.” Yet, executives felt there was not much they could do to make other companies comply with regulations.

Even if a company has well defined procedures, the ability to implement those procedures ultimately depends on the training and responsible behavior of field personnel who monitor and maintain pipelines. One field manager compared pipelines to airlines. Compared to

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Pourbaix uses straws as an analogy to emphasize how pipeline bottlenecks can keep bitumen captive in Alberta and thereby slow development.
other forms of transportation, they are very safe, he explained, but a major accident can receive significant press coverage, giving the public the impression that flying is unsafe. “ Pipelines are the safest mode of transport” for liquid fuels, he noted. He said that he wanted “to get the truth out” about pipelines, but was unsure that social media was the best way to do it. In his mind, social media created more misinformation, because when people see something in print, they tend to believe it. In his opinion, recent events ranging from explosions and spills to the Keystone XL protests, were affecting the mood of the industry and the people he worked with. He was proud of his company’s safety record and the work they had done to improve pipeline safety. However, when he tried to start a blog, he quickly became frustrated because it took up a significant amount of time and he could not attract any significant numbers of viewers.

TransCanada has recognized that the company needs to do more to reach policymakers, stakeholders, and consumers through social media. Alex Pourbaix said that he has hired a team of people in their twenties who are social media savvy to promote his company’s interests online. Yet, given the results above, oil industry concerns about the impact that social media is having on their business may prove unwarranted. Public opinion surveys presented in the chapter on “tar sands” framing demonstrate that consumers are mistrustful of the oil industry in general. However, there is no evidence that public opinion is directly influenced by social media.

**Government Policy**

Pearson correlation coefficient was used to compare climate change keywords in the total sample of news media and government documents. The comparison of the way government and news media discuss climate issues shows a nearly perfect inverse correlation (-0.966) between
media sources and government policy documents. This can be seen in figure 7.3, which is an approximate mirror image of the corresponding news media chart presented in figure 7.1.

On reviewing the documents, the reason for the decline and subsequent rise in policymaker climate discussions could be attributed to tactics by oil industry supporters to neutralize anti-pipeline arguments in a process commonly known as “counterframing” (Benford, 1987). First, one sees a sudden increase in counterframing discussions by Republican and Canadian lawmakers promoting the job creation and economic benefits of Keystone XL. Most of these documents either ignore the climate concerns of activists or seek to dismiss them. As a result, the percentage of climate references declines relative to frames favorable to oil industry interests.

The subsequent rise in policymaker discussion of climate concerns stems primarily from environmental policy reviews written by the Democratic lawmakers critical of the Republican Party’s reaction to Keystone XL and other environmental issues. For example, the U.S. House of Representatives Committee on Energy and Commerce Minority Staff chaired by Henry Waxman included a chapter on Keystone XL in a 53 page report titled The Anti-Environment Record of the U.S. House of Representatives, 112th Congress, 1st Session. Although the report discusses oil spills and water quality concerns, the focus was primarily on climate change. The report notes that Keystone XL will increase dependence on “tar sands fuel” which will result “in substantially higher greenhouse gas emissions.” The report also strongly condemned House Republicans for dismissing “concerns about the pipeline’s impact on greenhouse gas emissions, air quality, and water quality” (Waxman et al., 2011).
Figure 7.3: Discussion of climate change in Keystone XL policy documents

The near perfect negative correlation is striking, but not surprising. Although counterframing, by definition, comes after the initial frame, Chong and Druckman (2013) note that counterframing is often undertaken immediately by institutional elites who sense a potential threat from social movement frames. “The public might therefore be exposed almost simultaneously to the frame and counterframe…”

Government agencies, including the State Department, did not change positions on climate change as a result of the respective frames and counterframes of Tar Sands Action and institutional elites. Climate change discussions remained at nearly the same level after the social media campaign as before. This likely reflects the concerns that Canadian and U.S. government agency officials expressed to me in private about becoming involved in political issues. If
government officials were to engage in discussion of controversial issues, they would be putting their jobs in jeopardy.

One can speculate about why government agencies adopt the frames of industry stakeholders. My impression was based on their closeness to industry stakeholders whom they regulate. For example, the API Pipeline Conference in Phoenix Arizona was attended primarily by oil industry executives, engineers, and senior officials from state and federal agencies. Executives and regulators knew each other well and spent a considerable amount of time conversing. Both appeared to be concerned about the reaction of lawmakers to recent accidents and the negative impact more regulation would have on the industry and already understaffed government departments, respectively.

Stephen Klejst, Investigations Director for the National Transportation Safety Board (NTSB), explained that he only has four investigators to examine numerous pipeline disasters and suggested that more accidents be delegated to state investigators. The problem with delegating investigations to state regulators was that they were under as much strain as their federal counterparts and they did not appear to be any better prepared to respond to investigations or public concerns.

I spoke to a top state regulator who expressed concern over his department’s level of staffing. Like his federal counterparts, he explained that the demands on his department continued to increase each year, yet he was not given any extra resources to cope with these increasing demands. “Government cuts put a strain on our staffing. They add and add [responsibilities], but our staffing doesn’t change.” Not only were his investigators charged with
responding to all the incidents occurring within his jurisdiction, but they also had to respond directly to public inquiries from concerned citizens, lawyers, real estate agents, and reporters.

The state regulator did not believe that social media had much impact on the level of public awareness or concern. Instead, he believed that television and print news media drove most of the inquiries fielded by his staff. “We don’t have a lot of liquid pipelines in this state, so [Keystone] hasn’t affected us that much. But after the San Bruno incident, we were inundated with calls.” He noted that his state does not have a social media outreach program, but instead responded directly to telephone and email inquiries. Under these circumstances, the lack of influence social media has had on agency documents relating to Keystone XL is not surprising. Any changes that do occur will likely come from new directives from elected representatives who must respond to the concerns of their constituents.

PHMSA Deputy Associate Administrator Alan Mayberry noted that his agency has seen strong demands for stricter regulations in 2011 than during previous years. He noted that “people don’t look at where an accident occurred, but they know a pipeline was involved and they want something done about it.” An election year “is not conducive to issuing of new rules,” he added, but new rules were likely to come after the 2012 presidential election based on the results of studies being undertaken by PHMSA. Based on my discussions with regulators, the focus of new regulations will likely be on pipeline safety. Without the direct intervention of elected officials, climate change is unlikely to become an important topic of discussion in pipeline policy in the near future.

Although climate activists may seek to mitigate climate change through stricter pipeline policies, strategically implemented DFS is more likely to have an impact because different
frames appeal to different types of government stakeholders. For instance, regulators who are focused on pipeline safety may be swayed by frames that emphasize safety concerns, such as the unique attributes of Dilbit that make it more likely to compromise pipes and more difficult to remediate spills or by questioning the ability of TransCanada as an operator due to its limited experience with heavy oil. Therefore, it is important to engage ranchers and the Pipeline Safety Trust to ensure that relevant frames are directed to appropriate audiences.

Conclusion

Earlier, the author showed that news media can be influenced to adopt specific language (i.e. “tar sands”) over the longer term, but media interest in specific issues frequently changes. For instance, the focus in media coverage of Keystone XL frequently shifted, starting with climate change, then shifting to the Sandhills, and finally to economic concerns.

Bill McKibben’s 350.org created Tar Sands Action to bring attention to the climate concerns of bitumen extraction. Although the campaign was successful in generating discussion of the topic, its ability to reframe the Keystone XL debate proved short-lived. The campaign’s greatest impact came indirectly through protests at the White House. It also effectively used social media as an organizing tool rather than in directly changing the way policymakers and other stakeholders perceive or frame the issues.

Social media can be an effective organizing tool when combined with traditional protest actions, including civil disobedience. It generates awareness among community members who already share an interest in the issues and it can help build ties between stakeholders who have different interests, but shared goals. For example, in the current study, awareness of oil spills and
the Sandhills increased when climate change activists protested the Keystone XL pipeline in Washington during the summer of 2011.

Although social media can help shift the language used to discuss a topic (i.e. “oil sands” to “tar sands”), social media alone does not appear to have a significant or lasting impact on news media or policymaker interest in specific issues. This becomes clearer when one compares the Keystone XL protests in Washington in August 2011 to the “24 Hours to Stop Keystone XL” social media blitz held in February 2012. The latter was perceived as a major success by campaign organizers when they far exceeded their target for online petitioners. However, it had virtually no impact on the news media or policymakers. These findings confirm the work of Neumayer and Raffl (2008) who found that “[p]olitical activism can be enhanced by the use of social software, but outcome is dependent on its real physical actors.”

Nevertheless, 350.org used social media to build a network of diverse stakeholders who could present different frames that appealed to different audiences and thereby maintain interest in Keystone XL far longer than would have been possible with an exclusive focus on climate change.

During the 2008 U.S. presidential election, White House chief of staff Rahm Emanuel famously said, “You never want a serious crisis to go to waste” (Seib, 2008 quoting Emanuel). Heterogeneous social movements that brace the stakeholder diversity have a larger “toolkit” of potential crises that may be used strategically in DFS implementation. Although the current study did not seek to correlate DFS with major news events, it demonstrated the ability of one social movement to use DFS to maintain media and lawmaker interest longer by allowing different frames to dominate the discussion at different periods. Even when the dominant frame
shifted towards jobs and economic benefits promoted by Republican lawmakers, the Canadian government, and the oil industry, it ensured that Keystone XL remained a topic of interest and gave opponents additional opportunities to express their fears and frustrations in public forums. Future research into heterogeneous social movements may seek to uncover potential correlations between DFS and external crises.\textsuperscript{45}

\textsuperscript{45} Researchers need to be cognizant that social movements that suppress the frames of less powerful stakeholders are poor candidates for further study of DFS, as they mimic homogeneous social movements. Moreover, if the findings of DiStefano and Maznevski (2000) hold true for social movements, one would expect heterogeneous social movements that do not embrace DFS to engage in “ineffective behaviors” and to be less effective than homogeneous social movements. The reasons for poor performance in business teams include negative stereotyping, internal conflict, and demoralization of minority members. Intuitively, frame suppression in heterogeneous social movements is likely to produce similarly harmful behaviors. Therefore, the first step in any further study is to define SMOs that truly embrace diversity. Heterogeneity, in itself, is not sufficient.
Chapter 8: Leadership in Heterogeneous Social Movements

The climate movement played a critical role in stakeholder mobilization and coalition building during the Keystone XL controversy. This chapter examines how 350.org used its organizational skills and social media expertise to build and maintain a heterogeneous social movement. Stakeholders who lacked the capability to mount an effective campaign, and as a result had been largely ignored by mainstream media, leveraged 350.org’s organizing capabilities to promote non-climate frames.

Early Stakeholders

Canadian trade unions were the first to oppose Keystone on the grounds that bitumen should be refined in Canada. However, the campaign against Keystone XL began in earnest with ranchers and indigenous peoples who were opposed to the pipeline on the grounds that an accident could have a devastating impact on their livelihoods and general wellbeing.

The earliest news media reference to land and water concerns was an article about the original Keystone pipeline that appeared in the April 29, 2007 Argus Leader, a local newspaper serving the Sioux Falls, South Dakota region. The article noted that TransCanada planned to construct Keystone through the environmentally sensitive Hecla Sandhills of South Dakota, but agreed to reroute the pipeline after concerns were raised by the US Fish and Wildlife service. That did not assuage the fears of other stakeholders, particularly the late Curt Hohn, who was general manager of the WEB Water Development Association, a water utility company charged with providing water to local farmers. He raised concerns about the lasting impact a spill would have on his customers.
In numerous public hearings, ranchers expressed concerns about the volume and pressure of Keystone XL and the types of materials that would be released into the environment in the event of an accident. They were clearly more concerned about Keystone XL than the many other pipelines that crisscrossed the American landscape. They also expressed dismay that a Canadian (foreign) company could exercise eminent domain in cases where landowners refused consent to right-of-way access. A less frequent concern was the impact the pipeline would have on property values, assuming that potential buyers might be reluctant to purchase property where pipelines were located. However, given that most ranchers who spoke at public hearings owned property that had been in their families for multiple generations, property resale values seemed to be a secondary concern.

Unlike environmentalists, most ranchers saw climate change as a low priority. Safi (2011) surveyed Nevada farmers and ranchers between 2009 and 2010 to better understand their perception and knowledge of climate change concerns. Only 12 percent of ranchers viewed climate change as a serious threat to themselves and their families. Even among ranchers who were most likely to be negatively impacted by climate change, support for policies aimed at mitigating greenhouse gases was very low, especially if policy solutions involved higher taxes on gasoline or corporations.

Although it is tempting to dismiss ranchers as climate change skeptics, it more likely reflects the reality that the “principal raw material of modern U.S. agriculture is fossil fuel” and any increase in fuel costs could seriously impact agricultural costs (Pimentel et al., 1973). Moreover, the views of ranchers closely reflect the general population. For example, Leiserowitz (2006) found that only 12 percent of the American population viewed climate change as a
serious threat to themselves or their families. Ranchers who did express concerns about climate change cited the increase in droughts in recent years and the impact that climate change might have on agricultural output over the longer term. After reading an Internet article on climate change, one Montana rancher noted that “my family has been growing, farming for 100 years and I just cannot imagine how we can continue to grow a crop with those kind of temperature changes” (Hoffman, 2011).

TransCanada started publishing information about the Keystone XL Pipeline in June 2008. However it was not until January of 2009 that TransCanada began to publicly discuss the Sandhills Native Rangeland as part of a series of fact sheets. It also mentioned the importance of safety for the first time on its Keystone XL webpage, stating that “Keystone XL’s application for a special permit includes measures above and beyond those required by regulations to ensure pipeline safety.”

In an April 2011 report, TransCanada recognized the Sandhills as a “biologically significant ecoregion” with “fragile” soils. However, instead of examining alternative routes, TransCanada sought to alleviate the fears of government regulators by providing training to construction crews “to minimize impacts to this sensitive ecosystem.” In response, the US Fish and Wildlife Service criticized TransCanada for minimizing the seriousness of the company’s impact on sensitive ecosystems that were home to several endangered species. An example of this critical approach can be seen in the agency’s response to a report submitted by EXP Energy Services, Inc. on behalf of TransCanada discussing the impact of Keystone XL on Sage-grouse living near the right of way.
USFWS South Dakota field manager Charlene Bessken disputed a number of assumptions and observations in the report, such as the impact of vibration noise on nesting birds and the time that would be required to monitor reclamation of bird habitat (see Appendix 8-A). In a separate email, she raised concerns about the impact of heat from the pipeline on the American Burying Beetle (ABB), a critically endangered species that lived along the proposed right of way. TransCanada argued that the beetle “would not be expected to occur in poor or marginal habitats.” Bessken wrote “BS!” in the margin of the report and immediately protested that “fair habitats deserve mitigation – Oh Yeah – and so do marginal and poor!! Take is take no matter if the ABB was in poor or prime habitat. Maybe Keystone doesn’t think it’s significant but the [Endangered Species Act] does” (Bessken, 2011).

TransCanada further proposed to donate $1,800 to a conservation fund rather than fund the relocation of the beetle at an estimated cost of $25,698. Bessken underlined that sentence and wrote “NO!” and “NOT OK” in large bold letters in the margin, as if to indicate that TransCanada cannot buy its way out of environmental regulations.

Despite the numerous concerns raised by landowners and government regulators, the State Department appeared ready to approve the Keystone XL permit. For example, in October 2010, Secretary of State Hillary Clinton stated, “We’re not yet signed off on [the Keystone XL permit]. But we are inclined to do so.” For Clinton, national security concerns outweighed environmental issues. “We’re either going to be dependent on dirty oil from the Gulf or dirty oil from Canada,” she said (Hovey, 2010).

At the time, landowners appeared to have little say in Keystone XL. Ranchers and farmers were generally older and more socially conservative than environmental activists. The
average age of farmers in the United States is 57 and 61 for cattle ranchers (McCarty, 2011). They attended hearings, wrote letters, and sought coverage of the issue in local newspapers. Many of the ranchers who spoke at State Department hearings lived on property that had been passed down for generations. Cattle buyer turned activist Randy Thompson fit the demographic nearly perfectly. The 64 year old Republican, who lived on a 400 acre farm with his 92 year old mother, became a symbol of resistance after he refused to accept a $9,000 offer from TransCanada for an easement on his land. When the company threatened to exercise eminent domain, Thompson began calling state representatives and writing letters to federal officials. This eventually led to news stories and a campaign to “Stand with Randy.”

Nevertheless, ranchers were unable to win broad support for their cause outside of regional environmental and wildlife groups. At the time, Bold Nebraska was a one person organization run by Jane Kleeb, who focused on a broad range of liberal issues, from immigration reform to gay marriage. Bold Nebraska was the first organization with any social media presence to take up the ranchers’ cause in a serious way. Although Bold Nebraska later became associated with Keystone XL resistance, in early 2011 the pipeline was merely one of many issues that Kleeb discussed on her blog and Facebook page. For example, when Kleeb was interviewed by Fox News’ Bill O’Reilly on February 4, 2011, she focused not on Keystone XL, but Planned Parenthood. A review of organization’s early Facebook postings reveals that Bold Nebraska offered no strategy for dealing with Keystone XL other than encouraging stakeholders to attend hearings.

Kleeb’s first action on behalf of landowners was in March 2011 when she traveled to Washington with representatives of the Nebraska Farmers Union, the Nebraska Sierra Club and
the Nebraska Wildlife Federation “to lobby elected officials, the EPA and State Dept. to oppose the Keystone XL.” That meeting appears to have been a turning point for Kleeb, who appeared to find her *cause célèbre*. From that point forward, Bold Nebraska’s Facebook page focused less on broad liberal concerns and more on the concerns of Nebraska landowners.

Over the next month, Bold Nebraska dedicated itself to public education about the dangers of pipelines, government regulations, and the concerns of ranchers. The first direct action was a “Pipeline Call-In” staged for April 14, 2011. Bold Nebraska sought to get at least 200 people to call their state representatives about the pipeline. Although Keystone XL was no longer a postscript in Bold Nebraska’s broad liberal agenda, the organization continued to support other liberal interests. As late as June 24, 2011, the “ACTION” section of Bold Nebraska’s website focused on the Defense of Marriage Act, state health insurance, and President Obama’s personal interest in Harry Potter. Bold Nebraska’s only direct action was a road show it referred to as “I Stand with Randy,” where people could listen to Randy Thompson tell his personal story and buy “I Stand with Randy” t-shirts and bumper stickers.

**Social Media and the Environment**

By the time 350.org became involved in early summer 2011, it had become clear that the letters, phone-ins and hearings were having little impact on the Keystone XL debate. Landowners and Nebraska environmentalists were desperate, Bill McKibben later told me. Whereas Bold Nebraska, the Sierra Club, and the Nebraska Farmers Union represented a range of issues, McKibben understood the need to focus exclusively on Keystone XL. Tar Sands
Action sought to build a coalition of stakeholders under a single organization that would use social media, protests and civil disobedience to stop the pipeline.

Tar Sands Action’s first act was to make Keystone XL relevant to a much broader range of stakeholders than landowners and wildlife enthusiasts living near the pipeline route. From day one, Tar Sands Action was also far more proactive than Bold Nebraska. On July 12, 2011, Tar Sands Action launched its Facebook page with an article about a protest being held at the Montana Capitol Building. “The movement is strong,” read the caption next to a photo of three young climate activists joined together with black tubes that read “NO PIPELINES.” After only one week, the Tar Sands Action Facebook page had signed up 1,000 people who agreed to participate in civil disobedience.

Tar Sands Action addressed itself to an audience that it referred to as “youth climate leaders.” It used social media to establish branches at universities across the country that could then coordinate local direct action. For example, New England protests were led by a branch called the Tar Sands Patriots. Meetings were held in the Harvard University cafeteria and dormitories and were largely attended by college students from area universities and a smaller number of veteran environmentalists who had been part of the youth environmental movement in the 1960s and 1970s.

Traditionally, college students have been at the vanguard of activist movements. For example, in the 1960s, protests against the Vietnam War were often organized by some of the 300 chapters of Students for a Democratic Society (Dyke, 1998). Because Facebook was originally designed around the interests and needs of college students, it became a natural tool for generating interest in social movements. For example, within a few weeks of its creation in
2004 at Harvard University, “People were using it…to protest whatever was important,” noted Facebook co-founder Dustin Moskovitz (Kirkpatrick, 2010).

Tar Sands Action created a sense of urgency that was missing from previous efforts to stop Keystone. Every Facebook post and every online news release targeted Keystone as the instrument of global disaster. This was consistent with findings of Snow et al. (1986), who found that apocalyptic imagery creates a sense of urgency that helps to mobilize participants. Tar Sands Action simultaneously engaged in frame bridging, amplification, extension, and transformation. Previous efforts focused on specific issues unique to stakeholders (indigenous concerns about health effects or ranchers concerns about water contamination, for example), but Tar Sands Action bridged the interests of stakeholders who were interested in wildlife, agriculture, water resources, human health, environmental justice and climate change. It amplified the problem so that it was no longer just about Keystone XL, but the Canadian oil industry as a whole.

**Mobilization and Risk-seeking**

Fireman et al. (1978) explain that “[t]o be effective, movement organizations must be able to manage the logistics and coordinating tasks of mobilization. Sometimes their constituency is bursting with angry energy, ready and eager to act but without coordination.” For Tar Sands Action, social media became the coordinating tool that allowed stakeholders to focus on specific and achievable goals. From the outset, Tar Sands Action focused on an August 20, 2011 direct action in front of the White House. It rallied supporters who were willing to be arrested, following the example of climate change activist and folk hero Tim DeChristopher who was serving a two year prison sentence for placing false bids on federal oil and gas leases. For
some participants, the Washington protests represented an opportunity to show solidarity with someone whom they perceived as a climate martyr.

Behavioral studies have demonstrated that human beings generally avoid risks (Scholer et al., 2010). However, under certain circumstances, individuals may engage in risk-seeking behavior. Studies have shown that protest movements are often more successful when participants must subject themselves to personal risk, particularly when they are following the example of a high profile martyr. For example, the arrest of Rosa Parks is often cited as a galvanizing moment for the civil rights movement, leading to further acts of civil disobedience and arrests. It has also become a model for the environmental movement (Ped, 1994). In his study of the protest movement that arose from the assassination of Archbishop Romero of El Salvador, Gamson (1991) observed that “[p]ublic demonstrations of commitment under conditions of risk help create solidarity and strengthen it.”

Movement identity is central to the willingness to undertake such risks. Some people may join initially because of personal loyalties and social bonds with individuals who are involved or because of ideological commitment rather than because of any internalized movement identity. But since agents of social control do not distinguish motives, they will be treated like any other member of the movement and, under the circumstances, a broader movement identity is likely to develop. (Gamson, 1991)

Similarly, in the Tar Sands Action campaign, protests and arrests helped to remove the distinctions between ranchers and environmentalists, students and native tribes, or scientists and artists.

Tar Sands Action went so far as to emphasize the risk of arrest on its website and Facebook pages as a way to gather support. For instance, a July 20 post titled “Why I am risking
arrest to stop the tar sands pipeline” was written by a mother who expressed concern for her children’s future. “This pipeline has been called the fuse to the biggest carbon BOMB in the world,” she wrote.

Numerous other posts followed the same vein. The following are a few examples that could be found on the Tar Sands Facebook page:

- July 28: “People always question if I am really going to be arrested, and if I think this will make a difference.” - College student
- July 29: “I have not yet gone to jail. It will be an honor, given the company.” – Community organizer
- August 2: “On August 29th, faith leaders from across the country will come together to join the action against the tar sands in Washington, D.C. They will be worshiping together and risking arrest to celebrate an end to the Keystone XL tar sands pipeline.”

**Goal Setting and Rewards**

Tar Sands Action was also effective in providing activists with concrete goals (stop the pipeline) for a seemingly intractable problem (climate change). When they were not focused on the imminent and dire threat that Keystone represented, Facebook posts were extolling the momentum of the movement. “Great news: the momentum for the action in DC is building, big time,” reads a July 21 post. “The leaders of dozens of the nation’s environmental and allied groups released a letter personally endorsing the sit-in at the White House. Less than one month to go until the action begins in Washington, DC!” Each post was then reposted on the Facebook walls of numerous supporters and environmental organizations, helping to quickly spread awareness. Suddenly, Keystone XL was not only about endangered species and agricultural output, but about the future of the planet. The campaign distinguished itself by making it appear that participation could bring about meaningful improvement in climate policies.
The effectiveness of Tar Sands Action depended largely on direct action at the local level that was coordinated by climate activists affiliated with 350.org. For example, on November 30, 2011, Tar Sands Action brought together more than 400 local chapters from across the United States to participate in a virtual strategizing session. The Boston Tar Sands Patriots gathered in a Harvard University cafeteria, where they set up a video link and online chat through the Tar Sands Action website. Organizers in New York and San Francisco provided real-time instructions to local groups on how to develop action plans. Local suggestions were later uploaded to the website, allowing groups to share ideas with each other.

Approximately 50 activists attended the session at the Harvard University campus. The majority of attendees were college students, many of whom were also involved in the Occupy Boston movement. Also in attendance were several veteran environmentalists, some of whom have been involved in environmental activism since the 1970s. They were well connected to an assortment of environmental organizations, such as Greenpeace, the Sierra Club and a variety of regional and local organizations. For these environmental movement veterans, Tar Sands Action and the Occupy Wall Street movements were viewed as part of a larger effort to protect the environment. Older participants also appeared more skeptical than youth members about the longer term ability to bring about meaningful change. After working for environmental causes over several decades, they were clearly frustrated over the continued increase in pollution and carbon emissions and the apparent lack of commitment to “green technologies,” such as solar and wind generators.

46 Occupy Boston was affiliated with Occupy Movement that originated with Occupy Wall Street.
Feenberg (1991) envisioned the development of an Internet society that was self-organizing and democratic. When one observes activist meetings, it quickly becomes clear that SMOs that rely heavily on the Internet and social media are not self-organizing. The strategizing session had clear leaders designated from 350.org offices in New York and San Francisco. At the beginning of the meeting, one person continued to check his iPhone to see if Bill McKibben had given any instructions on what he expects the group to do. Everyone clearly looked up to McKibben as the one person directing the movement. Although McKibben could not attend the strategizing session, the meeting symbolically began with a recorded video of McKibben congratulating participants on the recent success in delaying approval for the pipeline.

Tar Sands Action also set up a live video feed on its website (www.tarsandsaction.org/video-chat/) that allowed supporters to participate in the discussion even if they were unable to attend local meetings personally. At the top of the web page was a LiveStream video feed and below it was an interactive instant messaging chat using Disqus chat software. At the beginning of the session, 459 groups and individuals were logged into the site.

McKibben’s video presentation began by warning activists to remain vigilant, to continue putting pressure on the U.S. administration to block the pipeline and take other meaningful action to encourage policies that reduce carbon emissions.

After McKibben’s “state of the movement” address, the website then switches to a Livestream feed from New York City. Two movement leaders from the New York City chapter discussed some of the major issues. They explained that the Occupy Wall Street movement and Hydraulic Fracturing opponents are “sister movements,” and they have a “united interest” in

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47 San Francisco-based “Disqus is a global comment system that improves discussion on websites and connects conversations across the web.” Source: www.diquus.com Accessed December 7, 2012
fighting “corporate power” and the influence of corporate interests in government. The delay in Keystone XL was a temporary and unexpected win for the movement, they explained. They told participants that the delay is costing TransCanada Corporation $1 million per day and that so far the delays are estimated to cost the company $1 billion. The New York organizers end their session by offering encouragement to those who remain committed to stopping Keystone XL. They note that some 20,000 people have signed a pledge to engage in civil disobedience if at some point the pipeline project is restarted. “We showed that we have a lot of power.”

The feed then switches to Oakland, California where four 350.org organizers were coordinating the strategy session with local chapters and online participants. One of them explains the process and how participants can submit suggestions online through the Tarsandsaction.org website. He offers some information about how the suggestions will be used to formulate strategies for future actions. He also notes that in 2012, tarsandsaction.org and 350.org, which are essentially the same organization, will be introducing a new online format and new online tools. Climate organizing groups will be created to facilitate greater participation at the local level.

Local groups were instructed to download a PowerPoint or PDF document with strategizing questions. Individuals could submit comments or questions to info@tarsandsaction.org. The organizers noted that the email will be monitored throughout the strategizing session and a national coordinator will respond immediately to any emails received. He then signs off and the local chapters conducted the rest of the meeting.

The local organizer of the New England chapter asked participants to count off from one to ten. Each person was then assigned to a small group of five participants according to number.
Each group was tasked with answering the same question. Participants then rotated to other
groups to discuss subsequent questions. This allowed each participant to be introduced to as
many people as possible. The purpose was twofold, to answer the questions that will be
submitted to the Oakland coordinators, and to build local community by facilitating face-to-face
interaction between activists. At the beginning of the session, participants were naturally grouped
demographically and/or by affiliation. Therefore, veteran environmentalists congregated together
as did Brandeis University students and Occupy Boston members. The rotation of participants
forced these individuals to interact with participants from outside their naturally formed groups.

The first small group session included a veteran campaigner from the Global Warming
Education Network and the New Hampshire Sierra Coalition, an undergraduate student from
Brandeis University, an engineer with an interest in green jobs, and a community organizer from
Boston. The ensuing discussion centered on the problem of climate change in general and broad
ways to tackle the problem, such as wind and solar incentives. The discussion around the
pipeline and the Alberta oil sands was minimal and did not include other stakeholder
perspectives.

The second group focused on the most effective aspects of the anti-Keystone XL
campaign. By encircling the White House, activists received attention from the media and the
president. One participant who took part in the Washington, DC initiative felt that they should
have fully closed off the White House instead of leaving two openings where people could enter
and leave. Nevertheless, a number of participants thought that Tar Sands Action received the
attention it needed and helped win an unexpected delay in approval of the pipeline.
Another small group session discussed how to continue the campaign’s momentum by involving other stakeholders. Four stakeholder groups were identified, environmentalists, indigenous peoples, ranchers, and labor. The group recognized that their interest in global climate change differs from other stakeholder interests. They also discussed focusing on other climate problems, such as hydraulic fracturing (fracking), but worry that doing so will alienate other stakeholders who have less of an interest in other issues. On the other hand, most seemed to feel that fracking is a pressing issue that needs to be addressed and they can bring in new stakeholders who have an interest in fracking.

The meeting ended with announcements of upcoming events that may be of interest to participants and announcements by local environmental groups of how participants can be involved in their groups. For example, December 3, 2011 was highlighted as “Global Climate Action Day.” Occupy Boston was organizing a “speak out” on environmental issues at the Park Street subway stop in downtown Boston.

Oberschall (1973) observed that in the United States “[c]onflict tends to take place in affluent suburbs with a participatory tradition; the upper and middle classes are readily mobilized into controversies through their associational ties.” This observation is consistent with my observations of the activists who participated in this meeting. The majority of student activists were enrolled in elite private colleges. The student leader of Boston Tar Sands Patriots, for example, is an Ivy League freshman who grew up in a suburban household in the western US, the daughter of an affluent physician who has practiced internationally.

Older activists came from affluent suburban communities. One was the leader of a social movement that focuses on creating awareness of global warming and participating in protests.
against polluters. This activist leader had an engineering background and an MBA from Harvard Business School. Before starting his own organization, he was employed in a lucrative management position in a well-known chemical company.

Everyone at the Tar Sands strategizing event was either a college student or a college graduate. According to US Census Bureau, in 2010, fewer than 30 percent of Americans had college degrees, and as such, climate activists represent part of the elite minority of American society. This bias was not unexpected. Schattschneider (1975) found that members of the upper class were 16 times more likely to be involved in community organizations and associations than lower class citizens. And Snow (1986) observed that the anti-nuclear movement was primarily driven “white middle-class baby-boomers” despite outreach efforts aimed at racial and ethnic minorities.

Conclusion

Early opposition to Keystone XL was not successful for three reasons. First, it focused on narrowly defined issues that affected a small number of stakeholders. Second, it lacked strong leadership. And third, stakeholders were not Internet savvy.

Benford and Snow (2000) assert that “the difficulties some movements experience in expanding their ranks is likely due in part to the empirical incredibility of their framings to more than a small cadre of people.” Framing Keystone XL as a threat to Nebraska’s agricultural industry and water supplies was an important concern to many who depended on Ogallala Aquifer, but the frame did not resonate in the same way with audiences outside of rural Nebraska.
By reframing Keystone XL as a climate change concern, Tar Sands Action was able to build broad support for denying a pipeline permit. Previous studies have shown that mobilization largely depends on the ability of SMOs to present frames that are consistent with the core values and concerns of potential supporters (Benford and Snow, 2000). Although a minority of Americans see climate change as a serious threat, extreme weather events and other empirical evidence are impacting public perceptions. Dunwoody and Konieczna (2013) blame public skepticism over anthropogenic climate impacts on the inability of climate scientists to speak to average citizens without being mired by scientific jargon. However, by connecting the droughts and hurricanes of 2012 with climate change, news stories may yet increase public support for new climate policies. Even if public support remains at 12 percent in the United States, 350.org and other environmental organizations have millions of potential supporters who can be mobilized against projects like Keystone XL.

The results of this study suggest that for new social movements to be successful, they need to align themselves with established organizations with strong online social ties. Tar Sands Action, under the direction of 350.org, employed a number of classical social movement strategies to build an anti-pipeline coalition primarily through social media. Tar Sands Action was able to achieve in less than two months what other stakeholders were unable to achieve after four years of campaigning (the first opposition to Keystone was in 2007). Within two weeks of launching its Facebook page, Tar Sands Action had more than 1,000 people committed to civil disobedience, compared to Bold Nebraska, which struggled to get 200 people to “phone-in” their concerns about Keystone.
By applying well established social movement strategies in an online social network approach, Tar Sands Action created a broad coalition of supporters in a short period of time and helped draw significant media attention to the pipeline and the concerns of both new and existing stakeholders. It built on prevailing social networks that its parent organization (350.org) established over a longer period of time within the broader environmental movement, allowing Tar Sands Action to facilitate social ties and mobilize supporters much more quickly than would have been possible if it had started from the ground up. In contrast, Bold Nebraska was a new organization that lacked direction, focus, and social network ties. The legitimacy it developed later in the campaign was largely due to its association with 350.org through the Tar Sands Action coalition.

Although Tar Sands Action had different concerns than ranchers, the alliance between ranchers and environmentalists helped to build awareness of the concerns of stakeholders who were not part of the climate movement. As a result, even if the pipeline is eventually approved, it will likely miss the most sensitive regions of Nebraska and the general public will have greater awareness of the connection between bitumen development and climate change. The implication is that DFS may require a central stakeholder with broad appeal (climate change) to amplify and disseminate the frames of stakeholders with more narrowly defined objectives (agricultural output).

Finally, the study lends support to the work of Breindl et al. (2011), who challenged the view that Internet activism is somehow self-organizing. Instead, as Breindl et al. observed, “new forms of organization can produce new hierarchies and the emergence of new elites.” The growing success of the anti-pipeline coalition was largely the work of 350.org under the
leadership of Bill McKibben and a small cadre of youth climate leaders located in the San Francisco Bay area and New York City.

If the observations hold true for other heterogeneous social movements, the ability to implement DFS effectively requires strong leadership and coordination from experienced SMOs advocating frames with broad public appeal. Inexperienced stakeholders and those with narrowly defined frames may then attach themselves to the central organizing group to have their issues heard by a wider audience. The challenge is to not allow secondary frames to be dominated and suppressed by the central frames advocated by experienced movement leaders.
Prior to the Tar Sands Action campaign, TransCanada remained confident that opposition to Keystone XL would prove inconsequential. “There were a handful of landowners opposed in the state of North Dakota and a handful in South Dakota. Ten to twenty people out of 15,000. That’s a small percentage,” noted Nicole Aitkin, Keystone stakeholder relations director for TransCanada Corporation (TransCanada, 2010). As such, TransCanada was able to complete phase one of Keystone near schedule and the pipeline began transporting heavy crude on June 30, 2010.

Although developing a new crude oil pipeline normally required three to four years to develop processes, infrastructure, and control software, TransCanada completed the development phase in only 12 months. In addition, unlike natural gas, which was compressible, uniform and non-corrosive, heavy oil was corrosive, non-compressible, and required sophisticated pumping stations that could direct different grades of heavy crude to different locations. As a result, Keystone posed “different physical operating challenges” from anything TransCanada had done before (TransCanada, 2010).

During Phase I, the company also held town hall meetings in rural communities along the right-of-way. Early in the project, Aitkin saw the importance of social media in influencing pipeline policy.

You can see how social media has started to play into things and the shift in the political agenda. The news coverage is less focused on war and Iraq and more focused on environment, looking at green energy. It’s difficult to be talking about issues that are much bigger than just a project. So we’re working with other organizations and key stakeholders to try to raise awareness about facts versus fiction, particularly as it relates to energy
security and supply. We try to continue to raise awareness, correct misinformation and keep the dialogue going. (TransCanada, 2010)

Although social media made information management more difficult for oil companies, early opponents lacked both organization and Internet savvy and therefore were not viewed as a serious threat by oil industry stakeholders. Hence, the Tar Sands Action campaign that began in summer of 2011 was unexpected, both in its intensity and longevity. In fact, TransCanada Pipelines President Alex Pourbaix joked that when he was promoted to president of the pipeline division, he thought it would be less stressful than his previous position as TransCanada’s Executive Vice-President for Corporate Development (Pourbaix, 2012).

By 2012, the challenges that Tar Sands Action posed for TransCanada had become clear. When Coral Lukaniuk, TransCanada’s Public Awareness Program Manager, told an audience of oil engineers and executives that “there is a second part of Keystone that is experiencing some challenges,” the room broke into laughter at her understatement. TransCanada Pipelines President Alex Pourbaix later told me that he thought social media, more than any other factor, played a critical role in convincing the State Department and President Obama to deny the permit for Keystone XL. Other industry executives expressed similar concerns about social media, as they scrambled to make social media a central component of their counterframing and public relations strategy.

**Responses to the Tar Sands Action Campaign**

Once industry leaders understood the potential threat that Tar Sands Action posed to their interests, they allocated substantial lobbying and public relations resources to Keystone. In the
months following the Washington DC protests, industry lobbying and public outreach increased substantially.

Surprisingly, TransCanada was less proactive in championing the alleged benefits of Keystone XL than other oil industry stakeholders, such as the American Petroleum Institute, the U.S. Chamber of Commerce, the Canadian government, and Republican lawmakers. Whereas TransCanada’s efforts were targeted toward key stakeholders with a direct interest in the pipeline, other industry stakeholders sought to use Keystone XL to win broad support for oil interests.

Leading the effort was the American Petroleum Institute (API), an industry association that lobbied policymakers in support of its members. Keystone XL featured prominently on the API website as one of three “urgent issues” alongside “Hydraulic Fracturing” and “American Energy.” The API issued a “fact sheet” outlining the key benefits of Keystone XL, namely:

- “Generate as many as 20,000 new U.S. jobs during construction alone.”
- “Increased investment in Canadian oil sands development will create more than 500,000 new U.S. jobs and generate $775 billion in GDP by 2035”
- “The Keystone XL pipeline will strengthen our energy security by increasing our capacity to import oil from a friendly, reliable neighbor…”
- “On a lifecycle basis, GHG emissions from oil sands are comparable to other average crudes refined in the US.”

Job creation has long been the trump card of the oil industry when lobbying for favorable government policies. For example, in 1999, ExxonMobil’s Brian Flannery denounced the Kyoto Protocol to the United Nations Framework Convention on Climate Change because it threatened to send jobs to less developed countries that were exempt from the protocol. Flannery argued that “developing nations may attract more industry and jobs from industrialized countries that do

restrict fossil fuel consumption. That means fewer jobs in countries that do impose such limits” (Le Menestrel and de Bettignies, 2002, quoting Flannery).

The oil industry’s energy security frame echoed the policy recommendations of Forest and Sousa (2006) of the United States Military Academy. They supported an “integrated policy framework” in which “U.S. national security and energy security are inexorably intertwined.” They maintained that reliance on supplies from hostile regimes “can wreak considerable havoc on our economy based solely on our significant dependence on foreign oil.”

Both the API and US Chamber of Commerce championed Keystone XL as fundamental to ensuring a stable supply of petroleum from a friendly neighbor while reducing our reliance on hostile regimes in Venezuela and the Middle East. For instance, the Consumer Energy Alliance, a lobbying group funded by the API and various oil companies began a public relations campaign asking people to sign a petition asking President Obama to approve the pipeline. On its petition site it noted,

Once the Keystone Gulf Coast Expansion is completed, it could replace about half the amount of oil the U.S. currently imports from hostile regimes in the Middle East or Venezuela. A consistent source of stable energy supplies will help to lower costs to consumers and boost the U.S. economy.49

Although numerous economists and climatologists have warned that climate change represents a serious threat to long term global security,50 the API sought to publicly discredit such research. Citing a leaked API internal memo from 1998, Van den Hove et al. (2002) noted

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50 For example, Le Menestrel and de Bettignies (2002) warn that “[c]limate change resulting from the enhanced greenhouse effect is amongst the most important global environmental threats today. It could lead to potentially dramatic impacts on human health, food availability and security, economic activity, water resources, and physical infrastructure.”
that the API employed a two prong strategy of “raising questions about and undercutting the prevailing scientific wisdom” in order to “cast doubts in the mind of the public and policy-makers on the existence of a problem, and attacking [climate change] policy proposals on economic grounds.” They further noted that the industry has long used the “threat of losses of jobs and of competitiveness in the US, of higher gasoline prices, and of overall huge negative impacts on the US economy” to challenge climate change mitigation efforts, such as the Kyoto Protocol.

The oil industry’s opposition to climate change mitigation efforts is understandable. The only way for an oil company to effectively combat climate change would be to move into renewable energy. Although some oil companies invested in renewable energies, they have had limited success because they require completely different competencies. A good analogy is the failure of film companies like Polaroid and Kodak to transition to digital technologies. It provides a classical example of the challenge that the oil industry might face were it to make a similar leap. As Danneels (2004) observes, “[a] crucial consideration is how the resources required to harness the disruptive technology relate to the resources of incumbents.” In other words, the ability to move from an old technology to a new technology depends on how similar they are.

Radio manufacturers were able to dominate television production because they required similar competencies in electronics engineering and manufacturing. For similar reasons, TransCanada transitioned from transporting natural gas to transporting heavy oil and supplying gas powered electricity. However, TransCanada lacks competencies in areas that would allow it to compete in the generation of solar and wind energy. In contrast, the city of Toledo Ohio has
become a hub of solar panel manufacturing largely due to its historical competency in glass manufacturing that could be adapted to solar panel production (Fitzgerald, 2010).

The inability of the oil industry to embrace alternative energy implies that Tar Sands Action could not hope to come to an amicable solution with its adversaries. Instead, achieving the kind of reduction in carbon emissions envisioned by McKibben will require nothing short of the demise of the oil industry as we know it. In a November 2012 visit to Northeastern University, a student activist asked McKibben if he thought investor activism might be more productive than divestment in the oil industry. McKibben replied that such an approach might work for Apple, a company that has problems in its factories in China that can be ameliorated by improving labor conditions. You can engage Apple and have them continue to make innovative products. Unlike Apple, the oil industry does not have a flaw in the way it operates. Like tobacco and asbestos, the product (fossil fuels) is the problem. In McKibben’s view, the only solution is “to battle to delegitimize these guys."

Online Strategies

Economic and security benefits were advertised by pipeline proponents throughout the Keystone XL controversy and became central to the oil industry’s response to the Tar Sands Action campaign in the latter half of 2011. In the wake of highly publicized Washington protests, oil industry associations created websites to promote Keystone XL. For example, a few days after Tar Sands Action held protests in front of the White House, the US Chamber of Commerce announced the creation of the “Partnership to Fuel America a, a new platform focused on
emphasizing the growing opportunities for energy that exist between the U.S. and Canada” (Harbert, 2012).

The Partnership to Fuel America sought to “spread our message about the Keystone XL pipeline in print ads, email communications and action alerts,” noted the US Chamber of Commerce in its annual energy report. For example, it took out full page advertisements criticizing the president’s decision to delay the Keystone XL permit (see Appendix 9-A) and created an informational website (see Appendix 9-B).

On September 23, 2011, TransCanada also launched a website dedicated to promoting Keystone XL titled *Nebraska Keystone XL Pipeline, Good for Nebraska, Good for America* (www.keystonexlnebraska.com). The fact that it came only weeks after the Washington protests was no coincidence. Within the industry, executives were becoming increasingly worried about the impact of the Tar Sands Action campaign, not only on TransCanada, but the industry as a whole. The TransCanada website invited people to “Follow Us” on Facebook. However, as of December 2012, the company’s page had only 668 “likes,” and among the few comments posted on the Facebook page, several were against Keystone XL.

The API Facebook page was titled *Energy Tomorrow* and represented a broad range of oil interests, particularly natural gas “fracking,” offshore drilling, and pipelines (notably Keystone XL). The page consisted primarily of links to news articles that favored the industry as well as interviews of oil executives and policymakers. Photographs on the API page features economic charts, images of oil rigs and platforms, and photographs of executives and lobbyists, most of whom were white males over the age of 50 dressed in formal suits. This closely reflected the demographic that the author also observed at the API pipeline conference in Phoenix,
Arizona and the New England-Canada Business Council Energy Trade and Technology Conference.

In overall reach, the industry’s Internet efforts fared poorly. More than a year after launching its Facebook page, the Partnership to Fuel America had only 349 “likes” compared to Tar Sands Action’s 28,777 likes, and the Partnership to Fuel America website (Fuelingus.org) received less than 10 percent of the web traffic as Tarsandsaction.org (see Figure 9.1)

Figure 9.1: Website traffic comparison for Tar Sand Action and Partnership to Fuel America

Source: SiteTrail, Inc. (www.sitetrail.com Accessed December 17, 2012)

51 As of December 17, 2012
Likewise, pipeline proponents failed to capture the growing popularity of video sharing sites like YouTube. A YouTube search of “Keystone XL” revealed nearly 150 anti-pipeline videos before the first pro-pipeline video appeared in search results. Environmentalists and ranchers created YouTube “channels” that placed videos higher in the search results and reached tens of thousands of viewers. In contrast, not one Chamber of Commerce video surpassed 1,000 views. The top ranked YouTube video about the job creation benefits of Keystone XL (Fuelingjobs.com) reached approximately 6,000 viewers, while a Media Matters video that ridiculed the industry’s job creation projections (To Infinity And Beyond: Keystone XL Jobs Claims Spill All Over The Map) reached more than 17,000 viewers.

The industry’s lack of online success could be attributed to a number of problems. Foremost was a general lack of understanding of social media. Whereas the environmental movement drew support from college students who were very active users of social media, oil industry leaders were social media neophytes. A 2010 Foster Marketing Communications study of social media use in the oil industry, found that only 25 percent of oil companies used social media in an official capacity and 76 percent prohibited employees from using social media in the workplace.

The few companies that used social media in an official capacity focused primarily on professional sites, like LinkedIn. Facebook was used by 69 percent of companies engaged in social media, while fewer than half used YouTube. Only 15 percent of companies had senior executives with a direct role social media content and policies. Most firms assigned social media development to lower level employees. Finally the majority of oil companies did not monitor
social media discussions and only 15 percent believed that their companies had seen a measurable benefit from social media use (Foster, 2010).

These results are consistent with my own observations. For instance, during the API Pipeline Conference, the author spoke with Andy Black, President of the Association of Oil Pipelines (AOPL), about his association’s use of social media for outreach. He did not seem aware of any strategy beyond creating a Facebook page and Twitter feed. He personally did not feel comfortable using Twitter. In fact, the author did not find any oil industry executives or engineers who seemed at ease with social media.  

None of the companies appeared to have a social media strategy beyond having a Facebook page and a Twitter feed. One oil industry executive explained that he was uncomfortable with social media because it uses a completely different language that he did not understand. For him, keeping up with email communications was difficult enough, let alone trying to engage people through social media.

One senior manager talked about how his company developed software to help the general public better understand pipeline safety. Although he claimed the project was a success, he admitted that only around 200 people had used the site since it was implemented several months earlier. Not surprisingly, his company did not use social media in any way to increase public awareness of the company’s stakeholder engagement programs, despite the considerable sums of money spent developing the company’s website.

Notwithstanding the oil industry’s meager use of social media, industry executives expressed concern that social media was shaping public opinion about pipelines. They also believed that their companies should do more to develop social media tools for stakeholder and

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52 In contrast, SMO leaders opposed to Keystone XL were active users of social media and were directly involved in social media and Internet campaigns directed against the oil industry.
media engagement. These opinions echoed the results of a 2010 Microsoft/Accenture study of 275 oil industry professionals. That study found that “75 percent of oil and gas professionals see value in using social media and collaboration tools at work… [but] firms are not embracing the technology at a corporate level” (Accenture, 2010).

Overcoming barriers to social media engagement will not be easy. Even if corporations relax the restrictions on workplace social media usage and involve senior executives in developing social media strategies, traditional organizations will continue to lack the knowledge and skills needed to engage online stakeholders. Oil industry leaders are well-educated and articulate, but their business acumen and engineering skills do not translate into the skills needed to engage online communities. For instance, Breindl et al. (2011) note that “networked advocacy groups” often use “abbreviations (lol, brb), numbers instead of letters (1337) and deliberate misspelling (pwned)” to exclude participation by outsiders. Learning the language of the Internet and understanding how to navigate social media networks can be as challenging as moving to a different country where one does not speak the language.

TransCanada’s Alex Pourbaix believed the solution was to hire “a bunch of 22 year olds” to develop Internet strategies and promote the company’s perspective in online social networks. Yet, even as these young social media savvy employees seek to influence online discussions, the distance between oil industry veterans and online social communities will continue to grow. To understand a different culture, one must become immersed in that culture (Lane et al., 2010). Similarly, active engagement of online communities will only become effective when executives abandon their fear of social networks, relax social networking restrictions in the workplace, and begin monitoring online discussions of their brands, company and industry.
Hiring younger staff members came with its own problems, according to one government contractor who prepared reports on the oil industry. She told me that her organization hired young interns to conduct Internet-based research. They are not able to sort through the overabundance of content on the Internet to distinguish accurate information from opinion and propaganda, she explained. By the time they are sufficiently trained, they leave for other positions in industry or government. As a result, she believed that government and industry stakeholders do not always have complete and accurate information.

News Media

A review of online news articles reveals that by early 2012, jobs and security dominated online news discussions (see Figure 9.2). An argument could be made that journalists are over reliant on official sources and that those sources seek to exploit the relationship between media, government and industry (Gamson et al., 1992). In context of Keystone XL, Media Matters for America painted a bleak picture where news outlets acted as propagandists for the oil industry, emphasizing economic benefits and ignoring environmental harms (Fitzsimmons and Fong, 2012). The suggestion was that the American public was being misled by inaccurate portrayals favoring the oil industry.

However, the current study found no such bias. In fact, many US-based news outlets did not accept industry claims that Keystone XL would create thousands of high paying jobs and a large portion questioned Republican claims. This finding confirms previous studies showing that
“far from aiding the maintenance of hegemony, challengers were helped by the media” (Gamson et al., 1992).

Figure 9.2: Keyword references in the top 1000 Keystone XL articles for three months ending February 28, 2012

In the discussion on activist frames, one notices a steep increase in media discussion of climate change during the second period followed by a shift to land and water issues. Both climate and land issues declined in the final period as the media shifted focus to employment and economic benefits (see Figure 9.3).

Prior to the Tar Sands Action campaign, few news sources outside of Canada discussed job creation in connection to Keystone XL. However, Canadian newspapers decided that they had a responsibility to convince Americans of job creation and economic benefits of Keystone XL. “Alberta is right to remind Americans that we’re a good neighbor making major investments in cleaner carbon technology and land reclamation,” noted Colin Robertson, a Canadian
politician turned lobbyist in a *Globe and Mail* editorial. “But that’s not enough,” he added. “We need to make our case around jobs and national security and reframe it from a Canada-U.S. dispute to one about American interests” (Robertson, 2010).

Figure 9.3: News media coverage of job creation in Keystone XL articles

Most Canadian news outlets appeared to follow Robertson’s advice, extolling Keystone’s benefits and inviting oil industry executives and lobbyists to write editorials. For instance, on April 14, 2011, Thomas Donohue, CEO of the U.S. Chamber of Commerce and Perrin Beatty CEO of the Canadian Chamber of Commerce wrote an editorial in *the Globe and Mail* lamenting the fact that Keystone XL “has been lingering under review by the U.S. State Department since 2008.”

Further delay will prolong America’s dependence on unstable sources of oil and postpone the creation of badly needed jobs… Building the pipeline will create more than 20,000 new American jobs in construction and manufacturing in the short term, adding more than $6-billion in personal
income to those workers. In addition, more than 250,000 jobs will be created in the long term. (Donohue and Beatty, 2011)

A January 5, 2011 article in the *Montreal Gazette* titled “Oilsands pipeline ‘crucial’ to U.S. prosperity; 340,000 jobs at stake,” exaggerated the potential benefits of Keystone XL even further and went on to reiterate comments by API President Jack Gerard that the pipeline is “vital to the recovery of the nation’s economy.”

Although most Canadian news articles extolled Keystone XL, a smaller number focused on potential harms. For instance, an August 8, 2010 column in the *Toronto Star* warned that Keystone XL would harm the Canadian economy. “The number of jobs lost is expected to be more than double the 18,000 already gone.” The article concluded that environmentalists were asking “exactly the right questions about whether the Keystone XL pipeline is in the best interests of the U.S. Stopping it serves Canada’s best interests, too.”

Ironically, as the oil industry was lobbying the US government, Canadian newspapers were becoming less enthusiastic about Keystone. Most continued to praise the pipeline, but far less vigorously than before. Some, like Toronto’s *Globe and Mail* appeared to switch sides. Early on, the conservative paper cheered the pipeline for its economic value and the thousands of jobs it would create, but by February 2012 the paper was more concerned about the harms of “dirty oil.” It also noted that “pipelines create jobs mostly during construction and not many thereafter” (Simpson, 2012).

In the United States, leading newspapers and industry journals began to focus on job creation in the fall of 2011, when TransCanada, the API, and other oil industry stakeholders and lobbyists began their public relations campaign to promote the benefits of the pipeline. The first mention of economic and employment benefits in a leading American newspaper was a *New
York Times “letter to the editor” written by TransCanada CEO Russ Girling on April 4, 2011. Girling’s letter was in response to a Times editorial (No to a New Tar Sands Pipeline, April 2, 2011) that warned of the various environmental risks posed by Keystone XL. Girling summed up what would become the industry’s primary arguments for the pipeline in one paragraph. After warning of the risk of obtaining oil from “volatile, unfriendly regimes” and the need to “secure supplies,” he added,

TransCanada’s Keystone XL pipeline can help provide that energy security. The pipeline is a $7 billion, shovel-ready project that will transport 500,000 barrels per day of crude to American refineries. Keystone will put Americans back to work, creating 20,000 construction and manufacturing jobs and 118,000 spinoff jobs. The project will also inject $20 billion into the United States economy and provide millions more in state and local taxes for decades (Girling, 2011).

Shortly afterward, several other high ranking officials, including the Canadian ambassador in Washington, wrote similar letters to major newspapers. Over the summer, many newspapers, including the New York Times, uncritically accepted the industry’s economic arguments. One Times article (State Dept. Backs Canadian Pipeline, August 27, 2012) told readers that Keystone XL “would greatly expand the nation’s access to oil from a friendly neighbor and create tens of thousands of jobs.” Two days later, a Washington Post editorial titled “Say Yes to Oil Sands” claimed that “the project should result in 20,000 construction and manufacturing jobs.” Moreover, rejecting the pipeline would “perversely – increase greenhouse gas emissions” because the bitumen would have to be transported to refineries by other less efficient means.

As the industry stepped up its public relations and lobbying campaign in the fall of 2011 with advertisements, news releases, web sites, and (to a much lesser extent) social media posts,
the number of newspaper articles repeating economic and employment benefits increased substantially, from 13 references prior to September 2011 to 154 references in the three months ending November 30, 2011. Most US newspapers simply repeated industry statistics without questioning how the studies were conducted. On October 3, 2011, the *Los Angeles Times* claimed that the pipeline would create 120,000 new jobs (Proposed oil pipeline draws deep divisions). The author was not sure if this was a typo that involved putting a “1” in front of 20,000 or was a rounding off of the 118,000 “spin-off” jobs. Either way, those numbers were later disputed in a Cornell University study and were eventually disavowed by the State Department and Department of Energy (see “Policy Considerations” below).

Although the willingness of the news media to accept industry claims may be attributed to the perceived credibility of the speakers (corporate CEOs, Canadian ambassador, etc.), more likely news outlets were unwilling to dedicate the resources necessary to independently verify sources. For instance, in 1997, the author visited the offices of Grey Group in Toronto. Grey is a global advertising agency that represents numerous well-known brands. At the time of my visit, the company had just finished its Nintendo video game launch campaign with much success. Part of that success was derived from staged video footage showing consumers lining up at stores to get the new Nintendo gaming console.

The advertising agency offered consoles one day earlier than the official launch at one rural Ontario store and then advertised the event in a nearby city bringing a large number of people to that store. The agency filmed the long lines and then broadcast that footage at 4AM the next morning to major television news outlets. The news agencies simply rebroadcast the footage, thereby creating a perception of scarcity. When the author asked why reporters did not
verify the footage, he was told that news organizations were understaffed. They will usually rebroadcast whatever Grey sends to them, because it is cheaper than sending reporters to cover a story.

Unlike a new product launch, which becomes a media event for a day or two and then quickly disappears from the public psyche, Dynamic Frame Sequencing helped the Tar Sands Action campaign maintain public interest in Keystone well beyond the summer protests. As the frames shifted from climate change to oil spills, the media had more time to verify the “facts” of various stakeholders.

By early 2012, US newspapers had become more critical of the economic and employment numbers projected by pipeline proponents. “The Republicans’ claim that the pipeline will create tens of thousands of new jobs – 20,000 according to House Speaker John Boehner and 100,000 according to Jon Huntsman – are wildly inflated,” observed the New York Times (Where the Real Jobs Are, January 2, 2012). Shortly afterward, the Washington Post recognized that the industry employment numbers were based on “person years” and not actual jobs and that even those numbers were based on “overly optimistic” projections (Five myths about the Keystone XL pipeline, January 18, 2012). The next day, USA Today criticized Republican lawmakers for touting Keystone’s job projections while voting against “the American Jobs Act, which independent analysts estimated could create nearly 2 million jobs” (Republicans killed the pipeline, January 19, 2012).

The vast majority of news articles reviewed in the December 2011 to February 2012 period challenged the estimates provided by the API and TransCanada, many citing a State Department report that pegged the number of jobs created at no more than 6,000. A small

Industry journals understandably adopted the economic, security, and jobs stance, while taking aim at President Obama, Democratic lawmakers, and environmentalists for threatening the outcome of the pipeline. For instance, an *Oil and Gas Journal* editorial criticized the “anti-oil fantasies” of some Democratic lawmakers and the Sierra Club (Resisting Exports, February 13, 2012). The editorial took particular aim at Massachusetts congressman Ed Markey. “He argues that only 5,000-6,000 jobs would result from Keystone XL construction, not the 20,000 TransCanada has projected, pipe spread by pipe spread.” Others took a similar stance, criticizing environmentalists and “Hollywood elite” for jeopardizing a project that would help solve America’s economic woes (Keystone XL all but dead, *Petroleum Economist*, October 2011).

Outside of North America, newspapers did not cover this issue until December 2011, at which time it became clear that the Keystone XL permit was in jeopardy. Most uncritically repeated the industry’s disputed claim that the pipeline would create 20,000 jobs. *The New Zealand Herald* wrote that rejecting the pipeline permit would expose President Obama to “charges that he rejected the creation of 20,000 jobs” (Obama signs $1 trillion spending bill, December 18, 2011) and *The Australian* claimed that it was “no wonder” that voters were turning away from Obama after he rejected “thousands of shovel-ready jobs” (Primary Mauling Could be the Making of Romney, January 12, 2012). Only *The Korea Times* challenged “the ludicrously high estimates of the number of jobs the pipeline will create” (Canada-to-Gulf pipeline can be done, January 6, 2012).
Conclusion

This study demonstrates that established organizations often find it difficult to respond to a sustained campaign. Industry executives misjudged the importance of stakeholder alliances, strong leadership, and sequential framing, and focused primarily on social media as the driving force behind the Tar Sands Action campaign. Although 350.org’s social media capabilities were critical in mobilizing support and maintaining stakeholder alliances, the oil industry response demonstrates a lack of understanding of how social media works. Moreover, when the industry tried to respond with its own social media campaign, it was unable to engage social media users.

Some business leaders believed that the public awareness surrounding Keystone XL could have repercussions beyond the pipeline debate. One was TransCanada’s Alex Pourbaix who complained about having “to fight this rear guard action” against environmentalists. He alleged that Keystone XL protests would impact the entire oil industry. “Oil and gas are not held in high regard by the public. Nobody believes [oil companies] because they lack credibility” (Pourbaix, 2012).

Although much of the oil industry’s online efforts appeared fruitless, the industry proved more capable in its use of traditional public relations tools and lobbying, at least initially. For instance, newspapers uncritically repeated the economic and jobs numbers provided by industry associations. Over time, however, the news media became increasingly skeptical of industry data once that data was called into question by scholars and government regulators.

DFS, more than social media, may have played a role in the oil industry’s deteriorating position in the media. Unlike Tar Sands Action, the oil industry publicized its various frames
simultaneously. In the weeks following the summer protests in Washington, the oil industry was able to win wide media coverage for its economic, job creation, and energy security frames. However, the industry’s limited “toolkit” reduced its ability to present different frames to publishers and broadcasters that are constantly seeking “new angles” to keep readers and viewers interested in their content. Meanwhile, Tar Sands Action was reframing its campaign to correspond with external events and the different harms the pipeline might pose to stakeholders.

Finally, the industry lobbied lawmakers to support the pipeline. However, by concentrating their efforts on Republican lawmakers, they made the pipeline into a partisan issue, creating a potential backlash among (non-Republican) supporters who did not want to be seen aligning with Republican policies.

In the end, API lobbying may have done more harm than good. By politicizing the issue and making the pipeline a partisan concern championed by Republican lawmakers, the API turned Keystone XL into a target for Democratic lawmakers who, according to TransCanada president Alex Pourbaix, might seek to kill it in a symbolic effort to weaken Republican opponents.
Chapter 10: U.S. Policy Considerations

Several oil industry frames featured prominently in government documents prior to the Tar Sands Action campaign. To understand government adoption of various Keystone XL frames, the author reviewed a total of 204 policymaker documents and 430 government agency documents. Document production varied from month to month. For instance, the author coded 238 government agency documents published before June 2011, but only 27 were coded from December 2011 to February 2012. As a result, simply comparing the total number of keyword references in each time period would have biased the results. Instead, a baseline of the total number of Keystone XL references was established, which was 4,169 for policymakers and 15,742 for government agencies. If document production increased within a given time period, it was adjusted by the number of Keystone XL references. Dividing the number of framing references (mentions of energy security, for example) by the number of Keystone XL references gave weighted results and allowed for meaningful comparisons between time periods.

The influence of the oil industry’s campaign on lawmakers can be clearly seen by the increase in the percentage of Keystone XL documents that discuss employment (see Table 10.1).

Table 10.1: Percentage of government documents that discuss energy security issues

<table>
<thead>
<tr>
<th></th>
<th>Prior to June 2011</th>
<th>June 2011 to August 2011</th>
<th>September 2011 to November 2011</th>
<th>December 2011 to February 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policymaker</td>
<td>53.8%</td>
<td>31.4%</td>
<td>65.7%</td>
<td>70.5%</td>
</tr>
<tr>
<td>Government Agency</td>
<td>22.7%</td>
<td>16.0%</td>
<td>32.4%</td>
<td>33.3%</td>
</tr>
</tbody>
</table>

Each cell represents the number of documents that mention employment divided by the total number of Keystone XL documents in the respective stakeholder category.
Many of the comments by lawmakers repeated the arguments used by the API. For instance, below are two comments by the oil industry, each of which is followed by a corresponding lawmaker comment.

- “This privately-funded, shovel-ready project would put 20,000 people to work – constructing the pipeline and manufacturing the equipment for it. Keystone XL would inject $7 billion into the U.S. economy, and allow the United States to receive a safe, secure and reliable supply of Canadian and U.S. oil to enhance America’s energy security.” – TransCanada Media Advisory, September 26, 2011

- “[Keystone XL] represents the largest shovel-ready infrastructure project in the United States and it’s privately funded – requiring no new government spending. The $7-billion pipeline would generate an estimated 20,000 new jobs directly and support hundreds of thousands of jobs in coming years.” – Senator Lisa Murkowski, November 30, 2011

- “Our country needs this shovel ready project because it will create jobs, boost our national security, and spur economic growth.” – API news release, January 11, 2012

- “My top priority is jobs, and this bill will help by approving construction of the privately funded Keystone XL pipeline that will create shovel ready jobs now and rebuilding and modernizing our infrastructure so we can remain competitive and spur economic growth.” – Rep. Tim Griffin, February 13, 2012

With a higher number of policymaker documents focused on jobs in the latter months of campaign, one might also expect the percentage of Keystone XL references to increase. However, only a negligible increase was found during the last period, which followed a slight decline in the previous period (see Table 10.2). In other words, although lawmakers were talking about employment more often, they were not giving it greater weight in those discussions relative to other talking points.

The number of projected high paying jobs that pipeline proponents claimed would be created by Keystone XL varied from a few thousand to over one million, but the most frequently quoted number was 20,000. This number came from a press release published by TransCanada
on February 2, 2011 that stated “Keystone XL will also create 20,000 high-paying jobs for American families and inject $20 billion into the U.S. economy.”

Table 10.2: References to employment in government documents as a percentage of Keystone XL references

<table>
<thead>
<tr>
<th>Prior to June 2011</th>
<th>June 2011 to August 2011</th>
<th>September 2011 to November 2011</th>
<th>December 2011 to February 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policymaker</td>
<td>31.8%</td>
<td>30.0%</td>
<td>27.1%</td>
</tr>
<tr>
<td>Government Agency</td>
<td>7.0%</td>
<td>2.4%</td>
<td>4.7%</td>
</tr>
</tbody>
</table>

An earlier report published by TransCanada claimed Keystone XL would create “118,935 person years of employment.” Although a person year is not the same as a job, some pipeline proponents embraced the number. For instance, an October 17, 2011 editorial in the Wall Street Journal (What’s Occupying Wall Street?) criticized the Obama administration for not approving Keystone earlier:

The Administration has spent three years sitting on the Keystone XL pipeline project that promises to create 13,000 union jobs and 118,000 “spin-off” jobs. A State Department environmental review says the project poses no threat to the environment, but the Administration's eco-friends are screaming lest it go ahead.

Two days later, a dozen members of Congress led by Texas congressman Gene Green wrote a letter to President Obama (later reprinted on TransCanada’s website), that urged the

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55 A person year is equivalent to a full time job over 12 months. A single job that lasts 20 years is equivalent to 20 person years.
President to approve Keystone XL. “We write today to express our support that a Presidential Permit for the Keystone XL Pipeline Project is in America’s national interest,” they wrote.

This is based on the fact that the Keystone XL Pipeline will inject $20 billion of private sector investment into the American economy, create 20,000 direct jobs, spur the creation of 118,000 spin-off jobs, payout $5 billion in taxes to local counties over the project's lifetime, bolster America’s energy security and strengthen our national security.

Both of these numbers were later challenged by State Department. For instance, an August 21, 2011 Appendix to the Keystone XL environmental impact study (EIS) examined the economic arguments for the pipeline.

The draft EIS assessed proposed Project economic benefits over an assumed 50-year project lifetime whereas the Perryman study assessed benefits over an assumed 100-year project lifetime. It appears that the calculation of the multiplier (i.e., indirect and induced) impacts in the Perryman study were also based upon the assumed 100-year project lifetime. The potential impacts do not appear to be separately calculated for construction and operation. Additionally, the Perryman study included direct construction expenditures as well as multiplier (indirect and induced) effects, and it also provided estimates of person-years of employment (i.e., the number of jobs multiplied by the assumed project life [100 years])

In other words, the actual number of person years must be divided by 100 in order to derive actual employment numbers. Instead of “118,000 spin off jobs,” the study actually claimed Keystone would create 1,189 jobs lasting 100 years, whereas the reasonable lifespan is only 50 years (Stansbury, 2011).

In a January 18, 2012 “Report to Congress Concerning the Presidential Permit Application of the Proposed Keystone XL Pipeline,” the State Department went even further and questioned whether Keystone XL would create any net jobs:
While some reports have suggested there could be over 100,000 direct or indirect jobs created by the pipeline, this inflated number appears to be a misinterpretation of one of the economic analyses prepared on the pipeline... The economic analysis conducted for the EIS under contract to the Department of Energy, however, indicates that Keystone XL is unlikely to have any impact on the amount of crude oil imported into, or refined in, the United States. Therefore, it would not be reasonable to suggest the pipeline would cause an increase in employment or other economic activity by increasing crude oil imported into the United States.

Unlike lawmakers who adopted industry frames and promoted inflated job creation and economic benefits, officials at the State Department and other federal government agencies remained neutral throughout the controversy.

Energy security concerns were mentioned in approximately half of all policymaker documents about Keystone XL prior to June 2011, a level that did not fluctuate significantly during and after the Tar Sands Action campaign. On the other hand, only eight percent of government agency documents discussed energy security prior to and during the Tar Sands Action campaign. The percentage increased substantially in the fall of 2011 when the oil industry began to promote Keystone XL’s potential security benefits and continued to increase into early 2012 (see Table 10.3).

Table 10.3: Percentage of government documents that discuss energy security issues

<table>
<thead>
<tr>
<th></th>
<th>Prior to June 2011</th>
<th>June 2011 to August 2011</th>
<th>September 2011 to November 2011</th>
<th>December 2011 to February 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Policymaker</strong></td>
<td>48.7%</td>
<td>45.7%</td>
<td>42.9%</td>
<td>55.8%</td>
</tr>
<tr>
<td><strong>Government Agency</strong></td>
<td>8.0%</td>
<td>8.4%</td>
<td>20.6%</td>
<td>25.9%</td>
</tr>
</tbody>
</table>

Each cell represents the number of documents that mention energy security concerns divided by the total number of Keystone XL documents in the respective stakeholder category.

The number of policymaker documents discussing security concerns did not decline, but the percentage of text devoted to security declined steadily relative to other concerns. Although
policymakers discussed security more than agency officials, the gap appeared to be closing. For instance, a gap of 12.4 percent that existed between policymakers and government agencies prior to the Tar Sands Action campaign narrowed to 1.7 percent (see Table 10.4).

Agency references did not adopt industry security frames per se, but rather they added security as one of several stakeholder considerations under review. One example is the State Department’s “Report to Congress” mentioned above, which states that the President will provide a report to Congress to justify his decision based on a number of considerations such as “employment, economic, energy security, foreign policy, trade, and environmental factors.” In almost every agency document released, both before and after the Tar Sands Action campaign, energy security was listed along with a number of other issues.

Table 10.4: References to energy security in government documents as a percentage of Keystone XL references

<table>
<thead>
<tr>
<th></th>
<th>Prior to June 2011</th>
<th>June 2011 to August 2011</th>
<th>September 2011 to November 2011</th>
<th>December 2011 to February 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policymaker</td>
<td>12.6%</td>
<td>11.8%</td>
<td>5.3%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Government Agency</td>
<td>0.4%</td>
<td>0.5%</td>
<td>1.6%</td>
<td>2.8%</td>
</tr>
</tbody>
</table>

Number of energy security references/Number of references to Keystone XL

In contrast, elected officials often adopted oil industry rhetoric when framing energy security concerns. Senate Republicans, for example, developed “key talking points for the North American Energy Security Act” in which they discussed the national security value of Keystone XL. “Canada is the most reliable and secure oil supplier for Americans outside the U.S.,” they noted. “The real foreign alternatives to oil sands are from volatile nations like Venezuela.” Overall, however, energy security concerns featured less prominently in policymaker documents compared to economic and job creation frames.
An examination of how party affiliation affects the discussion of oil industry frames revealed a nearly even split. For example, Democrats made 213 employment references and Republicans made 257. However, when one considers how the issues were discussed, ideological differences become apparent. As noted previously, some Democrats (like Gene Green) were wholly aligned with oil interests. However, many were highly critical of the economic and jobs claims.

Long before Tar Sands Action entered the debate, Democratic congressman Henry Waxman challenged Keystone on environment grounds. In a January 25, 2012 statement on the North American Energy Access Act, Waxman also criticized “the inflated jobs promised” and challenged a number of other economic assumptions. Other Democrats challenged Republican claims that Keystone XL would improve national security, echoing environmentalist claims that the pipeline would primarily be used to export petroleum to other parts of the world (Restuccia, 2012).

In the run-up to the 2012 federal election, Republican candidates embraced the oil industry’s economic frame, turning Keystone XL into a major campaign issue. In April 2012, presidential candidate Mitt Romney famously told Republican leaders, “I will build that pipeline if I have to do it myself.” A September 14, 2012 editorial in the conservative Washington Times newspaper, claimed that “Romney could save the Keystone pipeline, making [the] U.S. energy independent.”

However, TransCanada’s Alex Pourbaix saw the politicization of Keystone XL as a risk that could harm his company’s longer term interests. A few days before the 2012 presidential election, Pourbaix told the author privately that Republicans had appropriated the pipeline
discussion and turned it into an election issue. “Romney keeps saying that on day one he is going
to approve Keystone. I keep telling my Republican friends that they need to tone it down. We
don’t want this to be Romney’s project, because what if he doesn’t win the election? Our
contacts in Washington say that if we keep our heads down, the State Department will eventually
approve [Keystone XL]. But if it becomes political, it will be easier for Obama to kill it as a
visible sign.”

The adoption of Keystone XL by the Republican Party might also explain the Canadian
media’s decline in support for the pipeline. Canada has a long history of progressive social
policies on issues such as racial equality, women’s rights, immigration, and gay marriage. As
such, many Canadians were repelled by what they view as the regressive policies of the
Republican Party, policies that Smith (2008) blames on the infiltration of the Republican Party
by evangelical Christians in the 1980s. Over the same period, Canada saw a “dramatic
liberalization” in social attitudes (Rayside and Wilcox, 2011). This alignment of the pipeline
with American conservatism could have negatively impacted the way Canadian journalists and
their readership viewed the project.

State and Provincial Governments

State and Provincial governments could be classified into three categories, producer
states, transit states, and refining states. Producer states had the most to gain in property taxes,
royalties, jobs, and other economic benefits. Transit states also received some economic benefit
in the form of tolls, property taxes, and temporary construction jobs. These benefits were
counterbalanced by the risks of oil spills and other accidents with significant impacts to
agriculture, wildlife, and human health. Refining states, such as Oklahoma and Ontario, Canada,
had significant existing infrastructure and therefore any additional impact from new pipelines was minimal. The interests of refining states were served by a consistent supply of low cost crude that could be converted into value-added distillates, such as gasoline and diesel fuel.

**Producer States**

Producer provinces and states included Alberta, Saskatchewan, Montana, and North Dakota. Alberta is well known as one of the largest sources of fossil fuels in the world. Less well known is the fact that Montana and North Dakota also have significant untapped reserves of fossil fuels in what is known as the Bakken Formation (see Appendix 10-A and 10-B). The US Geological Survey estimates that the US portion of the formation contains “3.65 billion barrels of oil, 1.85 trillion cubic feet of associated/dissolved natural gas, and 148 million barrels of natural gas liquids” (Pollastro et al., 2008).

In January 2011, TransCanada announced the construction of the Baker On-Ramp in Baker, Montana at an estimated cost of $100 million. Also known as the Bakken Marketlink, the on-ramp would connect Montana’s Bakken oil production to the Keystone XL system, allowing direct delivery of 65,000 barrels of crude oil per day to refineries in Oklahoma. When the on-ramp was announced, Montana’s governor Brian Schweitzer proclaimed it as “great news” for the state, because the state’s petroleum would no longer be stranded. Stranded oil had to be sold at a discount to cover the cost of alternative forms of transportation to reach consumer markets. In addition, the state estimated that the on-ramp would provide an additional $2 million per year in property taxes.
The added value that pipelines provided in terms of increased production, higher spot prices, employment, taxes, and royalties created important incentives for producer states. As a result, local and state government agencies and politicians in these states were among the most vocal supporters of Keystone XL and other pipelines, regardless of their political affiliation. When the State Department held public hearings in Montana in September 2011, Keystone XL received broad bipartisan support from state legislators. State democratic representatives took to the stand to declare their unwavering support for the pipeline. Among them was Montana State Senator Jim Keane. “We don’t have to defend the oil coming out of Canada,” he declared. “Build this pipeline!”

Transit States

Nebraska was the only state along the Keystone XL route that did not have production or refining interests. Nebraska’s Republican-dominated state government initially opposed the pipeline due to the planned routing of Keystone XL over the Ogallala Aquifer, one of the world’s largest natural watersheds. According to the U.S. Geological Survey,

> About 27 percent of the irrigated land in the United States overlies this aquifer system, which yields about 30 percent of the Nation’s ground water used for irrigation. In addition, the aquifer system provides drinking water to 82 percent of the people who live within the aquifer boundary. (Dennehy et al., 2000)

In a letter to President Barack Obama and Secretary of State Hillary Clinton, dated August 31, 2011, Republican Governor Dave Heineman urged the State Department to reject TransCanada’s permit. Specifically, Heineman expressing concerns about the impact a spill might have on the state’s $17 billion per year agricultural industry. “Nebraska has 92,685
registered, active irrigation wells supplying water to over 8.5 million acres of harvested cropland and pasture,” Heineman explained. “Forty-six percent of the total cropland harvested during 2007 was irrigated.” He also explained that he was not opposed to pipelines per se, but to the routing of a pipeline over a sensitive watershed.

We already have hundreds of them in our state. I am opposed to the proposed Keystone XL Pipeline route because it is directly over the Ogallala Aquifer. Therefore, I am asking you to disapprove TransCanada's pending permit request. Do not allow TransCanada to build a pipeline over the Ogallala Aquifer and risk the potential damage to Nebraska’s water. (Heineman, 2011)

Heineman correctly observed that Nebraska’s central location made it an important transit point for numerous pipelines. However, major pipelines avoided more sensitive areas of the Sandhills region and the Ogallala Aquifer.

TransCanada tried to dispel fears of a major spill, noting that pipeline safety has improved considerably during the past decade. Nicole Aitkin, stakeholder relations director for TransCanada Corporation, argued that pipelines were the safest form of crude oil transportation. She explained,

Like the airline or mining industries (among others), when our energy industry experiences a significant incident, such as a leak or spill, it generates due attention. However, leaks or spills, especially along the right of way, are rare. Due to our industry’s commitment to safety, spills along the right of way decreased from two incidents per thousand miles in 1999–2001 to 0.8 incidents per thousand miles in 2005–2007, a decline of 60 percent. The energy industry and its workers throughout the U.S. have a vested interest in protecting pipelines from spills and leaks in our communities. (Aitkin, 2010)

However, Prof. John Stansbury of the University of Nebraska Water Center criticized TransCanada’s risk assessment.
TransCanada made several assumptions that are highly questionable in the calculation of these frequencies. The primary questionable assumptions are: (1) TransCanada ignored historical data that represents 23 percent of historical pipeline spills, and (2) TransCanada assumed that its pipeline would be constructed so well that it would have only half as many spills as the other pipelines in service (on top of the 23 percent missing data), even though they will operate the pipeline at higher temperatures and pressures and the crude oil that will be transported through the Keystone XL pipeline will be more corrosive than the conventional crude oil transported in existing pipelines. (Stansbury, 2011)

Using historical data from the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration, Stansbury estimated that Keystone XL, if built as originally proposed, would produce “91 major spills over a 50 year design life of the pipeline.”

Bipartisan public opposition to the pipeline proved short-lived however and by late 2011, most state Republicans joined their federal counterparts in voicing support for Keystone XL. When TransCanada later announced that it would reroute the pipeline away from the most sensitive regions of the Sandhills, any remaining Republican opposition vanished.

**Refining and Distribution States**

Oklahoma and Texas expressed their unwavering support for Keystone XL. This is not surprising given the importance of oil to the economies of both states. Moreover, because they already have extensive oil infrastructure, the perceived risk of one more pipeline is lower than in states without significant existing petroleum infrastructure.

Historically, North American refining and distribution sites have been located in states that have also been important producers of fossil fuels. In 1857, Ontario Canada became home to the “the continent’s first integrated crude oil producing, refining and marketing company” after
James Miller “discovered the world’s first oil field to supply crude oil to a substantial petroleum refining industry” (Gray, 2008). In 1896, the first commercial oil well was drilled in Oklahoma (Boyd, 2002) followed by Texas in 1904 (Warner and Thompson, 2007). Therefore, unsurprisingly, they share many of the same perceptions as residents and policymakers in newer oil producing provinces and states like Alberta and North Dakota.

David Blatt, Director of the Oklahoma Policy Institute notes that the “oil and gas industry is unquestionably vital to Oklahoma’s economy.”

The energy sector accounts for nearly 9.5 percent of Oklahoma’s gross state product and employs 4.6 percent of the state’s nonfarm labor force. Although the state economy has diversified to some extent since the oil bust of the 1980s, our economic prosperity remains closely tied to the fortunes of the energy industry. (Blatt, 2012)

Therefore, state politicians advocated on behalf of oil interests. For example, in January 2012, Governor Mary Fallin of Oklahoma wrote a letter to President Obama that contrasts Nebraska Governor Dave Heineman’s earlier letter. “The pipeline represents an enormous and undeniable opportunity for job-creation and economic stimulus at a time when the nation is sorely in need of both,” wrote Fallin.

The creation of the pipeline will also help to ensure our nation’s future energy needs are met with resources from politically stable regions of the world right here in North America… Pipelines are already the safest, most reliable, economical, and environmentally sensitive way to transport crude oil and petroleum products in North America. The Keystone XL project has been deemed similarly safe; and no convincing evidence has been presented to suggest otherwise. (Fallin, 2012)

In contrast, policymakers in Ontario, Canada, where dependence on oil has declined in favor of a diversified economy focused on durable goods manufacturing, have been critical of crude oil pipelines, even though refineries in Sarnia, Ontario receive significant supplies of
bituminous crude from Alberta. Recently, Ontario Premier Dalton McGuinty claimed that the Canadian oil industry was harmful to the Ontario economy because it caused the Canadian dollar to increase in value, thereby making other Canadian exports uncompetitive in the world economy. “The only reason the [Canadian] dollar is high, it’s a petro dollar, driven by the global demand for oil and gas to be sourced in Western Canada,” he said when asked why he would not support Keystone XL (Bennett, 2012). Other provincial policymakers also criticized the Canadian federal government for providing development incentives for oil sands development while failing to invest in wind and solar energy projects in Ontario.

In refining states, many landowners who lived on or near the right of way expressed the same concerns about Keystone XL as landowners and ranchers in other states. At public hearings in Texas and Oklahoma they conveyed their apprehensions about oil spills, contamination, and the ability of a Canadian company to exercise eminent domain. More recently, in October 2012, Texas landowners joined environmentalists blockading construction along the right of way (Frosch, 2012).56

However, landowner opposition was not universal. Some ranchers, particularly in Oklahoma, talked about the personal effect of the economic crisis on their lives and how they hoped the pipeline would help improve economic conditions in the state. At a September 2011 hearing in Austin, Texas, Oklahoma cattle rancher Lance Smith told State Department officials that he lived near an oil refinery in Cushing, Oklahoma all of his life and has never seen an “oil spill or a major problem around that area.” He went on to say how his state needed the jobs and tax revenue the pipeline would bring to support the population and maintain public services.

56 President Obama gave his blessing to construction of the southern portion of Keystone XL, which does not require a special permit because it does not cross international boundaries.
The Role of the Environmental Protection Agency

The EPA was required to review the Keystone XL EIS conducted by the State Department, both to ensure that the methodology was rigorous and thorough and to assess the potential environmental impact of the pipeline. The agency rejected the original draft EIS from the State Department on the grounds that its focus was too narrow and that it needed to be defined “more broadly to allow for a robust analysis of options for meeting national energy and climate policy objectives” (Giles, 2010).

The EPA sought to include the impact of crude extraction on greenhouse gas emissions prior to being transported by the pipeline, which it claimed was 82 percent higher for Alberta bitumen when compared to conventional crude oil. The EPA argued that the pipeline will facilitate greater production of crude at the source and therefore the impact on climate change needed to be examined in the EIS.

The EPA also raised concerns that the chemical composition of diluted bitumen is significantly different from other forms of crude and the potential impact of spills on aquatic environments needed further study. In the aftermath of the Enbridge pipeline spill in Marshall, Michigan, the agency expanded these earlier concerns to request further study of the chemical composition of dilutants. More specifically, EPA Assistant Administrator Cynthia Giles criticized the EIS for not looking at dilutants more closely, instead choosing to accept TransCanada’s position that “the exact composition may vary between shippers and is considered proprietary information.” Giles wrote,

In the recent Enbridge oil spill in Michigan, for example, benzene was a component of the dilutants used to reduce the viscosity of the oil sands
crude so that it could be transported through a pipeline. Benzene is a volatile organic compound, and following the spill in Michigan, high benzene levels in the air prompted the issuance of voluntary evacuation notices to residents in the area by the local county health department. (Giles, 2011)

Moreover, the EPA did not consider the Department of Transportation guidelines to risk assessment to be sufficient under EPA regulations, and requested more detailed spill response plans, additional shutoff valves, and financial bonds posted by TransCanada to ensure that it could meet the costs of any cleanup should a major spill occur. Finally, the EPA believed the EIS was insufficient in addressing concerns of environmental justice (the impact on minorities, particularly Native Americans, and economically disadvantaged citizens), wetlands, and migratory birds.

The author found no evidence that the EPA was influenced by Tar Sands Action campaign or by industry lobbying. For instance, the agency’s concerns about the impact on wildlife and greenhouse gas emissions predated the Tar Sands Action campaign and remained consistent during and after the campaign.

Social Media and Government

State and federal regulators appeared to have almost no social media presence. When the author spoke to officials from a federal agency about their social media communications strategy, one of them laughed. “Let me put it this way,” he said. “If I wanted to post something on Twitter, I would need to seek approval almost to the undersecretary level. On the other hand, I am involved in private company and when I want to get something done, I just do it. But government is far more restrictive.”
In response to the Keystone protests, the official said, “I am not political.” His concern was not with activism per se, but with ensuring the safety of pipeline systems. A computer hacker, for example, could potentially take control of pipeline system and cause major supply disruptions. As a result, in an emergency such as a major spill or terrorist attack, federal regulators had no formal plan to use social media to warn the public.

Government-imposed restrictions on electronic communications also limited the ability of agencies to participate in what PHMSA referred to as “stakeholder engagement.” The author spoke with a federal agency official who felt that social media has played both positive and negative roles in increasing stakeholder awareness of pipeline issues. On the one hand, social media has increased awareness overall, which has helped to encourage landowners and others living near pipeline right-of-ways to seek out information about pipeline safety from the agency and pipeline operators. At the same time, social media can be detrimental when it is used to spread misinformation. “We need to provide an appropriate level of information to stakeholders without overloading them,” she said.

Both state and federal regulators appeared to be overworked and understaffed. Based on their public statements at the API Pipeline Conference and on what they told me in private, they have barely sufficient time to investigate the accidents reported to them, let alone monitor new and existing lines or engage the public in dialogue. During these accident investigations, regulators must work closely with oil industry managers and field engineers. Therefore, one would expect that over time they would be influenced by industry language and framing. For

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57 Later, when the author raised this question with an executive from control systems supplier, he believed the federal official had understated the potential damage from a cyberterrorist attack. A hacker could do more than just disrupt flows, but could potential redirect oil and gas lines to a central location, causing a major explosion. If this were to occur in an urban area, the consequences could be devastating.
instance, government documents referred to a pipeline spill as a “discharge” at twice the rate of “spill.” A Google search of government websites revealed 323,000 references to “pipeline discharge” compared to only 159,000 references to “pipeline spill.”

Finally, regulators appeared to be uncomfortable using social media. Even those who would like to use social media to learn about public concerns or provide information to stakeholders are discouraged from doing so by very strict rules that limit the way government employees are permitted to communicate with the public. If state or federal employees use social media to post information or respond to public inquiries, they risk disciplinary action that could cost them their careers. As a result, none of the agencies primarily charged with stakeholder engagement, such as PHMSA, the State Department, and Homeland Security, had any meaningful presence on social media sites. Instead, communications were typically limited to officially approved documents.

To make matters worse, government websites appeared to be overly technical and cumbersome, which limited their usefulness to the public. Stakeholder communications were often touted as an important part of PHMSA’s responsibilities, yet online public outreach content appeared to be very limited.

PHMSA had its own stakeholder communications site, highlighting industry “Public Awareness Programs.” The site included information about the transportation of hazardous liquids, the “dig safe” program, and Community Assistance & Technical Services (CATS). The purpose of CATS was to “advance public safety, environmental protection and pipeline reliability by facilitating clear communications among all pipeline stakeholders, including the
However, the site itself appeared very technical in nature and offered little to attract public interest beyond those seeking official statements on safety compliance and related issues. The agency had no significant presence on social media sites and no apparent strategy for using new media to engage the public directly. Instead, the agency appeared to rely on pipeline operators to fulfill this role. The author spoke with a senior PHMSA official who said that operators were experimenting with new methods and technologies to reach stakeholders, but she did not go into detail about what those methods and technologies were.

Another senior PHMSA official acknowledged the general lack of user friendly content. When asked for specific pipeline safety information, he replied, “Go to phmsa.dot.gov and get through the maze. You’ll get there.” Carl Weimer of the Pipeline Safety Trust expressed disappointment with the agency’s online outreach efforts. Although the agency has moved in the right directly by increasing transparency, Weimer felt that PHMSA had so much information on its website that it was hard to find anything specific (Black et al., 2012).

The lack of useful content on the PHMSA website was mitigated to a limited extent by the agency’s extensive list of “related links” to organizations that offer “more information about pipelines and pipeline safety.” However, the list proved to be highly biased toward industry. It included links to U.S. and Canadian government agencies, public stakeholders, and industry stakeholders, but excluded links to environmental organizations that rank highly in Google searches of “oil pipelines,” such as the National Wildlife Federation, the Natural Resources Defense Council, or the Sierra Club. The site offered at least 10 links to industry associations,

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lobbyists, and other organizations closely tied to the oil and gas industry, and only one link to a public advocacy organization, the Pipeline Safety Trust (see Appendix 10-C).

On the other hand, regulators and private sector managers expressed concern over the influence of public events on elected policymakers. Elected officials were not bound by the same restrictions as government agents and were far more likely to respond to public concerns about pipeline safety. For example, DOT Secretary Ray LaHood had his own Facebook and Twitter accounts where he posted comments on a wide range of transportation related news stories.

However, many in the industry seemed to feel that policymakers did not understand their industry well and that policymakers often placed unrealistic expectations on the industry in reaction to sensational news coverage. As a result, the industry was faced with complex and often contradictory rules that made compliance cumbersome and difficult. At the same time, regulators appeared to have a difficult time managing the increased regulatory requirements without additional staffing and resources to implement new rules and regulations.

**Pipeline Safety**

In April 2012, Carl Weimer, Executive Director of the Pipeline Safety Trust, told oil industry executives that recent events were undermining public trust. “In April 2010, things went bad,” he said. “Deepwater Horizon had nothing to do with pipelines, but had a big impact on public opinion.”\(^{59}\) Pipeline accidents were also taking a toll on the industry, “but everyone’s favorite is the oil sands,” Weimer observed. Pipeline companies simply did not know enough about the impact that bituminous crude has on pipelines, such as their corrosive properties, nor

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\(^{59}\) Deepwater Horizon was an oil platform in the Gulf of Mexico that exploded on April 20, 2010, killing 11 workers and causing unprecedented environmental and economic devastation.
did they know how to respond to spills. He explained that the oil industry knows how to clean up crude oil spills, but the Enbridge spill in Michigan demonstrated that the industry was “not prepared to deal with oil that sinks.” Weimer urged the industry to become more proactive in promoting safety as a way to avoid stricter regulations. “Congress is not the best place to get directly involved. I don’t think you want those people making the rules” (Black et al., 2012).

After the meeting, the author had an opportunity to speak to Weimer about his opinion of social media. He said that he thought the Internet was a “double edged sword” and expressed concerns about oil companies exaggerating the truth. “If you are pushing the truth a bit, it undermines 99 percent of what you are saying to the public.” He also did not feel that the oil industry was doing a very good job of engaging the public through social media. His own organization was using Facebook and Twitter to communicate with stakeholders, but he admitted that they were not very sophisticated users of social media.

In 2011, the Pipeline Safety Trust examined regulator websites and found that most were lacking in their ability to provide useful information to the public. “They compared state regulator websites and looked for seven key pieces of information. The ratings were based on how easy it was to find the items. If they were pretty easy to locate, they got a ‘3’, if you had to click around a bit ‘2’, if you needed specialized terminology or had to search for them quite a bit ‘1’. If they were nowhere to be found, they got a ‘0’” (See Appendix 10-D).

The chart created by the Pipeline Safety Trust showed that the most common score for critical categories, such as incident data, inspection records, and transmission maps, was a “0”. The only categories that government agencies appeared to score well at was in providing contact information for agency staff and access to regulations. Alaska and New Jersey have major oil
production and processing facilities, yet both states failed in basic categories, such as providing contact information and access to state and federal pipeline regulations.

**Conclusion**

This study has demonstrated that economic considerations outweighed environmental concerns among state and provincial lawmakers on both sides of the border. In almost every case, policymaker support and opposition was based solely on perceived economic benefits and harms. States and provinces with historical petroleum interests supported Keystone XL with the exception of Ontario, which was concerned that the high value of the Canadian “petro-dollar” was harming its manufacturing sectors.

Although Ontario was home to one of the world’s first petroleum economies, it has long since diversified away from petroleum, such that today more than 90 percent of Ontario’s economy is based on manufacturing, finance, retail, services, and education.\(^6^0\) Similarly, Nebraska initially opposed the pipeline on economic grounds and the potential harm a major oil spill could have on the state’s large agricultural sector. In every case, social media and traditional media responses were calculated to serve the perceived economic needs of the state or province.

At the federal level, the Tar Sands Action campaign appeared to have a greater impact on lawmakers whose constituents represent more diverse interests than those of state lawmakers. However, the impact appeared to be indirect, resulting from media coverage of direct action organized by anti-pipeline stakeholders. In most cases, lawmaker responses focused on ways to

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protect existing interests, such as promoting the economic benefits as a way to counterbalance news coverage that was favorable to environmentalists and ranchers.

Finally, the study found that American government agencies, which are guided by regulations and policies rather than public opinion, are far less likely to be influenced by the politicization of issues, both directly or indirectly. Moreover, a very limited social media presence, largely driven by strict policies that limit interaction between government employees and the general public, caused government agencies to be excluded from the social media discussions that were vital to the Tar Sands Action campaign. At the same time, government agencies offered the most accurate and unbiased information about important stakeholder issues ranging from environmental impacts to economic benefits.
Chapter 11: Brand Canada: Transparency and Political Influence in Keystone XL Framing

Internationally, Canada is often viewed as a progressive country with strong green credentials. In 2007, Canada placed third in a “National Brand Index” that ranked countries by public perception. That perception is currently being challenged by Canada’s status as the worst performer among all the signatory nations of the Kyoto Protocol and the first country to exit the agreement. An Economist editorial (Kyoto and Out, December 17, 2011) suggested that the Canadian government is “more worried just now about the health of the economy than that of the planet.” It further noted that “Canada has failed to do much to curb its carbon emissions, which rose by 20.4% between 1990 and 2009.”

The reality is that Canada’s conservative government has long been hostile to climate change mitigation. In 2002, shortly before being elected Prime Minister of Canada, Stephen Harper wrote a letter to campaign supporters in which he vowed to win the “‘battle of Kyoto’ — our campaign to block the job-killing, economy-destroying Kyoto Accord.” He further challenged the belief that carbon emissions were harmful to the environment. “[The Kyoto Protocol] focuses on carbon dioxide, which is essential to life,” he argued.

Canada’s emissions performance has threatened to undermine its international standing. “The oil sands are posing a growing reputational problem,” wrote a UK-based Canadian diplomat in 2010. “[W]ith the oil sands defining the Canadian brand… we anticipate increased risk to Canadian interests much beyond the oil sands” (Lewis, 2012).

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Despite the growing threat to Canada’s reputation posed by Keystone XL and Canada’s withdrawal from Kyoto, the Canadian government sided strongly with the oil industry. The Canadian Embassy in Washington created a webpage, simply titled *Nebraska,* which focused on that state’s economic dependence on Canada. The page began by noting that “53,500 Nebraska jobs depend on trade with Canada, 2,700 Nebraskans are employed by Canadian-owned businesses, [and] Nebraska sells more goods to Canada than to any other country in the world.”\(^62\) Although the Canadian embassy did not repeat the often disputed jobs claims of the American Petroleum Institute, it did emphasize the jobs created by the first leg of Keystone.\(^63\)

Canadian policymakers also suggested that environmentalists had an unfair advantage over the oil industry in projecting their version of Keystone XL. “We hear a lot from environmental groups, and that’s fine, and we should hear from oil companies and from others who may be able to bring some facts to the table and who have interests,” explained Canada’s Minister of Natural Resources Joe Oliver (Lewis, 2012). To that end, the Canadian government sought to promote the benefits of Alberta oil sands to U.S. and international policymakers. It hosted private events, sent lobbyists to Washington, and sponsored international trade conferences.

The current study had a limited data set of Canadian policy documents to work with relative to American documents, thereby limiting the ability to conduct a meaningful trend

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\(^{63}\) The site noted: “Keystone is an enormous economic stimulus project that represents $13 billion in capital investment between 2008 and 2013 and creates thousands of jobs. In the U.S., Keystone Pipeline created jobs for 5,000 construction workers in 2009 and 2,100 construction workers in 2010.”
The lack of available data could be explained in several ways. For instance, the Canadian government may have viewed Keystone XL as less pressing than the American government, or it may have been less transparent in making its documents publicly available. Given that Keystone XL received greater news media coverage in Canada, the lack of transparency appears to be more likely. In fact, as will be demonstrated later in the chapter, Canadian government agencies were careful to reflect the positions of the Canadian parliament, particularly the ruling Conservative Party of Canada led by Prime Minister Stephen Harper.

Not only did the Canadian government publish fewer documents, those it did publish were far less comprehensive in examining stakeholder issues. For example, environmental impact studies conducted on the Canadian section of Keystone failed to include many of the issues thought to be important by American government agencies, such as wildlife impacts and social justice concerns. Canada’s final Keystone XL report numbered 168 pages including appendices compared to the US State Department’s Final Environmental Impact Study (FEIS) that numbered more than 3,000 pages. Moreover, many of the draft environmental review documents produced by Canadian government agencies were classified as secret or were not publicly available.

The lack of transparency in Canadian regulatory oversight has long been an issue in the Canadian energy sector. For instance, Fraser and Ellis (2009) who examined offshore petroleum development in the Province of Newfoundland, noted that “the public is forced to trust a government entity which plays a dual role of promoting offshore development and protecting the marine environment. The importance of transparency of the regulator has been identified as an

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64 The author was able to collect approximately 150 Canadian government documents, compared to more than 1,000 U.S. government documents.
outstanding issue in the management of offshore oil and gas, yet remains unresolved.” More critically, they noted that “citizens participating in the assessment of future offshore oil and gas developments need to be aware of lack of transparency of the environmental management in [Newfoundland] and understand that they may be excluded from fully understanding the realized environmental impacts of the offshore oil and gas industry.”

The lack of transparency appeared to be a government-wide problem that affected many departments and agencies. For instance, the Canadian Medical Association (CMA) recently raised concerns about the lack of transparency in Canadian government healthcare, noting that “Health Canada has long faced criticism for the systemic secrecy in which it shrouds data” (Vogel, 2011). The CMA compared Canada to the United States, which they identified as having far more progressive access to information policies. “The US is among a number of nations, including Great Britain, Australia, India and Brazil, which have aggressively proceeded with open government and open access policies.”

Canada’s restrictive information and public engagement policies limit the ability of government employees to adapt to rapid technological changes that have been shown to correlate with greater innovation and efficiency in the delivery of government services. For instance, US states that have embraced electronic communications have been shown to be a source “of potential administrative efficiencies and a mechanism for democratic participation” (McNeal et al., 2003).
Agency Objectivity

Unlike their American counterparts, Canadian government agencies did not remain neutral in policy discussions. In September 2011, shortly after the Tar Sands Action protests, Natural Resources Canada (NRC), a federal government agency responsible for managing Canada’s natural resources, published a “fact sheet” titled *Oil Sands: A strategic resource for Canada, North America and the global market* (see Appendix 11-A). The document sought to convince stakeholders to support Keystone XL based on economic and national security benefits similar to those promoted by some oil industry stakeholders. For instance, the document stated, “If the Keystone XL pipeline is approved, [oil sands employment] is expected to grow to 160,000 U.S. jobs per year” from the currently estimated 93,000 jobs. The document did not specify whether these were direct or “spin-off” jobs and it did not define the time period over which the jobs would be created. It cited a study by the Canadian Energy Research Institute titled *Economic Impacts of Staged Development of Oil Sands Projects in Alberta (2010-2035)*, which indicated that the projected jobs would be created by 2035. However, this “study” did not give details on the types of jobs created or the methodology used to determine the expected economic benefits of Keystone XL.

Natural Resources Canada also sought to promote the energy security benefits of Keystone XL, arguing that “[o]il sands can help the United States eliminate dependency on foreign oil.” The document named several countries often perceived as threats to American security interests, “such as Nigeria, Russia, Venezuela and Libya.”

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65 This statement is ironic considering that one of the key arguments made against Keystone XL by landowners was that a “foreign” company (TransCanada) should not have the right of eminent domain in the United States.
66 Such concerns conflicted with other Canadian government documents that promoted cooperation with countries listed as threats in the NRC “fact sheet.” For instance, Foreign Affairs and International Trade Canada
Lastly, the NRC sought to promote Canada’s commitment to sustainable energy. “Canada, along with the rest of the world, is working toward a long-term transition to a lower carbon economy by improving energy efficiency standards and increasing the use of alternative and renewable energy,” the agency noted. It argued that while Canada shifts “toward a lower carbon economy,” oil sands will provide “the energy we need in the near term.” Of course, this conflicted with the Canadian government’s decision to withdraw from the Kyoto Protocol and evidence that Canada had long been one of the worst performing industrial nations in carbon emissions.

Although Canadian documents reviewed for this study generally supported Keystone XL, not all Canadian policymakers favored the pipeline. Some Liberal opposition members of parliament criticized the government’s job creation arguments for Keystone XL and other pipelines. For instance, in a November 27, 2011 senate debate on the Income Tax Act, Senator Grant Mitchell of Edmonton, Alberta worried about the effect of Keystone XL protests on Canada’s global image. “That is a fundamental restructuring about the way the world will view our product.” Later in the debate, he acknowledged that pipelines “create lots of jobs,” but wondered “how many jobs is climate change killing?”

Lots of good jobs were created by the energy projects, thankfully, but how many jobs have been killed? Go talk to the fisheries on the east and west coasts. Go talk to the farmers who are being hit by drought and floods. Go talk to the forestry industry that is seeing its resources devastated by the pine beetle and other pests and so on.

Social Media Strategies

Canadian government employees expressed similar frustration as their American counterparts over restrictions on social media use. One Canadian consular official based in the United States explained that to post something as simple as an event announcement on Twitter would require official approval from senior level bureaucrats in Ottawa.

This observation was independently confirmed by Clarke (2012), who found that “a concern for accountability is at play in the long and cumbersome approval processes applied to social media communication.”

As one interviewee noted, governments feel that they are held to a higher standard than other social media users, and must be more thoughtful and careful about their use of these tools as a result. Accordingly, the government must ensure that its activity on social media complies with a suite of policies that help the government responsibly and ethically deliver its services to the public. (Clarke, 2012)

When the author discussed this issue with former Deputy Prime Minister of Canada John Manley, who currently serves as CEO of the Canadian Council of Chief Executives, Manley said that he saw social media as an informational tool, and that private enterprise needs to become more engaged in “running blocking positions” for politicians, who are limited in what they can say because of the need for reelection. Manley advocates granting TransCanada’s Keystone XL permit. Furthermore, he saw all forms of cross-border barriers as “a complete waste” of government resources.67

67 After the 9/11 terrorist attacks, John Manley became responsible for overseeing Canadian border security and anti-terrorist intelligence. He designed the NEXUS border security program and has since worked toward greater integration between Canada and the United States.
Manley seemed to suggest that the restrictions placed on government employees made them less equipped to directly engage stakeholders. Therefore, businesses need to take on this role and be proactive in communicating with citizens. Businesses are also better able to respond to new developments without having to wait for approval from senior level bureaucrats. In the current study, the inability of the government to respond to stakeholder discussions appeared to give the environmental movement an advantage, despite the vast economic resources available to the Canadian government and the Canadian oil industry.

The Canadian government’s concern over the ability of anti-pipeline protesters to influence U.S. and international policies and public opinion could be seen in the November 30, 2011 proceedings of the Senate Standing Committee on Energy, the Environment, and Natural Resources. The committee called on Andrew Leach, Associate Professor, Natural Resources, Energy, and Environment, University of Alberta, to provide expert testimony on the carbon emissions impact of Keystone XL and related projects. Leach expressed concern over environmentalist claims that tar sands were “game over” for the environment, a phrase that came to the fore as a direct result of Tar Sands Action social media campaign.

NASA scientist James Hansen [claims] that somehow the oil sands in and of themselves are game over for the climate, and if we simply get into extracting oil sands, then all hope is lost. None of these things is actually true, but perception on these frames has become a reality. (Leach, 2011)

Leach also gave a frank and obvious reason why the Canadian government will likely never agree to environmentalist demands to cease bitumen development. “I think the example I could draw would be James Hansen’s statements on oil sands, that one of the ways to meet global greenhouse gas targets is by leaving the oil sands in the ground, and we have all heard that conversation,” he explained.
I think when you look north of here, depending how much value you put on the reserves in the ground, you are looking at value that – since it is Alberta Crown-owned, I will be careful here – is probably between $500,000 and $1 million of wealth for every single man, woman and child in the province of Alberta of the original oil in the ground, and we are being told, well, leave that in the ground because it is new. Not because it is low-value, not because of anything else, just because it is just new. (Leach, 2011)

This position was repeated by Alex Pourbaix at the NECBC conference in November 2012 when he told the audience that the reason environmentalists were targeting US policymakers was because Canadians would never listen to their arguments given the economic value that was at stake.

The Canadian senate took a less favorable stance toward the testimony of Ed Whittinghan, Executive Director of the Pembina Institute, a research institute that has been critical of Canadian energy policy. Canada has “a mentality where we throw the shovels into the back of the pickup truck and drive as fast as we can to unearth the resource,” Whittinghan noted, to which conservative Senator Richard Neufeld responded “I am darn proud of what we do in Canada,” noting that “Canada’s electricity generation system is about 70 per cent clean.”

Later in the session, the Senate Committee heard from Brenda Kenny, President and Chief Executive Officer of the Canadian Energy Pipeline Association, who responded to concerns that Canada’s declining international reputation was costing Canada “a lot of money.” Kenny believed that the problem was not Canada’s reputation per se, but the growing influence of climate change activists. “[I]t is really hard to decipher what part of that is Canadian reputation and what part of that is misguided mathematics on actual emissions,” she said. “What is unfortunate is that there has been a campaign of misinformation about what Canadian oil sands represent.”
Trade Promotion

In an extension of its public relations and lobbying campaigns, the Canadian government sponsored a number of trade related venues where it could promote its agenda to American business leaders and policymakers.

In November 2012, the author attended one of these events, the NECBC’s Energy Trade and Technology Conference. Keystone XL was a main topic at this international trade conference, which was sponsored by the Canadian consulate in Boston and attended by New England lawmakers, business executives, attorneys, and government officials. Among those in attendance was former governor of Maine John Baldacci, whose state has become embroiled in controversy after Enbridge Corporation announced plans to install a bitumen pipeline from Alberta to Portland, Maine.

Bob Good, president of the New England-Canada Business Council, opened the conference by praising oil exploration and development in Canada. He noted that Alberta oil sands development requires products provided by 65 suppliers in New England and that 75 percent of the investment in Canadian oil sands is American. He further noted the benefits of greater energy security when energy demand is projected to increase by 35 percent and help create 600,000 US jobs.

In the wake of the drought that gripped the Midwest in the summer of 2012 and the devastation wreaked by Hurricane Sandy, nobody would suggest that climate change was not real, even among oil industry participants. Instead, they increasingly touted the industry’s green credentials. For instance, Good argued that Canada is at the forefront of clean energy. It is the
third largest producer of hydroelectric power in the world, which helps to decrease greenhouse gases. He further noted that TransCanada has the largest solar transmission in New England and the industry has increased its investment in wind farms.

In sum, the Canadian government approached the issues differently than the API and other American oil industry stakeholders. Although the government promoted the same frames of jobs, energy security, and economic benefits, it did not directly attack the science of climate change.

**Conclusion**

Although the author had a relatively limited amount of data on Canadian government discussions of Keystone XL, the Canadian government is an important and active stakeholder that must be considered in any study on Keystone XL and Canadian oil production. Instead of identifying discussion trends and the potential impact of activist frames, the author sought to explain unique roles of Canadian policymakers and government agencies.

Canadian politicians, like their American counterparts, reacted strongly to the Tar Sands Action campaign. The loudest voices were from pipeline proponents, who, like the Republican Party in the United States, touted the economic and security benefits of Keystone XL. The Canadian government also seemed eager to protect its international image, but appeared conflicted over its interests in the petroleum industry and its declining reputation abroad. In some cases, the government sought to emphasize Canada’s commitment to alternative energy, but this did not appear to have much impact on international opinion, as the European parliament
introduced legislation to limit imports of Canadian bitumen and international newspapers continued to criticize Canada’s environmental record.

Canada’s voice was not united however. Some members of Canada’s opposition parties took critical positions toward Keystone XL, called into doubt economic benefits, and raised concerns about climate change and oil spills. Canadians were also more concerned about the Enbridge pipeline spill in Michigan than their American counterparts primarily because Enbridge proposed to build a new pipeline through Canada’s ecologically diverse west coast rainforest.

Unlike the US State Department and other American government agencies, Canadian government agencies did not remain neutral in the debate. Instead, Natural Resources Canada took positions not unlike industry associations like the Chamber of Commerce and API, aggressively promoting Keystone XL’s economic and security benefits. Canadian agency efforts also appeared to be in direct response to the anti-pipeline movement, as the most strongly worded policy documents were published immediately following the Tar Sands Action protests in August 2011.

However, the fact that government agencies took policy positions does not mean that Canadian agencies were freer to engage in public discussions than American agencies. Canadian officials expressed the same reserve as Americans over participating in discussions of controversial issues, preferring instead to take direction from their superiors. The results of the current study suggest that Canadian agencies are, in fact, less independent than American agencies from their respective legislatures. Although the Republican Party held the majority of seats in Congress, US agencies expressed opinions that conflicted with party doctrine, whereas in
Canada, agency documents often reflected majority party positions on policy issues related to Keystone XL.

Although the current study was limited to Keystone XL, other comparative studies of U.S. and Canadian government policies have uncovered similar transparency issues with Canadian government departments, such as health care (Wilson and Keelan, 2008, Attaran et al., 2008) and fiscal oversight (Hagemann, 2010).

The current study did not directly examine agency organizational structure or independence. Based on the fact that agency documents often reflected the views of parliament and the oil industry, one may reasonably assume that the NRC lacked the independence to make informed independent analysis and statements free of political interference. “[I]ndependence from political influence requires adequate firewalls, both in the staffing of the agency and in the latter’s everyday operations” (Hagemann, 2010) a condition that appears absent in Canadian environmental policy and regulation.

Finally, Canadian government agencies, like its American counterparts, were generally excluded from participation due to restrictions on public discussion and social media use by government employees. Consequently, the ability of Canadian government agencies to influence policy and public opinion appeared to be severely limited.
Chapter 12: Conclusion

The current study observed how climate change activists successfully created a diverse social movement to nominally oppose a major pipeline project and, through that effort, challenge the Canadian petroleum industry as a major contributor to climate change. The study cannot state that diverse SMOs will always be more successful than homogenous SMOs, nor can one conclude that the framing strategies examined in the current study will be transferrable to other policy campaigns. However, research has shown that under the right circumstances, diversity can lead to greater innovation and organizational performance (DiStefano and Maznevski, 2000). The Tar Sands Action campaign exemplified circumstances under which diversity can be leveraged to facilitate favorable policy outcomes and create public awareness of important issues.

The Keystone XL controversy was ideal for this type of study for several reasons. The diversity of stakeholders provides insight into power struggles in multi-stakeholder contests. It was also one of the first major struggles in which social movements relied heavily on social media to mobilize support, build alliances, and counteract political and financial power of industry stakeholders. More importantly, this research fills a gap in the academic literature pertaining to tactics employed in framing contests. Framing contests have been examined at length in previous studies, but these have a tendency to focus on “factors that tend to shape the outcomes of such contests, other than stating or implying the tautology that those who won employed the most resonant framings” (Benford and Snow, 2000).

Often, heterogeneous SMOs fail to leverage the diversity of participants, because powerful stakeholders dominate the movement by suppressing the frames of less powerful allies.
(Benford and Snow, 2000). To date, Tar Sands Action has avoided the destructive tendencies that often plague diverse organizations. The diversity of SMO frames allowed pipeline opponents to maintain media interest and put pressure on industry and policymakers longer than might have been possible with a single frame strategy.

More remarkable was the ability of environmentalists to include ranchers in a campaign that sought to broadly influence climate change policy and to undermine the power of the oil industry in policymaking. Ranchers tend to be older, conservative, and skeptical of climate change. Yet their contribution was instrumental in delaying approval of Keystone XL. Part of the success of this unlikely coalition was due to the ability of Tar Sands Action to create a unified message that all anti-pipeline stakeholders could agree on, namely that “tar sands” are “dirty” and harmful. The “dirty tar sands” frame encompassed the grievances of the various stakeholders, including health concerns, oil spills, water quality, agricultural impacts, eminent domain issues, and climate change. Therefore, although Tar Sands Action represented diverse interests, it created a unified message that allowed stakeholders to rally around a single cause, the Keystone XL pipeline.

The Tar Sands Action campaign is not without precedent. In the 1970s, American indigenous tribes, ranchers, fishers, and environmentalists formed an alliance to fight a perceived threat from mining companies. Their combined efforts helped to bring about new legislation to restrict the damage caused by mining companies, to prevent harm to important archeological sites, and to make mining companies responsible for reclamation (Grossman, 2005). Although the success of the anti-mining movement has not yet been traced to DFS implementation, the
existence of similarly effective heterogeneous social movements suggests that the value of stakeholder diversity in SMO campaigns is not limited to the Keystone XL campaign.  

Oil industry stakeholders also presented varied frames, but because the stakeholders were less diverse and the frames were presented simultaneously, they had limited success sustaining media interest. Industry stakeholders also appeared to lack the knowhow to effectively leverage social media to influence public perceptions.

Despite an initial willingness by 350.org to embrace the frames of other stakeholders, some internal frame struggles were evident. For instance, frames focused on indigenous health issues were minimized during the anti-Keystone campaign, partially because the Indigenous Environmental Network was willing to attach itself to more powerful climate frames. The suppression of non-climate frames also appeared to increase later in the campaign. This raises additional questions on the sustainability of DFS over longer time periods. It appears that DFS may be a shorter term strategy, particularly when stakeholders have conflicting values, political views, and cultures.

The climate movement was the clear winner from the Tar Sands Action campaign. By utilizing the momentum of anti-Keystone XL protests to draw attention to the impact of carbon emissions, 350.org sustained the movement even as some ranchers dropped out of the campaign after new, less risky, routes were proposed. By the end of the study, 350.org appeared to be moving closer to dominating the agenda. Given these trends, further research is warranted to determine whether diverse frames can be sustained as a longer term strategy within heterogeneous social movements.

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68 It may be possible to examine historical records of previously successful heterogeneous social movement campaigns to determine the role, if any, of sequential framing.
Summary of Findings

The ability of the Tar Sands Action campaign to quickly organize what was arguably the most significant new environmental movement of the 21st century surprised both its organizers and the oil industry. The campaign also demonstrated that some social media strategies are far more effective than others in disseminating information, organizing supporters, and influencing news media coverage (see Appendix 12-A).

Gamson’s (1995) success criteria were examined in depth to help explain the evolution of various frames associated with Keystone XL and how some frames came to dominate the discourse. For example, the oil industry sought to create emotional urgency and build grassroots support by focusing on job creation during a time of economic crisis (Gasser, 2012). As a result, State Department hearings saw unemployed construction workers give highly charged testimony that portrayed the Keystone pipeline as a potential salvation from economic hardship.

By focusing on Keystone XL, rather than the diffuse and seemingly intractable problem of global warming, Tar Sands Action created a symbol of destructive energy policies and provided clear objectives (prevent a permit). Agency could also be seen in the blog postings, emails, and social media content of pipeline opponents who extolled each small win and provided positive reinforcement and hope to participants. At the same time, targeting Keystone solidified the movement’s identity by demonizing oil executives and their political supporters. As one environmentalist put it, “None of us can allow the plutocrats to hail the ‘Golden calf’ and make big money… at the cost of the sufferings inflicted on human beings and wildlife alike” (Cerclay, 2012).
The ability of stakeholders to address specific perceived harms is also an important part of framing contests. Benford and Snow (2000) refer to this ability to propose realistic and achievable solutions as “prognostic framing.” Although pipeline opponents sought the same immediate goal – the denial of a permit – some of the perceived harms were more easily addressed than others. For instance, the concerns of ranchers could be addressed by moving the pipeline away from sensitive watersheds or building the pipeline along existing pipeline routes.

Climate change activists had more wide-ranging objectives aimed at preventing bitumen from reaching markets by choking supplies at the source. This was part of a broader policy campaign for renewable energy and carbon mitigation (Auerswald et al., 2011). The oil industry understood that nothing short of the demise of the fossil fuel trade would prove satisfactory under the dire scenarios currently proposed by many climatologists (cf. Schneider, 1996, Sprat and Sutton, 2008). Industry stakeholders therefore saw negotiation as futile, because once the Keystone XL controversy is addressed, activists will merely direct their attention to other projects and addressing Keystone would simply cause the problem to shift somewhere else.

Nevertheless, the apparent unwillingness of institutional elites to negotiate an end to destructive fossil fuel policies does not mean that corporate-level policy changes should be dismissed. In fact, early evidence suggests that successful climate policy campaigns aimed at single projects or corporations may achieve industry-wide spillover effects (Reid and Toffel, 2009). For instance, TransCanada is one of a string of oil companies to invest in solar technology after spending $452.5 million on solar projects in Ontario, Canada. The oil industry’s ability to compete in alternative energy is debatable, however, given that several leading oil companies have chosen to divest their alternative energy portfolios (Pinkse and van den Buuse, 2010).
**Discussion**

At the beginning of the study, the author postulated that framing of issues by traditional television and print news media directly influences the way issues are discussed by policymakers and the general public. In fact, there was a nearly perfect *negative* correlation between media framing and policymaker discussions. This is very meaningful in the sense that policymakers clearly took notice of the Tar Sands Action campaign, but instead of adopting the frames advanced by activists, Republican lawmakers attempted to suppress them with counterarguments in favor of the pipeline. Meanwhile, Democratic lawmakers who were against the pipeline prior to the Tar Sands Action movement did not increase their opposition to the pipeline. Aside from a yearend report criticizing the environmental record of House Republicans, anti-pipeline comments by Democrats remained at or near the same level before and after the campaign.

Government agency documents did not appear to be influenced by social media content or direct action. Discussions of issues ranging from wildlife impacts, spill prevention, and climate change were consistent throughout. For example, the EPA examined climate impacts prior to the participation of environmentalists and continued to discuss climate concerns at the same level when 350.org became involved in the dispute.

Overall, government agency administrators and employees avoided policy discussions whenever possible. Based on the author’s observations of policy documents and discussions with government officials, two reasons for this lack of policy discussion were identified. First, government agencies were overworked. A higher number of accidents, stricter regulations, and a large quantity of new construction permits taxed the limited resources of investigators and
regulatory agencies. More importantly, government employees were generally discouraged from giving opinions in matters of policy, particularly through social media. Only the most senior government officials were permitted to engage in social media in any meaningful way.

In short, a firewall exists between government and the general public that limited the influence of social movements and excluded government agencies from engaging in online discussions. In the United States, a high level of transparency allowed non-government stakeholders to access agency documents, which allowed agencies to indirectly influence online discussions. For instance, news media reports that were initially supportive of economic arguments reversed course after the State Department published a report that called into question the economic claims of pipeline proponents. In Canada, a relative lack of transparency meant that Canadian government agencies were generally excluded (directly and indirectly) from online policy discussions related to Keystone XL.

The current study was unable to determine if policymaker reaction that began in late 2011 was in response to the social media campaign, news media coverage, or direct action that occurred in late August. Most likely, a combination of factors led Republican lawmakers to adopt Keystone XL as a campaign issue. Nevertheless, the Washington protests appeared to be a catalyst that prompted oil companies and lawmakers to become more active in pipeline-related policy discussions. Given that the protests could not have been organized without the leadership and new media skills of 350.org and that news media framing correlated strongly with the Tar Sands Action campaign, one can say with some confidence that the campaign strongly influenced policymakers.
Nothing in the study suggests that the way government interacts with activist stakeholders was unique to the Keystone XL controversy. Therefore, it appears that social movements are more likely to have an impact on news media coverage and policymaker discussion than on government agencies. For instance, neither side in the controversy appeared to influence government bureaucrats in the State Department and other federal government agencies. To influence agencies to act immediately on important issues, SMOs need to convince lawmakers to enact new regulations directing agency activities in ways that are consistent with desired outcomes. However, the study was limited to looking at immediate changes in the way issues are framed and did not account for potential longer term influences.

**Media and Public Opinion**

At the beginning of the study, the author postulated that external events, such as oil spills, increase public acceptance of activist frames. For instance, during the 1970s a series of accidents increased public concern over the environment, which in turn facilitated new environmental legislation. The current study has shown that various high profile accidents, such as the Deepwater Horizon explosion, have increased public mistrust of the oil industry. However, no specific events connected with the Keystone XL pipeline, such as the Enbridge pipeline spill near Marshall, Michigan and a number of smaller spills along the original Keystone pipeline, appeared to have any noticeable impact on public acceptance of anti-pipeline frames. An
independent poll that showed overall public opinion favoring the pipeline lends further support to the conclusion that pipeline accidents did not have the expected impact.69

On the other hand, data used in this study was collected prior to the extreme drought that occurred in the Midwestern states during the summer of 2012 and wreaked devastation on the Northeastern states by Hurricane Sandy. In the wake of Sandy, Tollefson (2012) observed that lawmakers were “[s]obered by climate scientists’ predictions that a warming atmosphere and rising sea levels are likely to bring large storms to the US east coast with increasing frequency.” Nevertheless, the ephemeral nature of news media coverage will likely mean that Sandy’s impact will soon be forgotten by all but those directly impacted by the disaster. It seems likely that sustained interest in climate change will require a constant stream of disasters to maintain news media interest, influence public opinion, and bring about meaningful legislative action. For the time being, climate change appears to be less important than other issues.

The extreme weather events that impacted the United States in 2012 may nevertheless have benefited the anti-pipeline movement by sustaining public and policymaker interest in the climate effects of bitumen development. Chong and Druckman (2013) note that “[a]lthough time generally erodes the effects of framing, the rate of decay varies according to the strength of

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69 A Rasmussen Reports telephone poll found that the majority of Americans had a favorable opinion of the pipeline and believed that the economic benefits outweighed potential environmental harms. The January 19-20, 2012 automated telephone poll of 1,000 registered voters asked:

1. How closely have you followed recent news reports about a major oil pipeline planned to run from Canada to Texas?
2. Do you strongly favor, somewhat favor, somewhat oppose, or strongly oppose building the Keystone XL pipeline?
3. If the Keystone XL pipeline is built, will that be good for the U.S. economy, bad for the U.S. economy, or have no impact on the economy?
4. Which is more likely to create more jobs – building the Keystone XL pipeline or cutting payroll taxes and extending unemployment benefits?
5. Generally speaking, is it more important to create new jobs or protect the environment?

Source: Rasmussen Reports
people’s attitudes —attitudes that are stronger, by definition, last longer and are more resistant to change and persuasion.” Also, risk perception studies have demonstrated that linking frames to specific events like hurricanes are more effective than advertising potential future threats from climate change, regardless of how dire the threat may be (Kunreuther and Weber, 2012). For frames to be effective, they need to be “congruent or resonant” with personal everyday experiences (Benford and Snow, 2000), and hurricanes and droughts are far more real to average citizens than hypothetical sea level changes or melting ice caps.

The Role of Social Media

A careful analysis of policy documents revealed that social media alone has a very limited impact. On the other hand, the current study supports previous research showing that social media can be an effective tool in “protest mobilization” (Breuer et al., 2012). In this case, Tar Sands Action took less than three months to mobilize thousands of environmentalists to participate in civil disobedience.

Additionally, social media is only effective when content sources are perceived as credible and stakeholders align themselves with established organizations that build support and lend credibility to their message. Organizations like 350.org, the Sierra Club, Bold Nebraska, the API, and the Pipeline Trust facilitated network building and connected stakeholders to journalists and policymakers. Without the support of established organizations, social media is unlikely to be effective. There is simply too much noise in cyberspace for individual voices to be heard.

When social media is used to mobilize supporters to participate in direct action, it correlates strongly with media coverage of relevant topics and policymaker discussions of
stakeholder concerns. Although news media coverage proved very short-lived, social media discussion correlated with longer term changes in the language that media used to discuss Keystone XL. Policymaker discussions of stakeholder issues were also sustained longer than corresponding media coverage. However, restrictions on social media use limited the ability of government and industry employees to influence social media discussions.

The Role of Direct Action

Another hypothesis developed at the beginning of this study was that social media influences policy framing indirectly through its influence on traditional media. This hypothesis was confirmed when lawmakers and the oil industry mobilized support for TransCanada in response to civil disobedience involving the arrests of 1,000 protesters in Washington, DC during the last week of August 2011. Civil disobedience on this scale would have been nearly impossible without social media. Moreover, Keystone XL concerns were all but ignored until traditional media began covering the high profile arrests of Hollywood actors, scientists, and high profile activists.

Finally, the arrests galvanized environmentalists to continue working on the issue. When the author spoke to protesters who were arrested in Washington, they saw their arrests as a badge of honor. Arrestees also appeared to win respect from other climate change activists.

Ultimately, protests drew public attention to issues that had long frustrated stakeholders, such as the potential impact on the Nebraska Sandhills. Given these findings, one can reasonably conclude that social media alone is unlikely to have much impact on policy. However, when used to create newsworthy stories through direct action, social media has a strong indirect
influence on policymakers. For instance, the campaign caused many lawmakers to voice support for oil interests and promote the benefits of Keystone XL, and led to House and Senate bills in support of the pipeline.

**Amplification and Credibility**

Both sides of the controversy exaggerated the harms and benefits of Keystone XL. Environmentalists claimed that tar sands produced more greenhouse gases than conventional oil. Although this was true over the product life cycle, the pipeline would have reduced the carbon impact by eliminating carbon intensive modes of transportation, such as rail and truck. They also claimed that the pipeline would increase the cost of fuel. Again, this was a distortion of the truth that was based on the fact that bitumen sold at a discount because it was landlocked. Alleviating bottlenecks would increase the value of bitumen, but it would not affect overall gasoline prices, which are set by global oil prices and refining capacity. It might result in a slight increase in prices in the Midwestern US, but even regional effects would likely be minimal.

Similarly, the oil industry exaggerated the economic and job creation benefits of Keystone XL. For instance, the oil industry claimed that Keystone XL would create 118,000 spin off jobs, when in fact it would create 118,000 person year jobs over a project lifespan of 100 years, a questionable assumption in itself. If one were to convert that number into actual jobs and shorten the lifespan of the project to a more reasonable 50 years, Keystone XL would at most create 6,000 spin off jobs.\(^{70}\)

\(^{70}\) It is important to note that these are not *net* jobs, but project-specific jobs. In terms of net jobs created, the State Department concluded that Keystone XL would not create *any* new jobs (see discussion below).
The industry also attempted to portray pipelines as safe at a time when government investigators were being stretched to the limit in their ability to investigate catastrophic accidents. Oil industry executives and government regulators expressed great concern over the increasing number of disastrous and sometimes fatal accidents that caused irreversible environmental damage and impacted the quality of life of residents living near accident zones.

Although pipelines were very safe when regularly maintained and operated according to recommended specifications, human error, cost cutting, and regulatory violations frequently undermined safety protocols. For example, the Enbridge spill was caused by falsified maintenance records that misclassified serious cracks as micro-fissures and overstated pipe strength. Moreover, control room operators ignored alarms and shut-down protocols and the company failed to notify first responders about the presence of pipelines. If Enbridge had followed existing regulations, the accident would not have occurred. Nevertheless, despite what the Department of Transportation referred to as a “culture of deviance,” Enbridge continues to operate pipelines in Canada and the United States.

Privately, industry executives admitted that safety has increasingly been undermined by irresponsible behavior. At the 2012 API Pipeline Conference, Michael Koby, Enbridge Director of Environment, Health, and Safety, explained some of the challenges he faced in trying to encourage safety in the field. In 23 years, Enbridge went without a single fatality, and then over a period of six months, the company had three fatalities in separate incidents. He blamed a culture of complacency. People with many years of experience become accustomed to doing jobs in a certain way. This instills a false sense of security, in which very experienced people are no longer afraid of workplace safety risks. This, in turn, leads to shortcuts that cause accidents. He
noted that implementation of safety procedures by email was the least effective means, since many people simply ignored email directives, but he seemed unsure how to ensure field compliance with company safety procedures. 

Until the human element can be removed from the equation, pipelines will never be as safe as the industry claims. More importantly, new regulations will not provide solutions to this growing problem if operators continue to ignore them. Perhaps a more effective step would be to revoke all existing and future permits by operators with poor safety records. These licenses can then be transferred or sold to operators that have demonstrated competence in preventing accidents and responding quickly to spills. As long as companies like Enbridge continue to win new permits, pipelines will continue to pose a serious threat to people and the environment, despite industry assurances to the contrary. 

Although some news media outlets challenged stakeholder exaggerations, reporters more frequently repeated what was told to them without properly verifying the facts. Social media helped to perpetuate myths on both sides, long after they were debunked, because stakeholders frequently provided links to old news stories that supported their points of view. Social media thus helps to keep specious stories alive when they would have long been forgotten in the pre-Internet era. This ability of social media to propagate misinformation encourages stakeholders to continue distorting the truth. 

Industry executives seemed more concerned than environmentalists about the impact that exaggerated claims might have on credibility. Lobbyists and industry associations also appeared less constrained by public credibility than the companies they represent, perhaps due to the fact that lawmakers often preserve, or in some cases further distort, false information. Long after the
US State Department determined that Keystone XL would not create any long term jobs, numerous industry associations and lobbyists continued to urge President Obama to approve Keystone XL based on dubious economic benefits. In December 2012 alone, the US Chamber of Commerce, the API, the Platte Institute for Economic Research, the National Association of Manufacturers, FreedomWorks, and other organizations linked to oil interests issued press releases or other official documents perpetuating various economic exaggerations.

Many Republican lawmakers initially repeated the economic figures supplied to them by the API and TransCanada. However, once the State Department debunked these figures, lawmakers who supported Keystone XL became more careful. A search of government press releases reveals that Republican lawmakers no longer repeated the industry’s jobs claims after the State Department issued its report in January 2012. Although they continued to urge the President to issue a permit to TransCanada based on economic benefits, they were purposely vague about the numbers. For instance, a bipartisan November 16, 2012 letter addressed to President Obama and signed by 16 US senators stated,

Nothing has changed about the thousands of jobs that Keystone XL will create. Nothing has changed about the energy security to be gained through an important addition to the existing pipeline network built with sound environmental stewardship and the best modern technology. Nothing has changed about the security to be gained from using more fuel produced at home and by a close and stable ally. And nothing has changed about the need for America to remain a place where businesses can still build things. (Voge, 2012)

Of course, something had changed. This press release, like others issued after January 2012, evades conversation on how many jobs would be created and whether they are direct jobs or “spin-off” jobs.
Pipeline proponents likewise avoided discussion about net jobs created. For instance, if the pipeline is not built, new jobs would be created in other projects that would be required in order to supply the country’s energy needs. These could be alternative energy jobs, such as those advocated by environmentalists, they could be jobs in other fossil fuel projects, such as coal or natural gas, or they could be jobs in other modes of bitumen transportation, such as trucking and rail.

News media discussions of such complex issues were virtually absent, despite the wide availability of government agency reviews of the economic, environmental, and social impacts of Keystone XL. Similarly, social media posts rarely repeated the technical details in government reports, even when they reinforced stakeholder positions. Instead, stakeholders from both sides preferred sensational angles over a more balanced and accurate narrative, such as one finds in government reports. Consequently, neither social media posts nor news media articles could be trusted to provide readers with accurate analyses of the issues.

Government agencies seeking to add objectivity to policy discussions should focus on publishing information that avoids technical jargon and summarizes issues that are relevant to stakeholders and the public. For example, the State Department “Report to Congress Concerning the Presidential Permit Application of the Proposed Keystone XL Pipeline,” which changed the way news media discussed economic issues, was notable for its brevity (five pages), focus, and straightforward language. Although agencies were generally not permitted to participate directly in social media discussions, reports of this kind allow agencies to inject themselves in online discussions by encouraging news media and the general public to quote from or repost
government documents. For instance, the State Department’s report was reposted or quoted at least 400 times on Internet blogs, discussion boards, and social media sites.

DFS and the Issue Attention Cycle

Downs (1972) noted that the public’s “issue attention cycle” is very short. “Each of these problems suddenly leaps into prominence, remains there for a short time, and then – though still largely unresolved – gradually fades from the center of public attention.” In the 1970s, public concern about the environment grew because a continuing series of events kept the media focused on environmental concerns. “A whole catalogue of symptoms can be arrayed, including ubiquitous urban smog, greater proliferation of solid waste, oceanic oil spills, greater pollution of water supplies by DDT and other poisons, the threatened disappearance of many wildlife species, and the overcrowding of a variety of facilities from commuter expressways to National Parks” (Downs, 1972).

McCombs (1997) observed that the “attention span of journalism is even shorter than that of the public. Unless there is a constant stream of new information and new angles to feed the story, even the most important topics can disappear from the news agenda.” Such observations are consistent with the current findings, as news media coverage of Keystone XL frequently shifted focus, from climate change, to rancher concerns, to economic issues. Heterogeneous SMOs that use DFS are better able to take advantage of the issue attention cycle by creating new angles that help journalists retell existing stories in new ways.

Gamson et al. (1992) argue that this “preoccupation with immediacy results in a proliferation of fleeting, ephemeral images which have no ability to sustain any coherent
organizing frame to provide meaning over time.” DFS may be even more relevant in the age of electronic media, which has condensed the time period over which frames maintain their relevancy. Therefore, organizations hoping to influence media discourse through social media must either concentrate their efforts on achieving immediate objectives or find “new angles” to sustain media and public interest. Just as the environment continued to be the focus of public attention in the 1970s because readers were constantly fed new stories of environmental harm, Keystone XL has remained a topic of interest because journalists have uncovered new ways to tell the story.

Anti-pipeline stakeholders were able to keep the media focused on environmental frames longer by shifting focus from climate change to the risks to the Ogallala Aquifer.71 Various stakeholder organizations including the Sierra Club, Bold Nebraska, and the Indigenous Environmental Network appeared willing to allow Bill McKibben and Tar Sands Action to act as a single voice for anti-pipeline interests.

In contrast, the oil industry lacked a coordinated communications strategy and presented its various arguments at once. This not only reduced the amount of news coverage that might have been possible through a multistage approach, it diminished the overall impact of their message. For instance, the industry could have focused exclusively on perceived energy security benefits. Once media coverage of that topic was exhausted, the focus could shift to job creation. Finally, they could have focused on the economic benefits, such as property tax revenue.

In addition, oil and pipeline companies, lobbyists, and industry associations needed to agree upon a communications strategy that ensured a consistent message, rather than the

71 This appeared to be unintentional. There was no evidence that Tar Sands Action had a strategy to shift focus from climate change to rancher concerns.
patchwork of messages and images that the author witnessed while reviewing documents collected for this study. In fact, the industry’s approach was not unlike that of Bold Nebraska prior to joining the Tar Sands Action coalition – to publicize as much favorable information as possible and hope that some of it convinces policymakers to support their position.

**Stakeholder Alliances**

When social movements threaten the entrenched interests of elite society, the natural reaction is to defend those interests. Elite stakeholders may enter into uneasy alliances that serve the interests of some participants more than others. For example, TransCanada executives did not feel that the Republican Party’s efforts to champion Keystone XL was in their company’s best interests, as it risked backlash among Democrats and Canadians who were uneasy about the GOP’s social policies.

Stakeholders form alliances with groups that share their interests. In this case, ranchers benefited from their alliance with environmentalists, while TransCanada may have been harmed by its unintentional alliance with Republicans.

Alliances may have negative consequences when viewed as a threat by non-participating stakeholders. For example, ranchers and landowners in Nebraska initially received support from state Republicans, including Nebraska governor Heineman who asked President Obama “to disapprove TransCanada’s pending permit request” on the grounds that it would pass over ecologically sensitive regions of the state and that a spill could pose a threat to state agriculture. At the federal level however, Republican lawmakers focused on the perceived economic benefits of the pipeline, as championed by the oil industry. This likely caused the later shift in support by
state lawmakers away from ranchers. In a December 5, 2011 Fox Business interview, Governor Heineman had reversed his position to the point of requesting fast track approval without the additional time requested by federal agencies to review alternative routes. “There’s been enough study, [President Obama] just needs to make a decision,” said Heineman.

Republican lawmakers also attempted to narrow the focus to ranchers from the Nebraska Sandhills region. Nebraska Governor Dave Heineman claimed that “we’re the only state in this position. Everyone else has signed off on it.” This contradicted numerous State Department hearings in which ranchers all along the route expressed concerns about the potential impact of a “tar sands” spill. For instance, in October 2012, Texas ranchers sought a court order that would bring pipeline construction to a halt, and some Texas landowners were arrested for blocking construction crews from accessing their land. TransCanada Pipeline President Alex Pourbaix claimed that such landowner resistance was created by environmentalist fear mongering.

If you listen to the opponents, you would think this project is risky. The biggest challenge is when we go to regulators and we have to tell the truth, but our opponents are not so constrained. This isn’t about pipeline safety, but if they bring up safety, they can scare landowners. (Pourbaix, 2012)

Pourbaix’s view that environmentalists created new fears in the minds of ranchers contradicted the current study, which found that landowner concerns predated the involvement of environmentalists by several years. The Tar Sands Action campaign instead helped to coordinate landowner opposition and combine their interests with those of other stakeholders. For instance, most ranchers were older, lacked the technical savvy to participate in online discussions and were isolated geographically. The Tar Sands Action campaign gave a voice to these previously
voiceless stakeholders and perhaps created the impression among some elite stakeholders that landowner opposition was new.

**Social Media and Trust**

At the beginning of this study, the author hypothesized that protests and other face-to-face activities increase social media effectiveness by building trust, credibility, and commitment among activists. Tar Sands Action engaged in frequent online conversations to keep stakeholders connected and to maintain interest in the topic. Bill McKibben said “I love to tweet,” but he also used Facebook, email lists, news releases, websites, media interviews, speeches, and protests to get his climate message across. The oil industry was less effective in generating conversations because it lacked an integrated social media strategy to connect its message to online communities.

Kietzmann et al. (2011) observed that “[s]haring represents the extent to which users exchange, distribute, and receive content.” However, the sharing that occurred offline was often more powerful at trust building than online sharing, such as when Harvard University student activists held Tar Sands Patriots meetings in student dormitories and activists shared food, materials, and support.

In addition to participating in protests and other direct action, protesters engaged in a number of offline trust building activities that helped build “presence.” In August 2012, Occupy Boston and Tar Sands Patriots banded together to raise $500,000 in bail money for 20 activists who were arrested for blockading a strip mine in West Virginia. And when protests were held against the Trailblazer Pipeline in Maine, Tar Sands Patriots organized car pools to protest sites.
The petroleum industry attempted to build its community through conferences and other venues where executives, regulators, consultants, and lobbyists shared information and discussed strategies for dealing with important issues, such as accident prevention, dealing with environmental activists, and promoting favorable government policies. Although these events were important to the industry, they did not create the same sense of immediacy, urgency, and trust that the author witnessed in activist communities.

The effectiveness of Tar Sands Action came primarily from its relationship to an established network of environmentalists. Kietzmann et al. explain that such networks are often built around “an influential member” who essentially acts as a catalyst in mobilizing support for a cause. Keystone opponents were ineffective in influencing policy until 350.org, under the direction of Bill McKibben, created the Tar Sands Action coalitions and mobilized environmental activists who looked to McKibben for guidance.

**Long Term Influences**

The Tar Sands Action campaign appeared to have the most lasting influence on the language that news media used to discuss the issue. In the chapter on “oil sands” framing, the author demonstrated how terminology evolved over nearly a century, then underwent a remarkable shift following the Tar Sands Action campaign, and how this shift in language has been sustained even as the stories themselves have receded into the background.

Opponents to Keystone XL came from diverse backgrounds and had different reasons for opposing the pipeline. Yet, they all used the term “tar sands” when describing the potential harms, often with highly charged adjectives like “dirty,” “polluting,” and “deadly.” Although
Canadian news outlets and some conservative American newspapers continue to prefer the term “oil sands,” at the close of 2012, most news outlets used the term “tar sands” to refer to Alberta bitumen deposits. A Google news search on December 14, 2012 showed that 18 of the top 30 news articles using the term “oil sands” were Canadian newspapers such as the *Globe and Mail* and the *National Post*, and the other 12 were primarily oil and gas journals.

Heterogeneous social movements may benefit from developing predominant frames that link the various frames of participating stakeholders. Nothing in the term “tar sands” conflicted with health, environmental, and economic concerns of anti-pipeline activists. Activists not only used the term “tar sands” exclusively in communications, they used it as the title for their movement and in campaign slogans like “Dirty Tar Sands,” “Shut Down the Tar Sands,” “Scar Sands,” and “Tar Sands Kill.” This presented the media and public with a consistent message linking the term “tar sands” to bitumen extraction, transportation, and processing and may have permanently changed the public discourse. The tar sands message also linked various frames presented under the DFS strategy, creating a perception of unity that likely strengthened the positions of all participants.

Regardless of the final outcome of the Keystone XL controversy, the Tar Sands Action campaign should be viewed as a model for social movements seeking to build alliances among diverse stakeholders. It demonstrates that stakeholder diversity can give strength to social movements that would not be possible in isolation. Nevertheless, certain conditions need to be met for alliances to be effective. Tar Sands Action created frames that appealed to broad segments of society, it used DFS to maintain media coverage, it had strong central leadership, and it had an effective online and social media presence. In the end, Tar Sands Action will be
remembered for its ability to challenge elite stakeholders with vastly greater resources and influence.
Appendix 2-A: Institutional Review Board Approval Forms

NOTIFICATION OF IRB ACTION

Date: May 22, 2012
IRB #: 12-04-13
Principal Investigator(s): Gloria Barczak
David Wesley
Department: Law and Public Policy
College of Social Sciences and Humanities
Address: 202 Hayden Hall
Northeastern University
Title of Project: The Role of Social Media in Public Policy Framing: A Stakeholder Analysis of the Keystone XL Pipeline
Participating Sites: N/A
DHHS Review Category: Expedited #7
Exempt #4
Informed Consents: Two (2) consent forms – signed and unsigned versions

As per CFR 45.46.117(c)(2) Signed consent is being waived as the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required.
Monitoring Interval: 12 months

APPROVAL EXPIRATION DATE: MAY 21, 2013

Investigator's Responsibilities:
1. The informed consent form bearing the IRB approval stamp must be used when recruiting participants into the study.
2. The investigator must notify IRB immediately of unexpected adverse reactions, or new information that may alter our perception of the benefit-risk ratio.
3. Study procedures and files are subject to audit any time.
4. Any modifications of the protocol or the informed consent as the study progresses must be reviewed and approved by this committee prior to being instituted.
5. Continuing Review Approval for the proposal should be requested at least one month prior to the expiration date above.
6. This approval applies to the protection of human subjects only. It does not apply to any other university approvals that may be necessary.

C. Randall Colvin, Ph.D., Chair
Northeastern University Institutional Review Board

Nan C. Regina, Director
Human Subject Research Protection

Northeastern University FWA #4630
Northeastern University, School of Public Policy & Urban Affairs and College of Business Administration

Names of Investigators: Gloria Barczak and David Wesley

Title of Project: THE ROLE OF SOCIAL MEDIA IN PUBLIC POLICY FRAMING: A STAKEHOLDER ANALYSIS OF THE KEYSTONE XL PIPELINE

Request to Participate in Research

We would like to invite you to take part in a research project. The purpose of this research is to look at how social media and related technologies are used to form coalitions, frame issues and achieve desired policy objectives.

You must be at least 18 years old to be in this research project. The study will take place at...and will take about [range from 30 minutes to 120 minutes]. If you decide to take part in this study, we will ask you to answer questions about your organization's social media usage, strategy, objectives, and outcomes as they relate to the proposed Keystone XL pipeline.

There are no foreseeable risks or discomforts to you for taking part in this study.

There are no direct benefits to you for participating in the study. However, your answers may help us to learn more about the role of social media in the development of energy policy.

Your part in this study will be handled in a confidential manner and you will have the opportunity to review any direct quotes and other attributed comments that might identify you as a participant in this study. Any reports or publications based on this research will use primarily group data and will not identify you as being of this project without your prior consent.

The decision to participate in this research project is up to you. You do not have to participate and you can refuse to answer any question. Even if you begin the study, you may withdraw at any time.

You will not be paid for your participation in this study.

David Wesley is the person mainly responsible for the research:

David Wesley
Research Manager
College of Business Administration
Northeastern University
515 Huntington Avenue
Boston MA 02115-5500
Phone: (617) 373-5138
d.wesley@neu.edu

You can also contact Gloria Barczak, the Principal Investigator:

Gloria Barczak
Professor and Group Coordinator/Chair
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Northeastern University
Boston, MA 02115
617-373-5261
g.barczak@neu.edu

If you have any questions about your rights in this research, you may contact Nan C. Regina, Director, Human Subject Research Protection, 980 Renaissance Park, Northeastern University, Boston, MA 02115. Tel: 617.373.7570, Email: hsb@neu.edu. You may call anonymously if you wish.

I agree to take part in this research

Signature Date

Printed name of person above

Signature of person who explained the study to the participant above and obtained consent Date

Printed name of person above

APPROVED

NU IRB# 12-04-563
VALID 7/3/13
THROUGH 5/21/15
Dear.....

I am the research manager at Northeastern University's College of Business Administration in Boston, where for the past 12 years I have been working with leading organizations to investigate issues related to new technologies, global management, and corporate social responsibility. More details about my background and experience can be found on my Northeastern University profile page.

As part of doctoral dissertation in Law and Public Policy, I am collecting information on the role of social media in presenting viewpoints and facts about the Keystone XL pipeline and how social media has influenced key decisions and decision makers. I would like to interview leaders like yourself who are affected by the Keystone XL discussion to examine how your organization uses and responds to social media to inform the public, news media, and policymakers of your concerns. Finally, in addition to scholarly research, I am planning to write case studies that examine the [environmental, social, industry, etc.] point of view on challenges faced by your organization and its partners. These case studies may include general strategic issues in addition to social media usage.

I am particularly interested in meeting with you and/or other individuals in your organization who have played leading roles in deploying social media strategies for Keystone, as well as senior leaders who may provide additional context on the strategic importance of this issue.

I look forward to your suggestions on how I might best move forward in examining these issues from the perspective of your organization. I would also be happy to answer any questions you might have about my research, procedures, and objectives.

Regards,
David Wesley
Institute for Global Innovation Management,
Northeastern University
313 Hayden, 360 Huntington Avenue
Boston MA 02115-5000
Phone: (617) 373-5138
Northeastern University  
School of Public Policy & Urban Affairs and College of Business Administration  
Names of Investigators: Gloria Barczak and David Wesley  

Title of Project: THE ROLE OF SOCIAL MEDIA IN PUBLIC POLICY FRAMING: A STAKEHOLDER ANALYSIS OF THE KEYSTONE XL PIPELINE  

Request to Participate in Research  
We would like to invite you to take part in a research project. The purpose of this research is to look at how social media and related technologies are used to form coalitions, frame issues and achieve desired policy objectives.  

You must be at least 18 years old to be in this research project. The study will take place at [range from 20 minutes to 120 minutes.] If you decide to take part in this study, we will ask you to answer questions about your organization's social media usage, strategy, objectives, and outcomes as they relate to the proposed Keystone XL pipeline.  

There are no foreseeable risks or discomforts to you for taking part in this study.  

There are no direct benefits to you for participating in the study. However, your answers may help us to learn more about the role of social media in the development of energy policy.  

Your part in this study will be handled in a confidential manner. Only the researchers will know that you participated in this study. Any reports or publications based on this research will use primarily group data and will not identify you as being of this project.  

The decision to participate in this research project is up to you. You do not have to participate and you can refuse to answer any question. Even if you begin the study, you may withdraw at any time.  

You will not be paid for your participation in this study.  

David Wesley is the person mainly responsible for the research:  

David Wesley  
Research Manager  
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Phone: (617) 373-5138  
d.wesley@neu.edu  

You can also contact Gloria Barczak, the Principal Investigator:  

Gloria Barczak  
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If you have any questions about your rights in this research, you may contact Nan C. Regina, Director, Human Subject Research Protection, 900 Renaissance Park, Northeastern University, Boston, MA 02115. Tel: 617.373.7570, Email: irb@neu.edu. You may call anonymously if you wish. You may keep this form for yourself.  

Thank you.  

David Wesley
NOTIFICATION OF IRB ACTION

Date: April 25, 2013  IRB#: 12-04-13
Principal Investigator(s): Gloria Barczak  
David Wesley  
Department: School of Public Policy & Urban Affairs  
D’Amore-McKim School of Business  
Address: 202 Hayden Hall  
Northeastern University  
Title of Project: The Role of Social Media in Public Policy Framing: A Stakeholder Analysis of the Keystone XL Pipeline

STATUS: CONCLUDED

The Northeastern University IRB has closed the above mentioned project in accordance with your report in which you indicated the project has concluded as of January 7, 2013. If you would like to resume this project or re-analyze the data for a purpose unrelated to your original approval, you will need to seek approval for the new research.

Please contact The Office of Human Subject Research Protection at 617-373-4588, with any questions or concerns.

Nan C. Regina, Director  
Human Subject Research Protection

Northeastern University FWA #4630
Appendix 3-A: Partial List of Keystone XL Stakeholders

Businesses:
1. TransCanada Corporation
2. ConocoPhillips Company
3. ExxonMobil
4. Canadian Natural Resources Limited
5. Michels Corporation
6. Siemens Corporation
7. Caterpillar, Inc.
8. Marathon Oil Corporation
9. Shell Canada Services Limited
10. CRC-Evans Pipeline International
11. Westar Energy
12. US Pipeline, Inc.

Trade Associations:
1. Association of Oil Pipe Lines (AOPL)
2. Canadian Association of Petroleum Producers
3. Consumer Energy Alliance
4. Canadian Energy Research Institute (CERI)
5. American Petroleum Institute (API)
6. Texas Chemical Council (TCC)
7. Associated General Contractors South Dakota
8. America’s Energy Forum
10. Oklahoma Independent Petroleum Association

Regulatory Agencies:
1. US Department of Transportation (DoT)
   a. Pipeline and Hazardous Materials Safety Administration (PHMSA)
2. U.S. Environmental Protection Agency (EPA)
3. National Energy Board (NEB) Canada
4. Natural Resources Canada (Minister Joe Oliver, Member of Parliament for Eglinton–Lawrence (Ontario), Patricia Best, spokesperson)
5. U.S. State Department
6. U.S. Department of Energy
   a. Energy Information Administration
7. European Commission
8. State of Nebraska
9. United Nations (Maudie Barlow, National Chairperson of the Council of Canadians and Senior Advisor on Water)

Environmental Movements
1. Tar Sands Action
2. 350.org (Bill McKibben)
3. Bold Nebraska (Jane Kleeb, Ben Gotschall)
4. Friends of the Earth
5. Inside Climate News
6. Sierra Club
7. Natural Resources Defense Council (NRDC)
8. National Audubon Society, Inc. (David Yarnold)
9. Pipeline Safety Trust
10. Greenpeace (Melina Laboucan-Massimo)
11. Collective Heritage Institute (CHI) (Clayton Thomas-Muller)
12. Rainforest Action Network (Brant Olson)
13. Peaceful Uprising (Flore Bernard)
14. Earthworks
15. Energy Action Coalition, Power Shift
16. Peaceful Uprising (Tim DeChristopher)
17. Occupy Movement
18. Students for a Just and Stable Future
19. Moving Planet New England

Other:
1. University of Nebraska (ended sponsorship after fans booed advertisement during a Cornhuskers game) Issue focus: leaks
2. Ducks Unlimited (beneficiary of $1 million donation)
3. Communications, Energy and Paperworkers Union of Canada (wants refining done in Canada)
Appendix 3-B: Map of the Keystone Pipeline System

Appendix 3-C: EIS Process under the National Environmental Policy Act

1. Agency Identifies Need for Action

2. Are Environmental Effects Likely To Be Significant?
   YES

3. Significant Effects May or Will Occur

4. Notice of Intent To Prepare EIS

5. Public Scoping and Appropriate Public Involvement

6. Draft EIS Is Published

7. Public Review and Comment

8. Final EIS Is Published

9. Record of Decision

*Per Council on Environmental Quality regulations contained in 40 CFR § 1502.9(c), significant new circumstances or information relevant to environmental concerns or substantial changes in the proposed action that are relevant to environmental concerns may necessitate preparation of a supplemental EIS following either the draft or final EIS or the Record of Decision.

Source: (Geisel, 2012)
Appendix 4-A: Pipeline Spills in the United States

Source: Department of Transportation, Pipeline and Hazardous Materials Safety Administration

Appendix 4-B: Tar Sands Action Virtual Policy Network

keystone activism

Co-link Map Details
Author: David Dwork
Date: 6 May 2011
Title: Tar Sands Action Virtual Policy Network

Statistics:
Twitter Name: http://twitter.com/tarsofspencer
Number of Lists: 1
Lists from network (1 to 20):
1. tarsofspencer
2. 650.org
3. 9to5.org
4. nrg.org
5. greenpeace.org
6. earthjustice.org
7. greenpeace.org
8. 350.org
9. climateprogress.org
10. thebeatlethor.org
11. freethought.org
12. thebeatlethor.org
13. thebeatlethor.org
14. thebeatlethor.org
15. thebeatlethor.org
16. thebeatlethor.org
17. thebeatlethor.org
18. thebeatlethor.org
19. thebeatlethor.org
20. thebeatlethor.org

Legend:
- http://twitter.com/tarsofspencer

Nodes: 454
Links: 1122

Map generated from network data by the author 2011, Memorial University.
Appendix 6-A: Top search results for academic articles from 2011 and 2012

<table>
<thead>
<tr>
<th>Oil Sands</th>
<th>Tar Sands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil sands mining and reclamation cause massive loss of peatland and stored carbon - Proceedings of the National Acad Sciences, 2012</td>
<td>Tar sands row threatens Canada-EU trade deal: sources, 2012</td>
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<td>Why are caribou declining in the oil sands? - Frontiers in Ecology, 2012 - Eco Soc America</td>
<td>Climate change policy could make Keystone XL obsolete, 2012</td>
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<td>Fathead minnow (Pimephales promelas) reproduction is impaired in aged oil sands process-affected waters - Aquatic Toxicology, 2011</td>
<td>Vertical Targeting and Leakage in Carbon Policy - The American Economic Review, 2011</td>
</tr>
</tbody>
</table>

Source: Google Scholar

73 The top 10 search results sorted by topic relevance are provided for each term. Google calculates relevance based on the “text of each document, where it was published, who it was written by, as well as how often and how recently it has been cited in other scholarly literature.” (http://scholar.google.com/scholar/about.html Accessed July 19, 2012)
## Appendix 6-B: Top search results for academic articles from 2001 and 2002

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<tr>
<th>Oil Sands</th>
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<tr>
<td>Characterization of naphthenic acids in oil sands wastewaters by gas chromatography-mass spectrometry - Water research, 2002</td>
<td>Comparing Venezuelan and Canadian heavy oil and tar sands - Canadian International Petroleum Conference, 2001</td>
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<tr>
<td>Isolation and characterization of naphthenic acids from Athabasca oil sands tailings pond water - Chemosphere, 2002</td>
<td>High quality diesel via the Fischer–Tropsch process—a review - Journal of Chemical Technology and Biotechnology, 2002</td>
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<tr>
<td>Comparison of hydrodenitrogenation of basic and nonbasic nitrogen compounds present in oil sands derived heavy gas oil - Energy &amp; fuels, 2001</td>
<td>Upgrading Athabasca tar sand using toe-to-heel air injection - Journal of Canadian Petroleum Technology, 2002</td>
</tr>
<tr>
<td>Preliminary risk assessment of the wet landscape option for reclamation of oil sands mine tailings: bioassays with mature fine tailings pore water - Environmental Toxicology, 2001</td>
<td>Management of oil sands tailings - Petroleum science and Technology, 2002</td>
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<tr>
<td>Management of oil sands tailings - Petroleum science and Technology, 2002</td>
<td>Kinetics of hydrodesulfurization of heavy gas oil derived from oil-sands bitumen - Petroleum science and technology, 2002</td>
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<tr>
<td>Effects of oil sands effluent on cattail and clover: photosynthesis and the level of stress proteins - Environmental Pollution, 2001</td>
<td>The growth of the steam chamber during the early period of the UTF Phase B and Hangingstone Phase I projects - Journal of Canadian Petroleum, 2001</td>
</tr>
<tr>
<td>Isolation and characterization of psychrotrophic bacteria from oil-reservoir water and oil sands - Applied microbiology, 2001</td>
<td>Simultaneous hydrodesulfurization and hydrodeoxygenation: interactions between mercapto and methoxy groups present in the same or in separate molecules - Applied Catalysis A: General, 2001</td>
</tr>
<tr>
<td>Methanogenic potential of tailings samples from oil sands extraction plants - Canadian journal of microbiology, 2002</td>
<td>Energy conservation and storage systems - Energy, Exploration &amp; Exploitation, 2002</td>
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<tr>
<td>Kinetics of hydrodesulfurization of heavy gas oil derived from oil-sands bitumen</td>
<td>A plausible reaction pathway of asphaltene under ultrasound - Fuel processing technology, 2001</td>
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<tr>
<td>Petroleum science and technology, 2002</td>
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</tr>
</tbody>
</table>

*Source: Google Scholar*
Appendix 6-C: Sample of Top Results from Google Images Search of “Tar Sands”


http://worldpress.org/Americas/3552.cfm

http://understory.ran.org/2010/12/21/more-lies-on-midwestern-tar-sands-pipeline/

http://www.canadiangeographic.ca/magazine/jun08/feature_tar_sands.asp

http://members.greenpeace.org/blog/greenwashing/2008/12/19/images_of_tar_sands


Appendix 7-A: News Article in the Omaha World-Herald

Published Sep 17, 2010
Published Friday September 17, 2010

Midlands Voices: Supporters, critics debate TransCanada pipeline plan
By Francis Mool, Ph.D.

Jim Meekham

The writer, of Lincoln, is an environmental historian. He recently made the 4,620-mile trip to the tar sands area in Fort McMurray, Alberta, Canada.

"You can't say no to the pipeline without saying yes to alternatives."

For Dana Hovinka, executive director of the Nebraska Wildlife Federation, the major alternative to the proposed TransCanada Keystone XL crude oil pipeline across 288 miles of Nebraska is energy conservation. "We need conservation first because we waste so much of the energy we use," Hovinka said in a recent interview.

Robert Jones, TransCanada vice president and manager of the Keystone pipeline project, agrees with Hovinka. In an August interview in his Calgary, Alberta, Canada, office, Jones said it's taking generations for new technologies to advance alternative and renewable energies, "so the best thing is to conserve and recycle."

That harmony on conservation is probably the only thing the two men agree on regarding the controversial proposed 1,661-mile pipeline from a huge 13-million-barrels oil tank farm at Hardisty, Alberta, to a Nederland, Texas, delivery station near the Gulf of Mexico coast.

In all, the five phases of the Keystone pipeline system (some already completed and operating) would be 2,151 miles long, to provide Canadian tar sands oil to Midwestern (Pekoto, Ill.) and Gulf Coast terminals. The XL portion would cut through the Nebraska Sand Hills from the border at Keya Paha County, go over the Ogallala Aquifer, crossing several major rivers and streams, and end at Steele City, Neb., near the Kansas border.

One leg of the pipeline, completed and now operating, crosses the eastern portion of Nebraska.

Because the pipeline comes from Canada, final permits for construction must be approved by the U.S. State Department. Michael Stewart, a State energy officer, said last week that work on revising the Environmental Impact Statement (EIS) is ongoing and there is "no current timeline" on when it would be issued and which permits would be approved or disapproved.

A comment period for groups to provide testimony for or against the EIS has been extended past a July 2 deadline, after an appeal to the State Department by U.S. Sen. Ben Nelson.

The XL pipeline is controversial for a number of reasons, according to comments filed by the Nebraska Wildlife Federation.

The fragile Sand Hills are subject to flooding and plant disturbance during construction and operation, with a heated pipeline (to facilitate moving the heavy oil) drying the soil and a potential for spills exposing the pipeline over its 40-year life.
May 23, 2011

Tom Kirschenmann
Chief of Terrestrial Resources
South Dakota Dept. Game, Fish and Parks

Foss Building
523 E. Capitol
Pierre, South Dakota 57501

Re: Keystone XL pipeline construction near priority sage-grouse leks.

Dear Mr. Kirschenmann:

The Keystone XL project team (Keystone) would like to take this opportunity to thank your staff for meeting with Keystone Representatives on January 19, 2011 in Rapid City regarding the upcoming Keystone XL pipeline. The intention with this letter is to summarize responses to questions that were raised in the meeting and provide your agency with additional information regarding the Project and measures Keystone is proposing to minimize impacts to greater sage-grouse (sage-grouse).

The outline of Keystone’s meeting with South Dakota Department of Game, Fish and Parks (SDGFP) was determined by the letter received from Silka Kempena, Wildlife Biologist with SDGFP, on January 18, 2011. Primary topics of the meeting included: 1) the distinction between “historic” and “priority” leks; 2) the location and potential effect of Pump Station 16 (PS-16) on an active sage-grouse lek (Lek 8); 3) the location of pipe yards with respect to historic lek sites; 4) the dates of seasonal construction timing restrictions around active leks; 5) the size of seasonal construction restriction buffers around active leks; and 6) reclamation in sage-grouse habitat. We would like to summarize our understanding of these topics and provide further information as necessary.

**Topic 1: Distinction between “historic” and “priority” sage-grouse leks.**

Keystone understands that SDGFP has prioritized sage-grouse leks for survey and study based on those leks that support the greatest number of sage-grouse and where the most data are available. Jonathan Minton provided a table during the meeting detailing how Keystone has edited the sage grouse lek data provided by SDGFP to reduce duplicate locations of the same leks. The table included the identification numbers of all leks IDs combined into a single location. The revised shapefile has been provided to USFWS – South Dakota and Jonathan Minton offered to provide it to SDGFP.

In the course of the meeting it was described how Keystone completed aerial surveys in 2010 of all sage-grouse lek sites, both historic and priority, which were provided by SDGFP to Keystone. This includes survey of lek sites that are associated with ancillary facilities, such as pipe yards, that are not necessarily along our proposed right-of-way. The results of the 2010 survey, and the 2009 survey that
shouldn't all leks be protected?
Grouse will use leks used in the past.

was completed in a more limited area, have been provided to SDGFP. Keystone repeated aerial surveys
for sage-grouse in 2011 and coordinated our survey efforts with SDGFP surveys with Loren Dahl
(SDGFP). The results of these surveys will be available to SDGFP by September 2011.

SDGFP staff questioned if Keystone would implement measures to minimize the effect of pipeline
construction on sage-grouse wherever sage-grouse were located during survey efforts, not simply around
priority leks. It is Keystone’s preference to implement minimization measures around lek sites where
birds are present in the year of construction rather than simply around a priority lek site if birds are not
using the lek site in the year of construction.

Topic 2: The location and potential effect of Pump Station 16 (PS-16) on an active sage-grouse lek
(Lek 8/Squaw Creek lek)

Substantial discussion was devoted to this topic during the meeting. Keystone noted that the current
proposed location of PS-16 has been moved away from Lek 8 as far as possible given engineering and
land acquisition constraints. Prior to relocation, PS-16 was within 0.25 miles of Lek 8. The new
proposed PS-16 location is 1.2 miles to the west of Lek 8 on the other side of a low ridge that prevents
visibility of PS-16 from Lek 8. This location is as far as PS-16 can be moved from the original
engineered location given pipeline hydraulic and land acquisition constraints.

SDGFP staff were concerned that noise from PS-16 could negatively affect sage-grouse. Keystone
appreciates this concern and has completed noise modeling for PS-16 and other pump stations. Data
from this modeling indicates that noise from PS-16 at Lek 8 would be about 39 dBA, the equivalent of
typical library sounds. These data are included as Appendix D of the An Approach for Implementing
Mitigation Measures to Minimize the Effects of Construction and Operation of the Keystone XL
Pipeline Project on Greater Sage-Grouse in South Dakota” (Plan). Keystone has reviewed the scientific
literature and does not believe that there is evidence to suggest that this level of noise will negatively
affect sage-grouse.

SDGFP staff were concerned that transmission powerlines and poles could negatively affect sage-
grouse. Keystone stated that it does not have authority over the siting or construction of transmission
lines that will service the pipeline’s pump stations. However, Keystone has informed the various power
providers that they will need to contact SDGFP and other state and federal wildlife agencies to discuss
electrical transmission facilities.

SDGFP staff questioned the amount of traffic and personnel that will work at PS-16. Keystone
responded that pump stations are unmanned but are visited approximately once per week for
maintenance and inspection. Access to PS-16 is via a public, county road, and a short access road from
the public road to the pump station.

PY-12 close to KXL195 lek
KXL196 lek - on row?
Topic 3: The location of pipe yards with respect to historic lek sites

SDGFP had expressed concern about the location of pipe yards PY-10 and PY-12 relative to sage-grouse leks. Keystone provided maps of the new pipe yard locations. PY-12 has been moved away from active sage-grouse leks to a site in Butte County. The current site of PY-12 is also near an active sage-grouse lek (termed KXL 195). This lek is approximately 0.8 miles north of the historic Hoover lek. However, both the lek and PY-12 are adjacent to Highway 79. Further, PY-12 is over one mile from the lek and not visible from the lek. Keystone does not believe that PY-12 will negatively impact sage-grouse at, or around, this lek. PY-10 has been moved to the opposite side of the road from where it had been, this site is within two miles of two historic sage-grouse leks, however, no birds were seen at either of these leks during 2011 surveys. Keystone has provided figures of the new pipe yards in Appendix E of the Plan.

Topics 4 and 5: The size and dates of seasonal construction restrictions

SDGFP staff expressed interest in the meeting and in the January 18th letter of expanding the size and dates of seasonal construction restrictions (i.e. buffers), based on review of some scientific research, from four to five miles, and from March 1 through June 15, to March 1 through July 15. Keystone does not agree that there is a biological basis for expanding either the size or dates of buffers around active leks.

Research done in SD to support 7/5/10 date

Keystone has completed substantial project planning with regards to minimizing impacts from the project on sage-grouse. These efforts are described in the plan that accompanies this letter entitled, “An Approach for Implementing Mitigation Measures to Minimize the Effects of Construction and Operation of the Keystone XL Pipeline Project on Greater Sage-Grouse in South Dakota” (Plan). Keystone’s Plan analyzes potential effects of the project on individual leks and includes an analysis of topography, suitable habitat, visibility of the project from a lek, and distance of the project to a lek. Keystone presented a very similar Plan to the Montana Department of Environmental Quality (MDEQ), Montana Department of Fish, Wildlife and Parks (MFWP), Bureau of Land Management (BLM), and U.S. Fish and Wildlife Service – Montana (USFWS-MT). Keystone received a favorable response from the agencies regarding this Plan and it is Keystone’s understanding that the primary tenants of the Plan, a three-mile buffer modified to account for topography and habitat, and a one-time pass-through of equipment to move equipment through a buffer, have been supported and will be incorporated into project permitting in Montana through MDEQ Environmental Specifications for the project. Keystone is pleased to provide a similar Plan to SDGFP that is focused on sage-grouse leks in South Dakota and look forward to your review and response.

Do Sage Grouse come to leks in the evening like other Grouse?
Topic 6: Reclamation in sage-grouse habitat

SDGFP staff expressed concern regarding reclamation in sage-grouse habitat, primarily sagebrush habitat, in both the meeting and the January 18th letter. Keystone has designed reclamation procedures, particularly in sagebrush and native rangeland. These procedures are based on pedestrian surveys by qualified botanists and wildlife professionals, as well as a review of the proposed procedures by state NRCS offices in Montana, South Dakota, and Nebraska. Keystone has incorporated NRCS input into the design of Construction/Reclamation Units that outline construction and reclamation procedures that are relevant to particular habitats and reclamation goals. A variety of measures, from establishing a firm seed bed to seeding high rates of sagebrush accompanied with low rates of grass seed, are outlined in the sagebrush Construction/Reclamation unit. A copy of the Sagebrush Construction/Reclamation Unit was distributed at the meeting and is also included in the attached plan.

Keystone looks forward to further discussion with your staff regarding our project. Should you have further questions please contact Stephen Craycroft at 713-693-6467 (stephen_craycroft@transcanada.com). Thank you for your attention to this matter.

Sincerely,

Stephen Marr, Manager - Phase 4, Steele City
Keystone Oil Pipeline

Source: US Fish and Wildlife Service
MR. PRESIDENT: DON’T SAY “NO” TO 20,000 JOBS.

The Keystone XL Pipeline project is good for America. It will create 20,000 well-paying jobs in the short term, thousands more in the long term, and generate $20 billion in new spending to benefit our economy. Congress has now given the President until February 21st to decide whether Keystone XL is in our nation’s best interest.

The Keystone XL Pipeline will provide our nation with a safe, secure supply of reliable and affordable energy from our trusted ally Canada. Denying the pipeline would be another blow to thousands of out-of-work Americans. Tell the President to put jobs ahead of politics. Jobs. Security. Now.

APPROVE KEYSTONE XL NOW

www.FuelingUS.org
Appendix 9-B: Partnership to Fuel America Website

Welcome
Welcome to the virtual home of the Partnership to Fuel America.
Initiated by the U.S. Chamber of Commerce, we are comprised of American businesses and industries that understand that the United States needs more energy to fuel our economy and that Canada’s resources can help us achieve that goal.
The Partnership promotes the benefits of Canadian oil sands and supports investment in critical North American energy projects. We invite you to explore our website, and join us in helping to create jobs while ensuring a more secure and reliable energy future.

Latest News
Oliver Says Canada Expects U.S. to Approve Keystone
November 7, 2012
Fuel America Seeks Support for Energy
November 6, 2012
RADIO: Matthew Koch on KWLM Willmar, MN
November 2, 2012
Keystone XL pipeline route skips Sand Hills
October 31, 2012
Feds: TransCanada shuts down Keystone pipeline for 3 days, tests show possible safety issues
October 18, 2012

Featured Partner
“I’m supportive of the Partnership to Fuel America, because as a small business owner, I’m dependent on customers. Whether direct or indirect, all our businesses are reliant on a stable oil supply. Developing our North American Energy resources not only creates that but will directly create more revenue in our cities and towns that need it.”

John Meyer | Small Business Owner, Winner, SD
The Keystone XL project is KEY to U.S. job creation, economic growth and energy security. After an exhaustive three-year review, numerous public meetings and multiple comment periods, the Department of State’s final Federal Environmental Impact Statement found that there are no substantial environmental concerns that should prohibit approval of the permit to allow this project to move forward. The decision to approve this KEY project to job creation, economic growth and energy security should be an easy one for the Administration to make.

**KEY** to U.S. Jobs
- The U.S. State Department estimates that, over a two-year period, the Keystone XL project would directly employ 6,000 - 8,000 workers.
- Longer term, the Canadian Energy Research Institute (CERI) estimates that economic growth generated by the Keystone XL project and the new energy resources it will deliver to America will result in an additional 85,000 new U.S. jobs between now and 2035.

**KEY** to Economic Growth
- According to CERI, Keystone XL would add $150 billion to U.S. GDP between now and 2035.
- Economists estimate Keystone XL would boost local retail sales by $2.3 billion and generate an additional $6.5 billion in personal income.

**KEY** to Energy Security
- Keystone XL would provide Americans with 700,000 barrels a day of new oil supplies from North America.
- North American oil from Keystone XL could potentially replace more than one-third of the oil currently imported from the Middle East.

Appendix 10-A: North American Fossil Fuel Deposits

Source: U.S. Department of Energy, Idaho National Laboratory
Appendix 10-B: Bakken Formation Oil Wells

Appendix 10-C: PHMSA Public Outreach Webpage

Many organizations have a stake in the safe operation of our nation's petroleum and gas pipelines. Many of these same organizations links are listed below.

Public Stakeholder, Damage Prevention, and Land Use Planning Links:

- Call Before You Dig
- Common Ground Alliance (CGA)
- National Association of Counties (NACo)
- National Association of Home Builders (NAHB)
- National League of Cities (NLC)
- One-call Centers
- PHMSA Land Use Planning
- PHMSA Community Assistance and Technical Services (CATS)
- Pipeline Safety Trust (PST)

Federal Government Links:

- Bureau of Safety and Environmental Enforcement
- Department of Energy
- Department of Transportation
- Environmental Protection Agency
- Federal Emergency Management Agency
- Federal Energy Regulatory Commission
- National Energy Board (Canada)
- National Energy Technology Laboratory
- National Institute of Standards and Technology
- National Transportation Safety Board
- Office of Pipeline Safety
- U.S. Fire Administration

State Regulator Links:

- National Association of Pipeline Safety Representatives
- National Association of Regulatory Utility Commissioners

Pipeline Industry Links:

- American Gas Association
- American Petroleum Institute
- American Public Gas Association
- Association of Oil Pipelines
- Interstate Natural Gas Association of America
- Midwest Energy Association
- Northeast Gas Association
- Pipeline Research Council International
- Southern Gas Association (SGA)
- Information on Pipeline Operators

Other Industry-Related Stakeholder Links:

- American National Standards Institute
- American Society of Civil Engineers
- ASME
- Associated General Contractors of America
- ASTM International
- Gas Technology Institute
- Geospatial Information and Technology Association
- International Association of Fire Chiefs
- International Association of Fire Fighters
- NACE International
- National Association of State Fire Marshals
- National Fire Protection Association
- National Propane Gas Association
- National Utility Locating Contractors Association
- National Volunteer Fire Council
- North American Telecommunications Damage Prevention Council
- NUCA
- Underground Utility and Leak Locators Association

Disclaimer: Links to web sites outside of the Department of Transportation (DOT) are offered for your convenience in accessing re stated on our web site may NOT be the same as that on other web sites. DOT takes no responsibility for and exercises no control c
# Appendix 10-D: Pipeline Safety Trust Rating of State and Federal Regulator Websites

<table>
<thead>
<tr>
<th>State</th>
<th>Contact Info for Agency Staff</th>
<th>Incident Data</th>
<th>Enforcement Records</th>
<th>Inspection Records</th>
<th>Transmission Pipeline Maps</th>
<th>Excavation Damage Data</th>
<th>Pipeline Company Contact Info</th>
<th>Easy to Access Regulations</th>
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Appendix 11-A: Natural Resources Canada “Fact Sheet”
Published September 20, 2011

Oil Sands
A strategic resource for Canada, North America and the global market

Energy Security and Economic Benefits

Canada is the United States’ most secure supplier of oil

Canada is the largest supplier of crude oil and petroleum products to the U.S., safely delivering 2.6 million barrels per day in 2010, making up 21 percent of U.S. imports.1 When U.S. domestic production is considered, this means on any given day, one in eight cars in the U.S. is using Canadian oil.

Oil sands can help the United States eliminate dependency on foreign oil

A 2011 study commissioned by the U.S. Department of Energy shows that higher oil imports from Canada, almost all of which come from the oil sands, could eliminate U.S. dependence on imports from foreign suppliers such as Nigeria, Russia, Venezuela and Libya by 2030.2

Oil sands represent approximately 60 percent of the world’s accessible oil

With oil reserves of 174 billion barrels, Canada is third only to Saudi Arabia and Venezuela in proven global oil supplies, of which Canada’s oil sands account for 168 billion barrels. The 169 billion barrels are “proven,” meaning their production is economically feasible given current prices and technology. As technology evolves, these reserves could grow even larger, up to an estimated 345 billion barrels.

The vast majority of crude oil in the world has been nationalized. While Canada holds about 13 percent of the world’s proven oil reserves, Canada has not nationalized its oil industry, has no government-controlled national oil company, works through markets and private investments, and is not a member of OPEC. Canada holds approximately 60 percent of the world’s oil that is accessible to private investment.

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Oil reserves by country

<table>
<thead>
<tr>
<th>Country</th>
<th>Reserves (billion barrels)</th>
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<tr>
<td>Saudi Arabia</td>
<td>345</td>
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<tr>
<td>Venezuela</td>
<td>330</td>
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<tr>
<td>Peru</td>
<td>100</td>
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<tr>
<td>Norway</td>
<td>90</td>
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<td>U.S.</td>
<td>80</td>
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<td>Mexico</td>
<td>70</td>
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<td>Mexico</td>
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<tr>
<td>United States</td>
<td>20</td>
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*PWC data; Source: EIA data.

The Canada–U.S. energy relationship produces significant economic benefits:

- Between 2010 and 2035, oil sands development is anticipated to support, on average, an estimated 93,000 jobs per year in the United States. If the Keystone XL pipeline is approved, this average is expected to grow to 160,000 U.S. jobs per year.1
- Oil sands development is also anticipated to contribute, on average, C$8.4 billion per year to the U.S. gross domestic product between 2010 and 2035. If the Keystone XL pipeline is approved, this average is expected to grow to C$14.4 billion per year.2
- Roughly 1,000 U.S. companies supply the Canadian oil sands sector.3

Oil will be dominant for years to come

Oil is a vital source of energy, currently providing about one-third of global energy needs.4 Canada, along with the rest of the world, is working toward a long-term transition to a lower carbon economy by improving energy efficiency standards and increasing the use of alternative and renewable energy. Nevertheless, oil will likely remain part of the energy mix for Canada and the world for decades to come. Even under the IEA’s most stringent low carbon scenario, oil will still provide 26 percent of the world’s energy mix in 2035.4

While large infrastructure investments are being made in the oil sector, Canada continues to make strategic investments in clean and renewable energy technologies and energy efficiency. These investments aim to shift Canada toward a lower carbon economy of the future while providing the energy we need in the near term. During this transition, the responsible development of the oil sands will provide North America with a secure source of crude oil.

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5 Canadian Association of Petroleum Producers (2011).
## Appendix 12-A: Ranking of stakeholder social media effectiveness from most to least effective

<table>
<thead>
<tr>
<th>Stakeholder Category</th>
<th>Key defining characteristics related to social media influence</th>
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</table>
| **Environmentalists** | **Pros:**  
  - strong leadership  
  - appeals to student activists with strong social media skills  
  - clear and achievable objectives  
  - organized into regional groupings  
  - combines online and offline actions  
  - organizes activities that build trust and ensure continuity  
  - willingness to take personal risk  
  | **Cons:**  
  - lack of financial resources  
  - inexperienced  
  - limited connections to government  
| **Industry associations and lobbyists** | **Pros:**  
  - large advertising budgets  
  - existing relationships with lawmakers  
  - advertising and communications experience  
  - industry support  
  | **Cons:**  
  - inability to coordinate members to ensure consistent message  
  - lack of grassroots support to spread message online  
  - short term influence of media coverage  
| **Ranchers and Indigenous Tribes** | **Pros:**  
  - interests align with environmental activists  
  - willingness to join coalition despite political and ideological differences  
  - high level of personal commitment  
  | **Cons:**  
  - No social media strategy  
  - Lack of social media knowledge and skills  
  - Focus on issues with limited appeal to broader public  
| **U.S. Government Agencies** | **Pros:**  
  - Comprehensive policies and procedures  
  - Independent of political influence  
  - High level of credibility  
  - Cooperation between departments with diverse knowledge and skills  
  - Highly transparent  
  | **Cons:**  
  - Inability to directly engage social media  
  - Lack of financial and human resources to meet obligations  
  - Poorly structured websites that make finding information difficult  
| **Oil and pipeline companies** | **Pros:**  
  - Strong connections to government  
  - High level of technical knowledge and skills  
  - Significant financial resources  
  | **Cons:**  
  - Inability to directly engage social media  
  - Lack of public trust and credibility  
  - Lack of social media knowledge and skills  
  - Few connections with stakeholders outside the oil industry  
| **Canadian government agencies** | **Pros:**  
  - international reputation (“brand Canada”)  
  - Comprehensive policies and procedures  
  - High level of credibility  
  | **Cons:**  
  - Inability to directly engage social media  
  - political interference  
  - Low level of transparency  

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