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## Geography, News Media Discourse, and Water Management: A Case Study of the Devils Lake Outlet

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Graduate Program in Geography  
A thesis submitted in partial fulfillment of the requirements for the degree in Master of Arts  
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GEOGRAPHY, NEWS MEDIA DISCOURSE, AND WATER MANAGEMENT: A  
CASE STUDY OF THE DEVILS LAKE OUTLET

(Spine title: Geography, News Media Discourse, and Water Management)

(Thesis format: Monograph)

by

Daniel J. Bednar

Graduate Program in Geography

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Master of Arts

The School of Graduate and Postdoctoral Studies  
The University of Western Ontario  
London, Ontario, Canada

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THE UNIVERSITY OF WESTERN ONTARIO  
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The thesis by

**Daniel Jerry Bednar**

entitled:

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Master of Arts

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Dr. Chantelle Richmond  
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## Abstract

This thesis explores the print news media discourse surrounding the dispute between Manitoba and North Dakota over a flood mitigation plan in Devils Lake North Dakota. In order to do so, critical discourse analysis was applied to news media from a seventeen-year period during the dispute. Findings were compared between media sources as well as to pertinent policy documents. The thesis finds that the political arena provided by local newspapers as well as the discourses of scale, confrontation, history, and economics had the largest effect on the dispute's public face. A total of nine findings within these areas are discussed for their relationship to the dispute. Existing concepts from within geography are acknowledged to place these insights into the broader set of geographical and water management discussions. It is concluded that research on environmental conflicts needs to pay special attention to news media and other forms of discourse creation, or promotion, in the public sphere in order to better understand these conflicts, broaden the scope of values involved and promote the potential for efficient conflict resolution and water management.

## Keywords

Devils Lake, transboundary water, Canada-United States relations, news media discourse, critical discourse analysis, narrative analysis, framing, water management.

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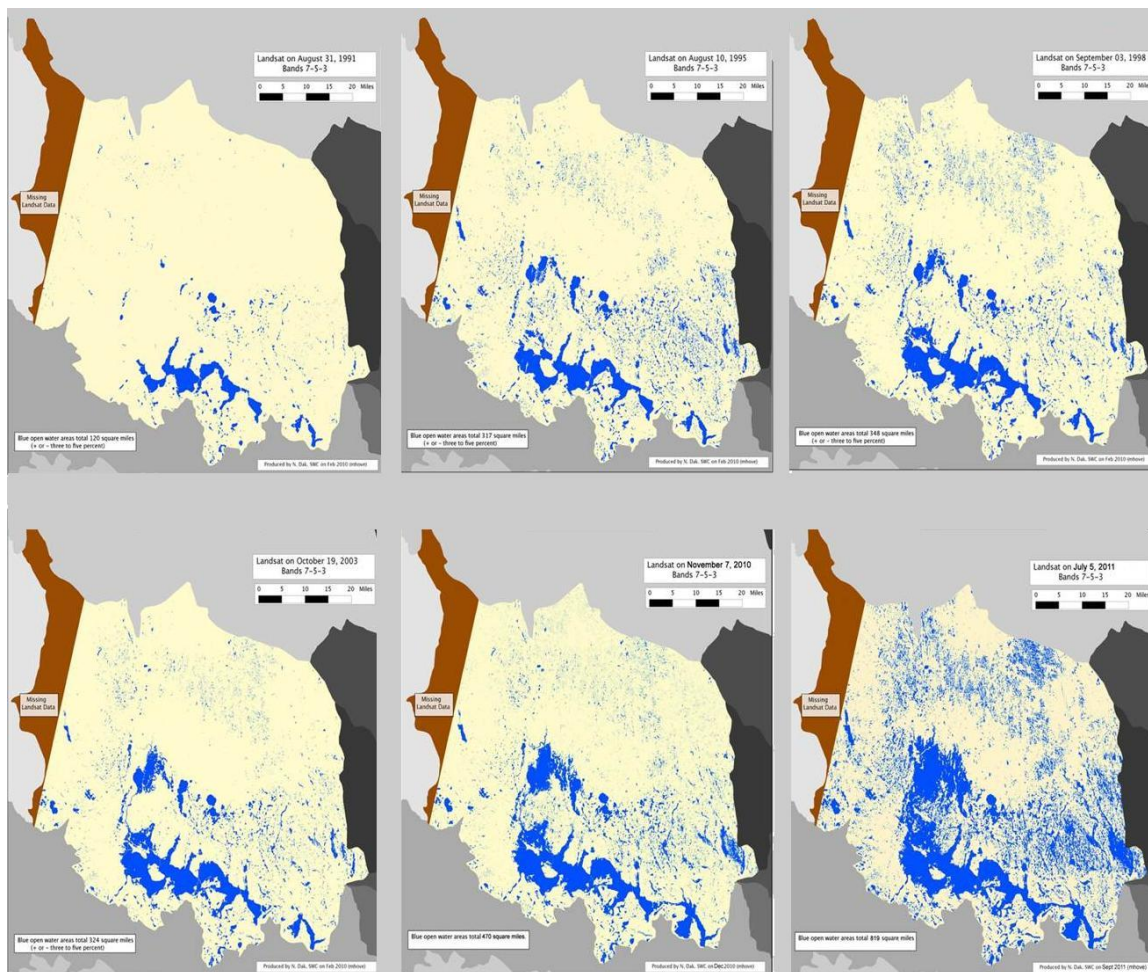
# 1 Introduction

## 1.1 The Devils Lake Dispute

The Town of Devils Lake is located in the northeast section of North Dakota; it has a modest population of just over 7000 and rests on the shores of the lake with which it shares its name (Figure 1.1). In 1993, a wet cycle began in the regional climate and led to increased precipitation rates in the basin (Zhang, 2010; Ma et al. 2011); this in turn led to flooding in Devils Lake. Unlike conventional river flooding, the rise in Devils Lake is not a seasonal occurrence that crests in the spring and returns to normal levels throughout the summer, as is common in the nearby Red River. Instead, Devils Lake is part of an endorheic, or closed water basin, meaning that water which precipitates within the lake's basin (Figure 1.1.) must evaporate, be diverted or captured for human use, or add to the lake's level (Wiche, 2000). Since 1993, precipitation has far exceeded evaporation, usage and storage, meaning the flooding of Devils Lake has continued each year since then (North Dakota State Water Commission, 2011). As visible in Figure 1.2, between 1991 and 2011 the lake rose 32 feet and expanded its area from 9,000 to over 200,000 acres (NDSWC, 2011).



Figure 1.1 - The Location of the Devils Lake Basin (yellow) within the Red River Basin (pink) (Manitoba Water Stewardship, 2005, 2)



**Figure 1.2 - Landsat images of the Devils Lake Basin between 1991 and 2011 (NDSWC, 2011)**

If left free of human influence, the lake would continue to increase in size until one of two events occurred; either the fall of precipitation rates due to a change in local climate, or, through the overflow of Devils Lake water into areas outside of the basin (Wiche, 2000). This natural overflow would have occurred on its own when the lake reached 1458 feet above mean sea level (Figures 1.3 and 1.4), but for local residents this event would have meant the lake would inundate hundreds of more homes, key roads, and risk nearly a billion dollars in further damages (Corps, 2003, S-7). Alternatively, North Dakota and Devils Lake officials decided in the mid 1990s to construct an artificial outlet to drain Devils Lake water out of the basin as soon as possible (Corps, 2003). The plan was to discharge Devils Lake water into the nearby Sheyenne

River, which flows east and meets the Red River north of Fargo, the Red River then flows into the Canadian province of Manitoba where it eventually enters Lake Winnipeg (Figure 1.1).

**Figure 1.3 - Devils Lake cross section as of May 2010 (United States Geological Survey & North Dakota Department of Health figure presented in NDSWC, 2011).**

Originally the outlet plan was to be designed and constructed by the United States Army Corps of Engineers (Corps) with its costs shared between the U.S. Federal Government (65%) and the State of North Dakota (35%) (Whorley, 2008, 623). However, because the State of North Dakota believed that the Corps' plan would take too long to complete and was too expensive (a final total of over \$200 million), the state planned their own outlet at cost of \$28 million and an expedited construction schedule (Whorley, 2008). The plan proposed and subsequently implemented by the State of North Dakota was opposed by multiple groups in the region, and faced numerous funding and planning obstacles of its own before it would be built. However, eventually the State of North Dakota completed construction of its outlet in 2005 and began limited operation that same year.

The decade long period of uncertainty in the Devils Lake and North Dakota regarding a solution to the flooding is indicative of the prolonged dispute that arose as a result of the plan. In the end, the outlet was not fully operational until 2007, and plans to implement further outlets did not succeed until 2009. The length of time it took to formulate and finalize a plan to outlet water from Devils Lake is the focus point of this thesis, as what is physically a relatively simple process took too long to conduct relative to the hazards faced in the region. While some of the concerns which delayed the outlet plan were of merit, this thesis will indicate how many other processes may have acted to continue the dispute for reasons of less merit.

The dispute regarding North Dakota's plan arose when downstream interests became concerned about both the risk of degraded quality of water from the lake and as well as the potential that species foreign to surrounding regions could be present in Devils Lake. These concerns stemmed from two crucial facts about Devils Lake. First, as part of a closed basin the water in Devils Lake accumulates higher than normal levels of sulphate, mercury and other substances potentially harmful to human use (Corps, 2003, 4-5). Some downstream interests, such as Valley City North Dakota, were concerned that high sulphate levels would endanger the health of drinking water withdrawn from the Sheyenne River (NDSWC, 2003, Comments). Second, because Devils Lake is estimated not to have overflowed into surrounding basins for at least 1000 years and potentially only twice within the past 4000 years (Vecchia, 2011), it was deemed possible that a unique ecosystem had thrived within the basin and could contain species harmful to downstream biota and water users (Manitoba Water Stewardship, 2005, 2). Specifically, Manitoba and Minnesota were concerned about the health of their commercial and recreational fishing industries, which could have potentially been devastated by the introduction of a foreign bacteria, virus, parasite or predator species (Manitoba Water Stewardship, 2005, 1).

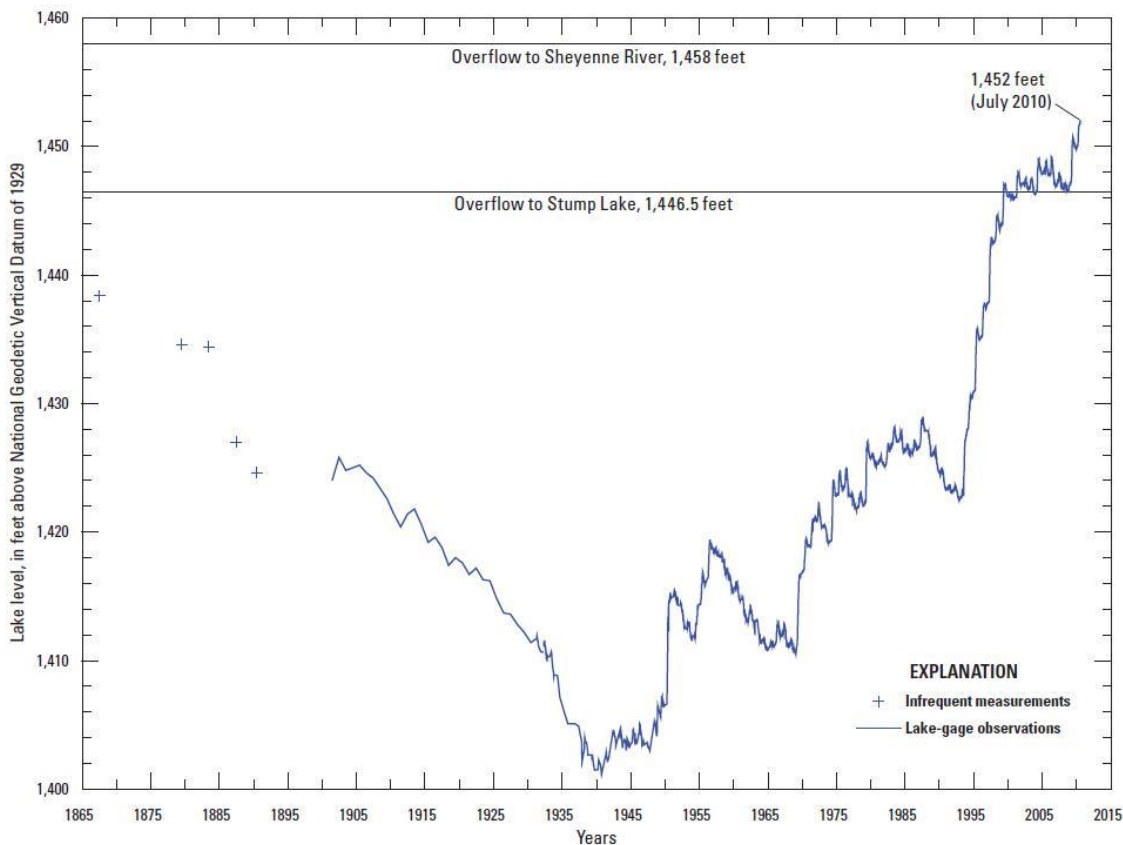
Perhaps most problematic was that the NDSWC outlet plans were scaled down versions of the original Corps' documents. This meant that the State's outlet plan was presented in permit applications only a fraction the size of the original Army Corps EIS; by removing much of the



Corp's focus on filtration infrastructure and downstream impact models, the NDSWC's plan increased the uncertainty around the effects of an outlet considerably. The State's outlet plan appeared to be based on logic that if the EIS of the Corps had shown that an outlet can be environmentally sound, then an outlet should be built. However in removing the 'excess' costs included in the Corps' plan such as filtration mechanisms, test phases, and cultural and social impact studies, the State's outlet plan essentially started from scratch in regards to expectations of the outlet's effects. As will be seen, this was prominent in allowing opposition to reiterate uncertainty as a reason not to allow the outlet to be built.

Despite downstream opposition, neither the federal or state outlet plans were ever officially referenced to the International Joint Commission (IJC). The IJC is the bilateral institution established by Canada and the United States in 1909 under the Boundary Waters Treaty to settle transboundary water disputes (Knox, 2004). One reason the IJC was not formally involved was that Canada declined an offer by the U.S. State Department in 2002 to ask the IJC for an official reference (Springer, 2007). At the time, it was argued by Canada and Manitoba that this reference was not appropriate because it was directed only at the federal version of the outlet as planned by the Corps and did not include a reference to the separate North Dakota outlet plan (Springer, 2007). Another reason the IJC was never directly involved was that, for numerous reasons, the United States and the State of North Dakota refused to allow the separate state-funded outlet plan to be referenced to the IJC (Associated Press 2004, April 12; Hollis, 2007). With the IJC removed as a venue for reviewing the outlet proposals, Manitoba's only recourse was to challenge the construction permits for the state outlet in North Dakota County Court and later North Dakota Supreme Court (Signorelli, 2010). Eventually both cases failed to stop construction and operation of the state outlet. A large portion of the existing academic literature on Devils Lake is focused on this lack of IJC involvement and other legal and political dynamics of the dispute (Rosenberg 2000; Knox 2004; Flanders 2006; Kempf 2007; Springer 2007; Whorely 2008 and Signorelli 2010).

Opposition of the outlet mostly rested on two key uncertainties regarding the necessity and effects of the plan. The first was the difficulty in predicting when ‘natural overflow’ would occur; in other words when Devils Lake would overflow naturally into the Sheyenne River (Figures 1.3 and 1.4). This was important because if the lake were to overflow naturally, it was believed it would cause considerably worse downstream effects than the planned artificial discharge (Corps, 2003, S-8). The higher flow rate of natural spillover would present even more potential for harm downstream than a controlled outlet due to increased erosion and the risk of downstream flooding (Corps, 2003, S-8). In addition, natural overflow would not be filtered for total suspended solids (TSS) and large biota, as it was planned that the artificial outlet would be (Corps, 2003). As a result, it was argued by outlet proponents that since natural overflow would be an eventual consequence of the flooding in Devils Lake, the outlet was not only a necessity for flood mitigation but also posed a significantly lower risk to downstream interests than the alternative of uncontrolled spillover (North Dakota Department of Health, 2010). Conversely, anti-outlet interests argued that natural overflow was unlikely to occur before the flooding would recede naturally and that the outlet carried unnecessary risks (Manitoba Wildlands, 2005, 1). This argument was bolstered by research which indicated that the lake’s levels had been quite variable in the past, although the trend since 1955 was clearly upwards (Figure 1.4)



**Figure 1.4 - Historical water levels of Devils Lake from 1868-2010 (Vecchia, 2011, 6).**

The second scientific uncertainty with which opposition relied regarded whether the Devils Lake outlet itself posed a threat to downstream water users, as reflected in two separate but related arguments against the outlet plan. First, opponents questioned whether the quality of Devils Lake water, which is higher in salinity, sulphate and mercury, could be controlled to limit or avoid downstream harm (People to Save v. North Dakota, 2005). Second, at the time, very little was known about the biotic community of Devils Lake and the presence or absence of its species in surrounding water basins (Arroyo, 2005). It was assumed by outlet opponents that harmful species could in fact exist in the lake and that before the outlet could be constructed research was required to prove this was not the case (Pearson & Conrad, 2003). However, pro-outlet forces argued that as early as 1997 it was known that Devils Lake presented a negligible risk to downstream water quality due to previous interbasin connections (Garrison Joint Technical

Committee 1997, NDSWC 2003). This set of circumstances allows for the study of the nature of the conflicting arguments presented by the interests in the Devils Lake dispute.

The ability to question the validity of opposing interests with ‘anti-narratives’ is something both Roe (1989) and Boonstra and Frouws (2005) claim is integral in environmental or policy disputes. Policy disputes in which both sides are promoting these anti-narratives is important as it is seen as responsible for removing the sense of responsibility to partake in the policy discussion in a more constructive manner. Policy approaches are then less about solving a given problem than they are about disproving the opponent’s position (Roe, 1989). These two scientific uncertainties provided both pro-outlet and anti-outlet interests the means to challenge the integrity of opposing views via the promotion of opposing narratives about the plan’s outcome. While these two uncertainties have never been unequivocally solved, new research indicates that the level of uncertainty surrounding them has been reduced. In 2011, research by the United States Geological Survey (Vecchia, 2011, 48) indicated that under multiple simulations, and given the newest predictions of future water levels in the Devils Lake Basin, the operation of one or multiple outlets will have a significant impact on reducing what would be the almost certain outcome of natural overflow. Also in 2011, the International Red River Board (Bensley et al., 2011, 41) concluded in its *Devils Lake-Red River Fish, Parasite and Pathogen Project* that no significant species of risk could be deemed to be present in Devils Lake that are not likely to be present in surrounding watersheds. Finally, former outlet opponents now appear supportive of the suggestion that the controlled release of Devils Lake water is better than the alternative of uncontrolled, and unfiltered, natural overflow (Owen, 2010, September, 9). The relationship between uncertainty in environmental planning and narrative construction will be returned to in Chapters 2 and 4.

In 2012, with opposition dwindling and scientific evidence mounting in favour of the outlet plan, the City of Devils Lake and the State of North Dakota are now partners in operating two separate discharge outlets into the nearby Sheyenne River (Figure 1.5) and are in the process

of planning the operation of a third outlet (NDSWC, 2011). However, much remains to be learned about the processes through which these outlets (specifically the first ‘west end’ outlet, Figure 1.5) were planned and opposed. For geographers, Devils Lake not only provides an interesting study between hazard mitigation and environmental protection, as will be discussed in this thesis through the lens of media analysis, it also touches on topics such as geographical and political scale in water management, the relationship between science and politics in resource management, the role of regional history in environmental disputes, and the role of economic valuation of nature in conflicts. Regardless of the geographical nature of the dispute, a majority of work on the topic has come from political and legal perspectives analyzing the role of high level characters and institutions in the dispute, as well as the legal potential for resolution.

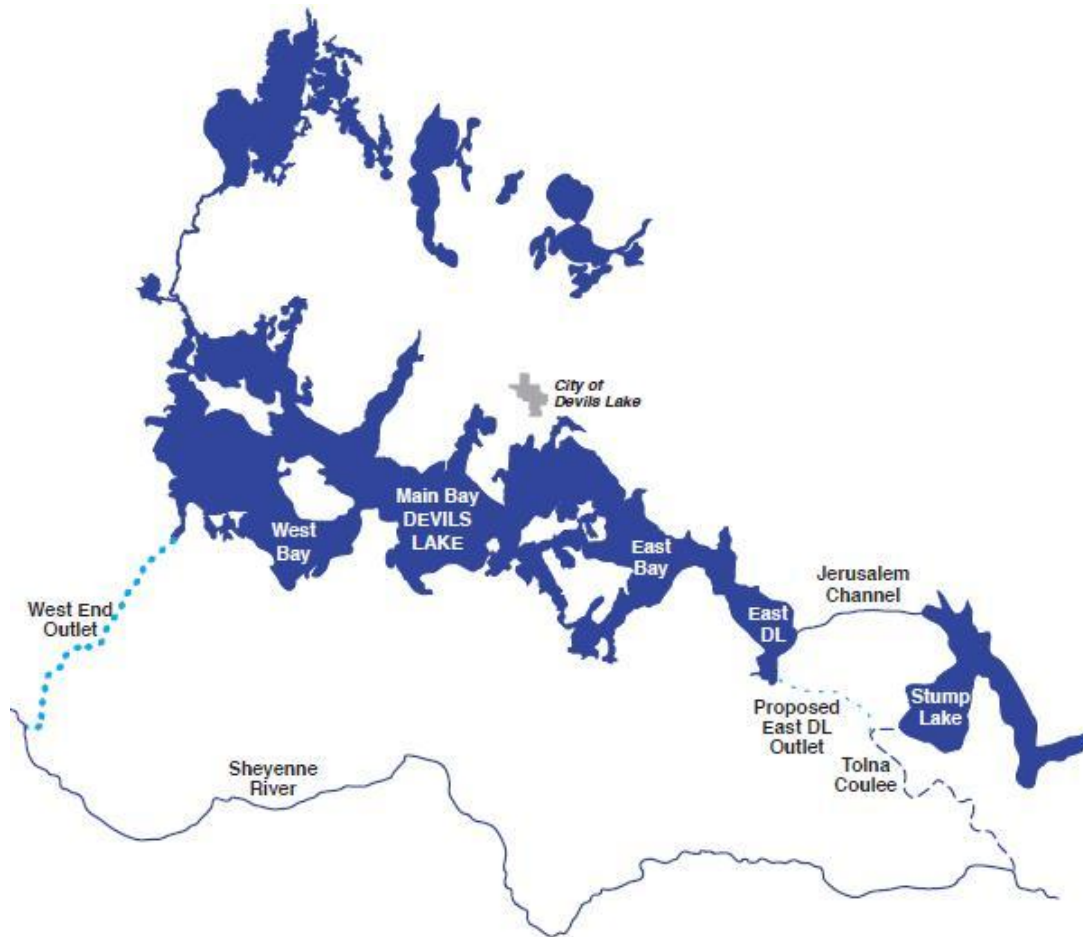


Figure 1.5 - Devils Lake with original 'west end' outlet and the (then proposed) 'east end' outlet (completed in spring of 2012) (NDSWC, 2011).

## 1.2 Research Problem

Along with focusing on legal and political aspects, existing literature on the issue of Devils Lake indicates that the media played a large role in the characterization of the dispute (Springer, 2007). While numerous authors have identified the role of the media in the dispute (Rosenberg 2000; Springer 2007; Hollis 2008), none have made it the primary focus of their research. This orientation is somewhat surprising given the fact that existing research in geography and related disciplines indicates an active role of news media in environmental

conflicts (Gamson & Modigliani 1989; Gamson and Wolfsfeld 1993; Bendix & Liebler 1999; Liesch 2008; Jonsson 2011). Further, it has been shown that when combined with policy analysis, news media analysis is a powerful tool for understanding environmental disputes (Gamson & Modigliani 1989; Howland et al. 2006; Liesch 2008). It was considered for this thesis that news media discourse played a role in the dispute as it is known in academic and public circles. The lack of research into the media's role in this event and its relationship to the policies and events that unfolded led to formulation of this thesis' fundamental research question, which is; what discourses are presented in the print news media regarding the Devils Lake dispute and what can be learned from them regarding the path and intensity of the dispute?

It was proposed that research questions analyzing news media presentation of the dispute and an in-depth understanding of pertinent policy documents regarding the outlet plan would address this gap in the literature and answer the fundamental research problem identified above. A discourse analysis of news media on the topic was carried out in fall of 2011 and coupled with analysis of relevant planning documents in order to answer three research questions. The goal of this thesis is to discuss the findings of this research in order to learn about Devils Lake, and to place these insights within the wider set of geographical knowledge.

### 1.3 Research Questions

To answer the fundamental research question, it was decided that there was a need to probe which characters were presented in the dispute and what arguments they used, which narratives were employed by the news media, and how the issue was framed for readers. All of these would be compared between two newspapers located in different regions of the dispute as well as to policy documents and existing knowledge on the subject from academic research. The answers to these questions fell into a three broader categories of geographic issue, and combine to

answer how discourse played a part in the dispute. Table 1.1 outlines the basic structure of the thesis.

**Table 1.1 - The outline of this thesis**

<b>Research Problem</b>	Which discourses were present in print news media discourse regarding the Devils Lake dispute and what can be learned from them in regards to the path and intensity of the dispute?		
<b>Research Questions</b>	1	2	3
	Which characters and arguments were present in the news?	Which narratives were present in news coverage?	How was the issue framed in the news?
<b>Method</b>	Critical Discourse Analysis		
<b>Findings</b>	See Chapter 4	See Chapter 4	See Chapter 4
<b>Placement into Existing Geographic Themes</b>	Political and Management Scale of Water Resources	Politics and Science in Resource Management	Regional History/Economic Valuation

The first research question was to ask which characters and arguments were presented in the news media. This would be compared across newspapers in different regions of the dispute as well as with the policy documents that drove the outlet project. The findings of this question provide an interesting explanation of the Devils Lake dispute as one taking place at a given scale of politics and water management, and how this worked to empower certain interests and values involved and marginalize others.

The second research question was to ask which narratives were used within news media to tell ‘the story’ of the Devils Lake dispute. The findings of this research question highlighted the manner in which opposing political interests grasped the narratives provided by scientific



uncertainty in contrasting ways in order to promote their version of the outlet dispute and the role of the media in this process.

The third research question asked which frames were employed by the news media in describing the story. The answer to this research question explores the manner in which historical and economic discourses provided a given structure for the dispute to be received by the public, and how this was done differently in the media between the two regions involved in the dispute

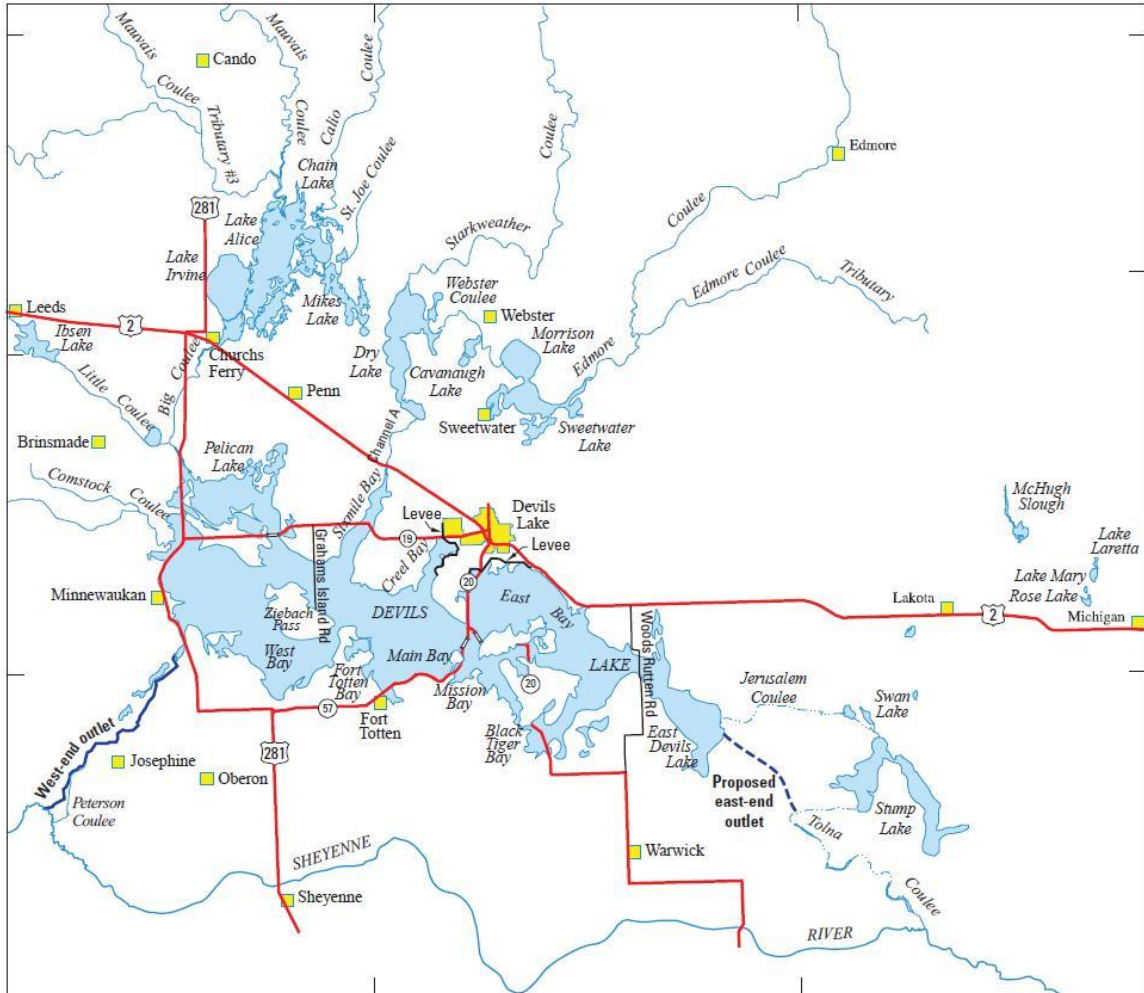
Chapter 2 of this thesis will present a more in-depth review of important literature on the topic of Devils Lake as well as on the literature associated with each research question's findings. Chapter 3 will explain the method of the thesis, leading to analysis and discussion in Chapter 4. Chapter 5 will summarize the thesis' main points.

## 2 Literature Review

At its core, the Devils Lake dispute was one regarding scientific uncertainty of environmental conditions. Therefore, this chapter first analyzes existing knowledge on the scientific uncertainties already discussed in Chapter 1. The chapter then moves to discuss existing academic work on Devils Lake and pertinent literature related to the arguments this thesis will make in Chapter 4 in its presentation of the discourse analysis findings.

### 2.1 Devils Lake – Lake Levels and Natural Overflow

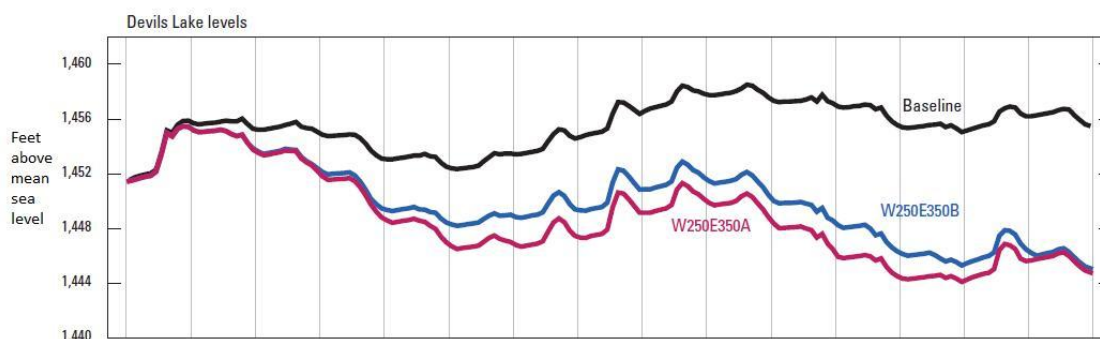
There is no shortage of scientific literature on the geology and hydrology of Devils Lake. The United States Geological Survey has a section of their website devoted to Devils Lake; it contains a listing of over 700 studies from the past half-century that are related to the basin in some manner. One of the earliest studies to provide empirical evidence on past overflows of the lake was Bluemle (1991), which suggested that overflow had occurred at least twice in the past 400 years. The study also suggested that Devils Lake is an extremely variable system which should not be expected to remain stable at any level for long periods of time (1991). Murphy et al. (1997) mapped the routes of natural discharge; that is, the route natural overflow would take to leave the basin. It was revealed that past overflows travelled through the Jerusalem Coulee at the east end of the lake which connects Devils Lake and Stump Lake (the two lakes first connected in 1999, Figure 2.1), and through Tolna Coulee into the Sheyenne River. Murphy et al. (1997) also estimated an increased rate of erosion to downstream banks likely to occur during this process and were therefore central towards the argument that natural overflow would be more dangerous for downstream communities than an artificial outlet.



**Figure 2.1 – Highway map of Devils Lake indicating the location of the Jerusalem coulee and the Tolna coulee, the two routes the water would take in order to naturally spill into the Sheyenne River. (Vecchia, 2011, 4).**

The US Army Corps of Engineers, the USGS, and the U.S. Weather Service have all provided regular assessments of natural overflow likelihood. The U.S. Army Corps (2003, S-6) rated a ‘wet-scenario’ (which included natural overflow) as having less than a 6% chance of occurring in the next fifty years, the Corps also indicated that previous studies in 1994, 1995, 1998 and 1999 routinely provided less than 6% chance that Devils lake would reach the level it eventually did. However, more recently, in 2011, the USGS (Vecchia, 2011, 34) conducted an exhaustive analysis of lake level and natural overflow predictions. According to this most recent report, for the baseline condition of Devils Lake (no outlets), the USGS indicates that the lake

would have had a 14.2% chance of overflow in 2012, a 27.8% chance of overflow by 2015, and a 44.7% chance of overflow by 2030. For modeling scenarios with one or more outlets, the chance of overflow was lowered to 8.8% by 2012, 14.4% by 2015 and 16.9-18.9 % by 2030. The models also indicated that few scenarios arose where the outlets could prevent natural overflow before 2015 (presumably because the outlets would not be able to catch-up to existing inputs), but conversely that natural overflow beyond 2015 was unlikely due to cumulative operation of the outlets (Vecchia, 2011, 34). The study also indicates that in taking 1454 feet amsl as the new base level of Devils Lake (the level as of 2011), the outlets created progressively better chances that the lake would never return to this height (Vecchia, 2011, 49) (Figure 2.2). Of course, many of these scenarios depend on the operating capacity of the outlets such as the amount of water per second the outlets are permitted to discharge, as well as any seasonal restrictions. These restrictions are based on the observed conditions of the Sheyenne River; most commonly the outlet has been restricted in use when sulphate levels are already too high downstream (NDSWC, 2008).



**Figure 2.2 - Baseline levels of Devils Lake for the years 2011-2025 with no outlets (black) versus water levels with outlets given stricter discharge restrictions (blue) and more relaxed (red) (Vecchia, 2011, 28).**

## 2.2 Devils Lake – Water Quality and Invasive Species

In their 2003 permit applications, the North Dakota State Water Commission (NDSWC, 2003, 15) referenced earlier work by Lietch and Tenamoc (2001) and Peters (2002), which

according to the commission indicated “[e]xcept for the striped bass...all of these studies have found no difference between the aquatic organisms found in the Devils Lake basin and the Red River Basin”. However, a Corps-sponsored study by Peterson and Gathman (2002, v) suggested that “[p]erhaps the most important finding of this study was the revelation of just how poorly the biota of Devils Lake basin and (to a somewhat lesser extent) the Red River basin are known”. Nonetheless Peterson and Gathman (2002, vii) also concluded that “based on all available information, it appeared highly unlikely that downstream habitats would suffer substantially as a result of biota transfer caused by the Devils Lake outlet project, and available information was inadequate to allow conclusive statements to be made regarding all aspects of biota transfer”.

This tentative conclusion remained until 2005 when, as negotiated by Canada, the Province of Manitoba, the State of North Dakota, and the Council for Environmental Quality (CEQ, a federal agency under the purview of the White House), conducted a rapid biota survey for Devils Lake. The report found none of the targeted aquatic invertebrates or macrophytes of concern, and while the survey did not sample for striped bass, it did note that: “over 11,000 hours of sampling (2000-2004), with 50,000 fish netted and over a million anglers a year, have failed to yield a single record of striped bass since 1993” (Arroyo, 2005, 7). However, because of the limited sampling time, it is suggested in the report’s conclusion that still no definitive answers regarding the risk of biota transfer could be given (Arroyo, 2005, 22).

While no Devils Lake outlet was ever submitted to the IJC for formal reference, the same political agreement in 2005, which produced the Arroyo/CEQ biota survey, included a provision to use the IJC’s International Red River Board (IRRB) in a fact finding role to “investigate the risk that outlet from Devils Lake in North Dakota would release invasive species and lethal fish parasites and pathogens into the Red River and Lake Winnipeg “(Bensley et al., 2011, 3). After six years of research on Devils Lake and surrounding basins, the report concluded:

*“Three bacteria, one parasite, and several lesions were identified from fish in Devils Lake that were not identified elsewhere in the basin. The fish pathologists*

*concluded that the fish parasites and pathogens in Devils Lake could be transferred from the Lake through the gravel and rock filter currently in place, by birds (often the intermediate or final parasite host), and by unintentional and intentional transfer by people (or their boats). The parasites and bacteria found in Devils Lake were generally widely distributed throughout much of North America. All were opportunistic pathogens that could adversely affect fish health only if fish health was compromised for other reasons. None were foreign parasite or pathogen species. For these reasons, all experts concluded that the risk to downstream fish and fisheries was low from the parasites and pathogens found in Devils Lake, and the potential for causing disease was negligible” (Bensley et al., 2011, 41).*

Understanding the progression of this scientific knowledge as it related to planning decisions and opposition towards the outlet is central to deconstruction the discourse of the dispute. As will be presented, it was not necessarily the scientific realities presented above which drove the dispute but instead the discourse surrounding them and the acceptance or omission of them in news media discussion and political positions.

## 2.3 Scale of Water Management

### 2.3.1 Political Scale

Political scale is defined here as the level of government at which a given process takes place. It is important in water management because it can indicate the capacities various interests have to promote their view. It is being discussed here because the findings of the character analysis fit largely into existing debates of scale in geography, politics, and water resources management.

Existing literature on the political scale of the dispute has been largely focused on the competing interests of federal and sub-national governments. Both Springer (2007) and Signorelli (2010) suggest that the role of provinces in the dispute was primary, but that there was an inherent problem in finding a solution to the dispute because the IJC is a transnational body and requires federal activation. Paris (2008, 16) agrees with these two authors on the need to increase the capacity of sub-national governments in transboundary water issues, but focuses largely on the federal relationship between Canada and the United States and suggests that it is ultimately the responsibility of the federal government to engage and manage the interests of provinces. Conversely, Whorley (2008, 628) suggests that the dispute took place largely because actors did not recognize the central roles of the Boundary Waters Treaty and the IJC and their ability to transcend “narrow local perspectives”. Hollis (2007) also focuses largely on the role the IJC could have played in the dispute and why the federal governments involved choose not to, or failed to, involve it. Finally, Rosenberg (2000) also discusses the dispute mostly from the federal level perspective of Canada-U.S. relations. Conversely, Knox (2004) and Kempf (2007) recognize that important lessons about the Canada-U.S. relationship can be learned from the actions of both federal and provincial powers in the dispute. In summary, existing work on the Devils Lake dispute disagrees about the appropriate narrative to attach to the dispute in regards to governmental scale, but is centered largely on the federal level and the IJC, and also does not address how the scale of the dispute was presented to the public.

As Springer (2007) points out, high level interests are usually unaffected by local environmental disputes in which they are involved, yet, despite this lack of consequential involvement, these distant, and more ‘powerful’ characters have had the capacity to dominate the discourse of the Canada-United States environmental relationship. This observation is interesting as Springer (2007) himself also focuses on higher level federal-provincial relations. Springer (2007) is nonetheless correct, in that little of the existing Devils Lake literature makes mention of more local processes in the dispute. Springer (2007), along with Knox (2004) and Paris (2008) do

note that the Devils Lake dispute exemplifies the idea that local tensions can override the sense of cooperation experienced in the broader relations between the Canadian and American Federal Governments. An identification of differences between local relationships and federal level relationships is also recognized in the wider transboundary water management literature (Wolf 2002, 7; Hsu and Parish 2007, 21, Dornbos 2011, 17). However, on this point, this thesis will remain within the Devils Lake literature and focus on the claims of Knox (2004), Springer (2007) and Whorely (2008).

Some researchers in the wider field of Canada-U.S. environmental relations have picked up on the aforementioned need to focus on all levels of scale in the relationship. Among the most active researchers in the area of Canada-U.S. environmental relations has been Debora VanNijnatten (2003, 115), specifically her paper: *Analyzing the Canada-U.S. Environmental Relationship: A Multi-Faceted Approach*. VanNijnatten (2003) uses negotiations on the Canada-United States Air Quality Agreement to indicate the necessity for researchers to avoid focusing only on high level interactions between diplomats, she states: *“Focusing primarily on high-level interactions between the two countries cannot provide us with a complete explanation of how power operates across the border and why bilateral agreements look the way they do. Instead, less visible modes of interaction at different spatial-institutional levels, particularly in terms of mid-level working relations and the operation of epistemic communities are a key part of the Canada-U.S. environmental narrative”*. Her reference to ‘less visible modes’ is important here because character analysis of the news media found distinctive differences between characters present in existing research and those in both policy and the news media respectively. An acknowledgment of the differences may further help to indicate the gap in knowledge regarding the role of the news media in the dispute, and its effect on the path and intensity of the dispute

This issue of political scale specifically in regards to water management between Canada and the United States has been discussed by researchers in various fields (see Newman and Paasi 1998; Huisman et al. 2000; Uitto and Duda 2002; Chen 2008; and Norman and Bakker 2009).



Norman and Bakker (2009, 104) in reference to Brown and Purcell (2005) identify that: "...we need to approach the social construction of scale as a material as well as political process with both material and discursive effects". Here the authors are suggesting that the discursive creation of scale and its role in transboundary water issues needs to be examined carefully and from a broader perspective beyond the political structures involved.

In regards to any connection between the construction of an issue within a given scale and the news media, Norman and Bakker's (2009) understanding of scale as something that is constructed discursively is combined with ideas from news media studies which suggest that the salience and silence of given actors is commonly used to construct, or reflect, elite level discourse. Callaghan and Schnell (2001, 186) indicate how the history of news media analysis has shown that the news production process has a "tremendous influence over the flow and shape of policy debates". Callaghan and Schnell (2001, 188) also point out how the elevation of a given character's positions acts to shape the issues which are considered in the public as well as the standards by which characters are judged. This thesis adopts that the creation of scale is helped discursively through the presentation of power or action of elite level political officials in the news media. It follows then that the news media's ability to shape the presence of these characters and the broader policy agenda is an important point of analysis in order to understand which scales and actors were potentially empowered (or marginalized) by the discourse surrounding the dispute.

Finally, discussion of political scale will also address the role of the IJC in the two newspapers and the potential relationship of differences between them and claims by Flanders (2006), Springer (2007), Paris (2008) and Signorelli (2010). These authors see the controversy surrounding Devils Lake as inherently tied to a previous water dispute between Manitoba and North Dakota. The plan, known as the Garrison Diversion Unit (GDU) was first initiated in 1944 and would have transferred Missouri River basin water across the continental divide and into the dry parts of North Dakota (Knox, 2004). The plan eventually failed, but it is notable for involving

many of the same actors and interests, and because a prominent movement in North Dakota remains to lobby for the attainment of mass irrigation from Missouri River water.

Springer (2007, 87) points out that “the Devils Lake dispute is considered by some to be little more than the latest phase in the Garrison battle”. Springer (2007, 88) also notes potential resentment towards the IJC on the North Dakota side of the Devils Lake dispute as a result of a 1977 IJC report which was seen as major contributing factor the downfall Garrison. Whorley (2008, 617) notes both that “the GDU has cast a long and persistent shadow”, and “the defeat of the GDU project has contributed to a weak transboundary relationship in the region due, in part, to diminished support for the International Joint Commission and the Boundary Waters Treaty”. Whorley (2008, 617) also discussed a sense of frustration on the North Dakota side of the dispute as part of a view that the region deserves control of its water sources; this was also discussed by Worster (1986). Finally, Hollis (2007, 6) discusses the role Garrison played in Manitoba’s resistance to the Devils Lake outlet; “...*Canada (and Manitoba) viewed a Devils Lake outlet as a precursor to an even more serious Interbasin transfer of water – the Garrison Diversion*”. The potential for resentment towards the IJC is suggested to have been reflected in differences of scale creation between the two newspapers involved in the study, and thus will be discussed in findings related to political scale in Chapter 4.

Based on this literature, it is clear that that the question of political scale is important in an environmental or transboundary dispute. Existing work on Devils Lake disagrees about the primacy of different levels of government, limits mention of local governments, and avoids discussion of how the issue was presented to the public. Meanwhile geographers such as Bakker and Norman (2009) and VanNijnatten (2003) indicate that any analysis of the bilateral relationship needs carefully understand the construction of scale in explaining the relationship between the parties involved, the interests which become privileged, and the solutions which are sought. These discussions of scale from geographers have been included to help ground further discussion of the character analysis and the ramifications of given scales. As will be shown in

Chapter 4, of primary concern were findings related to the silencing in the media of more moderate federal positions, the simplification of characters in the Manitoba newspaper to omit local North Dakota governance, and the silencing of transboundary and IJC narratives in the North Dakota newspaper.

### 2.3.2 Management Scale

The scale of management in regards to natural resources generally pertains to which jurisdictional borders are given precedence in governing the resource. Inherent contradictions and conflicts of interest between political management and the realities of the natural environment can often lead to disputes (such as in this case) or mismanagement (Blomquist and Schlager, 2005). Therefore, it is important to understand the level at which power is created to manage resources. While there is some limited mention of the role of citizens groups such as the People to Save the Sheyenne in the dispute by Kempf (2007) and Hollis (2007), the primary focus of most Devils Lake literature is governmental at either the national or sub-national level. This focus, as Springer (2007) and Paris (2008) indicate, is deemed appropriate by the authors for various reasons. Namely, it is in the end the federal governments of Canada and the United States who have the final and only authority to delegate the issue to the IJC. Since numerous authors suggest that the ideal scenario would have been an IJC reference of both the state and federal outlet projects, these authors privilege the role of the IJC in their writing (Kempf 2007; Springer 2007; Paris 2008; Whorely 2008; Signorelli 2010).

Ultimately, this focus on government practice and institutional mechanisms reflects what Michel Foucault called ‘governmentality’, that is the privileging of a topic as a process inherently tied to governmental structure and power (Rose-Redwood, 2006). A narrow focus on governmental characters and processes offers only a limited view of events and can silence important characters or views in environmental affairs (VanNijnatten, 2003). Problematic within

this governmentality can be the ability for borders and differentiation in identities to promote what Newman and Paasi (1998, 188) call “the Other”. Newman and Paasi (1998, 201) further argue that “the study of narratives and discourse is central to an understanding of all types of boundaries, particularly state boundaries...which affect the creation of sociospatial identities, especially the notions of ‘us’ and ‘the Other’, exclusive and inclusive spaces and territories”. In this context, this thesis will look towards its findings to ask if the discourse of the news media and policy documents around given political borders worked to create a policy landscape marked by the inclusion and exclusion of given interests.

Bakker and Norman (2005) conclude that multiple drivers for cooperation exist in the informal relations of local actors, and that many of the formal governmental mechanisms, actually act as barriers to transboundary cooperation. They conclude “*Informal governance mechanisms, such as networks, contacts and personal relationships were the key determinants of successful cooperation on transboundary water governance*” (Bakker and Norman, 2005, 45). While Bakker and Norman (2005) are still concerned with governmental operations (just the informal ones rather than the formal ones), what is important is that their research found that the formalized mechanisms of governments, namely jurisdictional borders and the bureaucratic regulations which those entail, created problems for transboundary management. This indicates that a governmental approach, if present, tends to focus too strictly on political borders, and ignores the transboundary nature of natural resources and informal arrangements. This problematic dichotomy between political borders and natural processes goes back to discussions in the 1970s by Lynton Caldwell (1972; 1975) on the conceptualization of sovereignty, political borders as they were conceived in the 18<sup>th</sup> century, and modern understanding of the natural environment (Litfin, 1997).

Character analysis found that this governmentality dominated almost all discourse related to the dispute (in both academic work and popular media) and as a result failed to accommodate any alternatives to resource management, which are not so bound by arbitrary human jurisdictions.

One framework within water management which has identified the effect of political borders on resources is integrated water resource management (IWRM). IWRM aims to better understand and manage the interaction between land and water, involve multiple stakeholders, account for temporal and spatial scales of water issues, and be interdisciplinary and holistic in practice (Medema et al., 2008). IWRM also addresses the issue of scale and is concerned with changing the way in which water is managed by reformulating the problem at a different level or re-binding the system of concern (Medema et al., 2008). IWRM often aims to manage water at the basin-wide level, but as a result faces numerous political and economic obstacles in doing so (Gupta and Zaag, 2006). Also noteworthy is Blomquist and Schlager's (2005) explicit discussion of the challenges facing IWRM from existing notions of sovereignty and related political processes. The Devils Lake outlet plan has never been explicitly analyzed from an IWRM perspective.

Finally, the discussion of governmentality within the findings of the discourse analysis arrives at the debate between Graham Haughton (1998; 1999) and Karen Bakker (1999) regarding Haughton's media analysis of the 1995-1996 Yorkshire drought. Noteworthy from this exchange is Haughton's (1998) assertion that the drought existed independently from the news media's portrayal of it, and Bakker's (1999) responses that news media discourse on the drought was actually constructed as crisis of political legitimation rather than a crises of drought, and further that this discourse took place within an existing paradigm of power and thus failed to challenge the failures of the private water program which caused the event. In Chapter 4, the discussion of 'discourses of legitimation' are tied to Foucault's idea of governmentality to indicate how news media discourse work to legitimate modes of power in public discourse and remove alternatives such as IWRM from common public awareness.

This discussion of governmentality, discourse creation and the broader water management perspectives of IWRM have been included because it has been identified that existing academic research, the outlet planning documents, and the discourse surrounding both newspapers took place within a governmental approach which omitted the notion of natural borders as scales of

management, and also worked to silence any criticisms of the existing structure of water management in the region which undoubtedly failed to not only take into account downstream interests, but also to help the people of Devils Lake in a timely fashion.

## 2.4 Politics and Science in Natural Resources Management

After the narrative analysis was conducted, many of the more interesting findings regarded the relationship between the emergence of scientific information to the public (often via the media) throughout the dispute and the relationship of it to political positions (especially within the media). Water resources researcher Tony Allan (1999) suggests that the optimal outcomes of good water management are rarely prioritized above the optimal political gains of decision makers. Allan (1999, 74) argues that the discourse of ‘political feasibility’ is the prominent manner by which politicians make water management decisions. In his case study of the water management in the Middle East and North Africa, Allan (1999, 72-73) goes so far as to suggest that a post-structural approach to discursive control (in which actors have limited free will, rather than none) drives water management principles away from scientific and economic efficiency and towards political cost-benefit analysis. Svendsen et al. (2005, 8) seem to agree and indicate that water management must be understood through its political economy, and by “the identity of the beneficiaries and the increased power or financial gain that accrues to different actors as a result of the decision taken”. Both authors also suggest that changing the political incentive paradigm in water management is difficult because it is entrenched in powerful socio-political principles. Obviously the management of natural resources by political interests rather than through sound scientific and management ideals is not something the public would likely support. Steel et al. (2001) proved this in their research of natural resource management in the

Pacific Northwest where survey data indicated strong public support for the close integration of scientists in natural resource policies. Below it will be argued that this political economy approach to water management analysis can be aided by news media discourse analysis.

The capacity for the news media to act as ‘agenda setter’ is a common theme in news media analysis (Herman 1993; Herman 2000; Herrick and Jamieson 2001; Callaghan and Schnell 2005; Patten 2002; Weaver 2007). Perhaps most well known for the idea that news media and policy are intertwined is Edward Herman (2000), who suggests that news media discourse evolves in a cooperative structural scenario through which both news producers and policy creators benefit by the limitation of given narratives. In a review of the history of media and policy research in his article on corporate environmental disclosure, Patten (2002) discusses Brown and Deegan (1998, 25, as quoted in Patten 2002) who concluded that “[i]n terms of causality, increased media attention is believed to lead to increased community concern for a particular issue. The media are not seen as mirroring public priorities; rather, they are seen as shaping them”.

For the finding related to science and politics, two aspects of news media discourse are taken into consideration. First, that the agenda setting capacity of the news media works to shape policy disputes either through the promotion of political interests or through the co-creation of them; for Devils Lake this meant the discussion of justification and ramifications of the outlet plan were narrowed to those which coordinated with the dominant political actors. Second that the discourses in the news media is reflective of policy interests of elites either because they had a hand in creating them, or because these discourses shape public opinion and political officials need to act to placate public concerns. In this sense, the water management approaches of Allan (1999) and Svendsen et al. (2005) are put into the agenda setting approach of news media analysis to suggest that the news media provides a manner not only to analyze the discourse around the dispute but also to understand the beneficiaries of it.

Discussion of the relationship among resource management, news media discourse and political incentive is included in this literature review because the findings of the second research question regarding media narratives leads this thesis to question whether the emphasis on certain narratives regarding the scientific realities of the dispute by actors within the media and subsequent changes in policy approaches gives credence to existing suggestions that water management decisions are driven by political interests rather than scientific information.

## 2.5 Devils Lake and Regional History

Analysis of framing in the news media found two key frames which were central in the structure of the dispute in the media. While numerous frames were found, the two discussed here are seen as most important because they relate uniquely to the planning documents which drove the dispute. The first of these two was also notable for being significantly different between the two newspapers analyzed.

As mentioned, while one of the findings regarding political scale discusses the potential presence of resentment towards the IJC in North Dakota discourse, this findings looks towards the historical aspect of Devils Lake more for its role in framing the issue, and the differences between the two newspapers. The thesis will do so by assessing the presence of historical branding, describing how it was constructed in the two textual forms, how it differed between regions, and elaborating the important effects it had on the overall dispute. Here, Feldman et al.'s (2009) idea of 're-sourcing' as the process in which elite discourse is created around existing concepts in order to sway public sentiment towards certain paths will be discussed. Discussion of this finding will also address the ideas of Blomquist and Schlager (2005) and Saravanan (2009) that regional history is important in the implementation of more integrated water management and will tie into a closing section on the pertinence of this thesis to IWRM.



## 2.6 Devils Lake and Economic Valuation

The 2003 Final Environmental Impact Statement (EIS) of the federally funded version of the outlet plan reaffirmed earlier Corps findings that an outlet was not economically viable given the most likely scenarios of water levels predicted at the time (Corps, 2003 S6-7). However, before the Corps began its assessment, the U.S. Federal Government waived the requirement for economic viability (which is usually part of a Corps EIS) due to the emergency status of Devils Lake (Corps, 2003, S-1). Leistriz et al. (2002) followed up on the Corps findings after many pro-outlet interests, including North Dakota officials, felt that preliminary Corps assessments, released in the years prior, did not account enough for secondary economic benefits of the outlet such as saved agricultural production, outlet expenditures in the local economy and less emergency funding required from the Federal Government (Leistriz et al, 2002; Weixel, 2002, November, 26). However, Leistriz et al. (2002, 473) found that even in accounting for secondary economic effects, the outlet was still not economically efficient. Nonetheless, the economic efficiency of the plan and the assumed neutrality of economic interpretations played a role in both side's approaches to the plan.

Work in environmental ethics suggests that economic evaluation can be a problematic approach to analyzing environmental issues. Environmental philosopher Mark Sagoff (2011) has proposed that the valuation of the natural world takes place within two ways of understanding. The first is what Sagoff (2011, 497-499) calls 'market based' in which local stakeholders, such as market actors, interest groups and property owners identify ecosystems within the framework of local institutions and where value is identified in a

dispersed and fragmented collective manner for site and case-specific reasons (497). Conversely, Sagoff (2011, 499) also identifies ‘science based’ valuing of the natural world in which information is centralized, collaborative and consensus-based for general application across times and places. Sagoff (2011) concludes that these two systems of valuation are ‘conceptually distant’ and their incompatibility defeats the purpose of economic attempts to value nature in an integrated manner; especially in conflicts. Desjardins (2006, 60-61) points out that there are numerous obstacles in economically valuing one scenario of economic impact versus another; cost-benefit analysis is “neither as simple nor as value-neutral as it may seem” and because there are no open markets on things such as biodiversity, endangered species and aesthetic beauty “we rely on economists and other social scientists to tell us what the cost would be if there *were* markets for such goods”.

This discussion on the role of economic valuation in environmental issues is included here because framing analysis of news media, as well as analysis of policy documents found key aspects of the dispute’s public face revolved around certain methods of valuation and diverging conceptions of the end goals of water management. Further, broader valuation mechanisms for water resources is a central component of IWRM (GWP, 2000), and the means by which modern discourse promotes given understandings of water values is seen as fundamental to the potential to avoid environmental or water management conflict through more progressive policy approaches such as IWRM.

### 3 Chapter 3 – Method

This chapter describes the critical discourse analysis (CDA), which is the main method in this thesis. The three aspects of CDA employed by this thesis are discussed - character analysis, narrative analysis, and framing analysis. This is followed by an explanation of the manner in which the CDA was conducted, followed by a final discussion on the perceived limitations of this method.

#### 3.1 Discourse Analysis

Discourse analysis is a research method through which communication is studied for its relation to various theoretical concepts (e.g. ‘power’ ‘control’, ‘suffering’) and (depending on one’s ontological beliefs) ‘discursive events’ (i.e. the ‘real world’ actions of human society). The common use of discourse analysis is to analyze “opaque as well as transparent structural relationships of dominance, discrimination, power and control as manifested in language” (Wodak, 1995, 94 as cited in Blommaert and Bulcaen, 2000, 448). Since the Devils Lake dispute had such a large public manifestation in the news media, and because existing literature has pointed to, but not yet discussed the potential effect, or nature of this manifestation, it is appropriate and timely for this research to address the gaps in understanding of the dispute through discourse analysis.

Critical discourse analysis, according to many authors, can do more than simply add to existing narratives on a topic; it can undermine and challenge hegemonic roles in society. In discussing the contribution of Norman Fairclough to modern discursive research, Blommaert and Bulcaen (2000, 449) argued “*It is not enough to lay bare the social dimensions of language use. These dimensions are the object of moral and political evaluation and analyzing them should have effects in society: empowering the powerless, giving voices to the voiceless, exposing power*

*abuse and mobilizing people to remedy social wrongs*". This approach of CDA, specifically the recognition that discourse has an effect on society and the possibility of challenging the dominance of given approaches is the main reason why CDA was applied in the conduct of this thesis. It is hoped that the CDA within this thesis will lay bare the communicative structures of power which operated in the Devils Lake dispute, and provide for discussion on the problems they created for avoiding or solving the dispute. For Devils Lake, the discourse can not only address the lack of discussion on the News Media, but also lay bare the assumptions that drove the debate and led to such a lengthy and heated political dispute.

The application of CDA in this thesis is similar to many previous empirical studies that analyze discourse, in that it is a hybrid of techniques from the vast literature of textual analysis scholars. However, the crux of this analysis is based largely on the work of Teun van Dijk (2006), Ruth Wodak (1995), and to a lesser extent Norman Fairclough (2003) (with the exception of his post-structuralist ontology). The already mentioned ambitions of CDA as represented by Fairclough are indeed supported by this thesis. As well, Van Dijk's (2006, 1) approach to ideologies within CDA also played a large part in the operationalizing of CDA for this thesis, as he argues: "*[a]s 'systems of ideas', ideologies are sociocognitively defined as shared representations of social groups, and more specifically as the axiomatic principles of such representations...[i]deologies are expressed and generally reproduced in the social practices of their members, and more particularly acquired, confirmed, changed and perpetuated through discourse*". His suggestion that ideologies are the values with which groups identify one another and their relative power is seen as similar to the social and political construction of scale in water management discussed by Norman and Bakker (2009), and thus central in answering the main research problem. The paths and strategies for avoiding or settling a dispute are determined by the identification of 'other' groups, and in this sense the discourse which promotes the groups and ideas in a dispute effect the route it will take. The role of identifying the 'us' and the 'other'

which ideology can dictate, was found to be central in the governmental discourse which is seen to have played a role in the dispute.

Critical discourse analysis can be seen as an umbrella term for a large number of textual analysis techniques which all work to the same ends of CDA mentioned previously. This thesis employed three aspects of CDA which were deemed appropriate for each research question. The following sections will discuss their merits and existing literature which influenced their use.

## 3.2 Characters and Arguments

It must be mentioned that here the term ‘character’ is used in lieu of ‘actor’, (van Dijk, 1993) ‘participant’, ‘agents’ (Fairclough, 2003), stakeholder (Howland et al., 2006) or any other descriptor, in order to acknowledge the narrative aspect of discourse this thesis adopts. Within textual studies, there exist differences of opinion in the relationship between textual characters and their relations to a variety of ontological positions, mainly the differences among ‘discursive events’, crystallized reality, and ‘positivist reality’. This thesis adopts a critical theory approach that rests perhaps somewhere between the ontological divide of constructionist ‘discursive reality’ and positivist ‘reality’ and believes that the characters presented in text are discursive creations based on ‘real life’ crystallized events and actors which have been interpreted by the authors of various texts (see van Dijk 1993 and Fairclough 2003 for more discussion of this). Character analysis was chosen in order to answer the first research question of which characters and arguments were presented in the news media. As mentioned in previous chapters, the findings of this process led to the discussion of scale in the dispute. Here, the characters and arguments as presented in the media were compared across newspapers and to those in the policy documents from the Corps and the NDSWC in order to understand the different scales at which the dispute took place. Identifying characters is relatively straight forward, though assessing their arguments,

does require what Alexandra Bogren (2010) calls “close reading”, the careful repeated reading of a text to clearly understand its contents for later analysis.

Howland et al. (2006) provide a method for cataloguing characters in news media, specifically for comparison to policy processes. They indicate that a simple coding matrix for characters which includes their reason for argumentation (e.g. legal, political, environmental) and their position on a given policy issue (usually, for, against, or neutral) can be helpful for policy research. For example, Howland et al., (2006) discuss news media presentations of characters for and against the 1987 Montreal Protocol. The same process was, for the most part with little modification, applied in this research. One notable difference is that Howland et al.’s (2006) analysis took more of a content analysis form which focused heavily on mathematical interpretations of the textual data, where as this thesis relies both on the ‘abundance’ or ‘regularity’ of a given topic as well as its potential ‘power’ or ‘influence’ in the policy or discursive world as evidenced by its relation to discourses in planning documents, scientific information, and (given the historical nature of the research) later developments.

### 3.3 Narrative

A second approach to CDA being operationalized in this thesis is narrative analysis. Narrative analysis was chosen to better understand the manner in which the dispute was talked about in policy and media as asked in research question 2 (Table 1.1). Narrative analysis has been shown to be useful for research on both policy (Roe 1989; Ospina and Dodge 2005) and the news media (Burgess 1990; Carvalho 2000, 2007) for indicating the preferred account of a dispute which competing interests wish to promote. As Hart and Daughton (2004, 88) explain “...*a growing number of scholars believe that there is logic to storytelling, a logic that the rhetorical critic must understand. These scholars argue that public policy is often determined by the stories persuaders tell*”. If public policy is truly driven by the promotion of stories, then undoubtedly the

news media, as perhaps the most powerful tools for policy makers to promote stories, is an important part of policy formation.

One scholar who argues that policy is indeed determined by narrative is Emery Roe (1989), who used the California Med-fly controversy to illuminate the relationship between narrative storytelling and the policy process. Roe (1989, 267) provides especially pertinent insights into the methods of this thesis because the author focused on the narratives of ambiguity in scientific understanding and the effect of a multiplicity of characters : *“treating an argument as ‘just another story’ is, of course, the time-honoured way bureaucrats and others deprecate the often very real merits of their opponent’s case. Indeed, most policy analysts have seen cases where organizational storytelling has hindered rather than helped the analysis of policy issues. As such, the kind of narrative policy analysis discussed above is intended only for those policy problems recognizably so complex and uncertain that stories and scenarios of necessity become the way these problems are articulated...”*.

Other researchers who have focused on narratives in policy research are Kaplan (1986) and Ospina and Dodge (2005, 153), the latter pair has suggested that *“narrative inquiry has the potential to help strengthen the quality of public administration research because it offers an orientation to inquiry and methodologies that are well suited for the nature of the problems and questions in a field, which, as White [1999] demonstrates, have narrative foundations”*. This again implies the point made earlier that policy disputes are about competing narratives or legitimation more than actual events or environmental changes.

Narrative analysis is also commonly applied to the news media; the most widely cited manifestation would be the work of Edward Herman, who along with Noam Chomsky (1988) suggested a structural theory regarding the political-economy of mass media and the relationship between political elites and news corporations (Herman and Chomsky, 1988). This approach, labeled the ‘propaganda model’, suggests that news stories carry with them narrative constructs that fit the desire of political elites (Herman and Chomsky, 1988). What is important is Herman

and Chomsky's (1988) further articulation that it is the selection of stories (narratives) by the news media that can have an effect on policy and the public's understanding of real life events. While the structural relationship between political interests and the news media will not be major a contributing factor to this thesis, it must be recognized that Herman and Chomsky's (1988) work to identify the narrative structure of news and the role it plays in public interests and policy making is important in the field of narrative analysis as it has influenced numerous empirical studies. One such study is Vincent (2000), who analyzed news media narratives of the NATO bombings of Kosovo in 1999 and found that the stories the news media told worked to emphasize pro-western ideologies found in American foreign policy. The author further suggested that these narratives worked to limit the discourse of the topic to easily recognizable black and white dichotomies in order to avoid opposition to existing American foreign policies.

The insights of Roe (1989) on the narrative structure of policy disputes, along with the relationship between political narratives in the news media and policy direction will be combined to discuss how newspaper coverage of both the dispute and the officials involved worked to promulgate the problem rather than solve it.

### 3.4 Framing

A final component of this thesis' approach to CDA will be an analysis of framing. The most commonly presented definition of framing is given by Entman (1993, 52) "*to frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described*". Benford and Snow (2000) discuss the connection between frames and the public, suggesting that frames represent the ways in which people understand public issues, and therefore what they are willing to do about them.



For Devils Lake, framing in the news media provides an abundance of insight into the manner in which a relatively complex issue was characterized for the public.

Many authors, including Snow et al. (1986), Gamson (1992; 1995)(as summarized in Fisher 1997), Capella and Jamieson (1997), Tankard (2001), and Oluasson (2009) develop their own case specific versions of framing analysis while staying true to Entman's general definition. This thesis pays particular attention to Fountaine and McGregor (2002) who present an understanding of framing which allows for two separate kinds to be analyzed. The first is to frame as a photographer would, that is to focus on, or accentuate, a given aspect of the story (Fountain and McGregor, 2002). The second is to frame as an architect would, that is to provide the general structure of the information in recognizable form (Fountain and McGregor, 2002).

This thesis adopts both of these approaches but for clarity sake, will label the first 'framing' and the other 'branding'. This thesis approaches the identification of 'photograph framing' (henceforth 'framing') with the help of Hart and Daughton's (2004, 89) work in rhetorical criticism. When looking for framing in the news media, this thesis accepted the authors' assertion that text is commonly designed to elicit certain universal human reactions; therefore the analysis of framing used in this thesis was based on the categorization of the emotional relationship of the frame (such as the emotions one might feel when viewing a picture framed a certain way rather than another). Framing here then was analyzed where key words, use of grammar or other discursive and rhetorical techniques are used to enhance a given reactive or emotional aspect of the story (e.g. 'confrontation', 'urgency' or 'cooperation').

The second kind of framing 'architectural framing', henceforth 'branding', was searched for according to Hansen and Machin's (2009) understanding of how a brand connects a piece of information to existing concepts the same that an architectural frame signifies the likely purpose of a building (e.g. churches don't look like banks and sports arenas don't look like office buildings). The authors state that "branding does not rely so much on describing product details but on loading the product with certain values..." (Hansen and Machin, 2009, 783). Branding

simply places a piece of information into a category or existing value set; such as in the case of Devils Lake where ‘political’, ‘legal’ or ‘environmental’ brands were found to be dominant. Hansen and Machin’s (2009) approach to branding then is similar to Fountaine and McGregor’s (2002), as both seem to suggest that a text’s internal contents can be less important than its relationship to other, already accepted, contents through its similar categorization.

The next few sections of this chapter explain how each of these methods was employed to the data selected for this thesis. However, first the process through which data were identified and collected is explained.

### 3.5 Newspaper and Time Period Selection

Since the Devils Lake dispute is commonly understood as one with two opposing sides (for the outlet and against) and for the most part belonged to distinct geographical regions (downstream and upstream), this thesis aimed to choose the print media which perhaps best reflected the two ‘sides’ of the dispute in order to best answer the fundamental research problem. This meant selecting one newspaper which was circulated in a region which could be identified as benefiting from the outlet, as well as one newspaper which circulated in a region which could be seen to be potentially harmed by the outlet. Because of the heavy activity of Canadian and Manitoban interests in opposing the outlet, and because so many have characterized the dispute as one between either Canada and the United States, or Manitoba and North Dakota, it was decided that one newspaper would be on the Canadian side and another on the American.

On the Manitoba side, the choice for newspaper was relatively easy given the small population of the province and the dominance of Winnipeg as a source of media. The *Winnipeg Free Press (WFP)*, based out of Winnipeg, Manitoba is one of the oldest newspapers still published in Western Canada. It is the official paper of record for the province of Manitoba and is

circulated throughout the province (History, 2012). In regards to the geography of the Devils Lake dispute, Winnipeg is located on the Red River, downstream of any potential effects of the outlet. While the city does not use the Red River or Lake Winnipeg for its drinking water, there are numerous reasons Winnipeg would be concerned about water quality of these systems, such as the reported \$50 million annual worth of the Lake Winnipeg Fishery (Background, n.d.). The *WFP* services nearly all of Manitoba, and in many communities is the only daily newspaper. In regards to smaller newspapers in Manitoba within the region of concern, there is also the *Red River Valley Echo*, the *Selkirk Journal* or the *Interlake Spectator*. However, none of these are daily newspapers and coverage therefore would not have contained the details this thesis was aiming for.

Newspaper selection on the North Dakota side required the selection of a newspaper circulated in a region which could be seen as benefiting from the operation of an outlet. The only daily newspaper to fit those criteria is the Devils Lake Journal (*DLJ*), the official newspaper of record for Ramsey County North Dakota. Unlike the *WFP* though, the *DLJ* is not the leading newspaper in the region (that would be the Fargo Forum). However, the *DLJ* is nonetheless the sole print news media which throughout the entire dispute was located in a region that could be perceived to be benefiting from the outlet. There is notable differences in the circulation of the *WFP* and *DLJ*, one represents a large region (the entire province of Manitoba), while the other represents a single county. This difference however, while noted, was not seen as a confounding factor but actually an integral part in the manifestation and role of discourses regarding the communities often associated with the dispute.

Before collecting articles from either newspaper, a time period had to be established. Based on existing literature, it was deemed that the beginning of 1995 was a justifiable starting point for the dispute because this is when discussions of an emergency outlet for the sake of flood relief began publicly taking place in North Dakota (Corps EIS 2003). Also, it was noted in pre-study searches of the *WFP* database that no Devils Lake news articles pertaining to an outlet

appeared before 1995 and only a single piece was found in that year. Further, there is no record of significant diplomatic communication between any Canadian and American participants on the matter of the outlet before 1995. The end date of the dispute was determined to be unknown at this point, while it may have already passed, it was deemed most beneficial to carry the analysis through to as recent of a date as possible. Since analysis was still being conducted in early 2012 and because the additional work of including the few articles from 2011 was deemed minimal, the most recent fully completed year (2011) was included in the last stages of the project.

### 3.6 Data Collection

Articles from the *Winnipeg Free Press* were accessed using membership to the newspaper's online archives, which stores entire newspapers in scanned .pdf format for download to members through a detailed search engine. Articles were searched for using "Devils Lake" in the 'exact phrase' entry and: "diversion", "outlet", "plan", "flooding", "water" in the 'at least one of' entry. Since returns sometimes varied from search to search, the terms were entered no less than twenty times, with the highest number from those searches noted; the search would then be entered again until the noted high was found. Articles would not be sifted through unless the search returned the noted high. As a result of this method, 618 documents were found, given that many results turned up sports or event listings taking place in Devils Lake, only 412 were deemed to be actual news articles. These articles were further read carefully for their discussion of the actual dispute as many simply mentioned Devils Lake in passing (e.g. an article on changes to provincial taxes may have stated 'Premier Doer, who recently returned from Devils Lake, released a proposal today to raise provincial sales tax'). After ascertaining which articles actually dealt with the dispute, 363 remained for analysis from the *WFP*.

Conversely, the *DLJ* is not archived digitally or online. Copies of past *DLJ* issues are only available in microfilm format at the State Historical Society of North Dakota. Travel to the

archives was required and consisted of manually scrolling through 14 years (the past three years are available online) of archived microfilm and scanning pertinent articles into .pdf form.

Because of the relative difficulty in accessing the articles, precaution was taken and over 1600 articles were scanned for later sifting. Eventually 562 articles from the *DLJ* (which combined those retrieved from the 2009-2011 online searches) were deemed appropriate for analysis. The reasons such a large portion of *DLJ* articles were scanned was the high number of news articles which spoke about the flood in other manners but not the outlet. However, this analysis is of the discourse surrounding discussion of the outlet and the dispute over it and not the flooding in Devils Lake in general.

### 3.7 Character and Argument Analysis

Analysis of the articles using NVIVO 10© coding software from the QSR Software Research Corporation began shortly after the articles were collected. It is important to note that no auto-coding, computational scrolling or digital searching of texts was used when coding, and the software's main purpose was to act as a highlighting, categorization, and numerical comparison tool for the researcher, meaning that all coding was done through the close reading of all the documents by the researcher.

The first coding process was characters and arguments, and was begun with no coding categories initialized. Characters were coded as they appeared, as were their arguments. Character codes were required to be mutually independent of one another and were coded based on the categorization which was mentioned for them in the article, despite whether the researcher knew of alternative titles for the same character (e.g. in the *Winnipeg Free Press*, members of the North Dakota State Water Commission (NDSWC) were often described as 'North Dakota officials' or 'members of the North Dakota Government' thus they were coded as 'Government of North Dakota' despite the reality that at many points in the dispute the *DLJ* indicated that the NDSWC

was at odds with the North Dakota State Government over various issues pertaining to the outlet). If characters were mentioned in two roles, they were coded as such, notably this did not occur often except for one important exception; Ramsey County Commissioner Joe Belford, one of the more visible characters in both the *WFP* and the *DLJ* was often cited in the *DLJ* as both his official position with the county as well as “and Devils Lake resident”. In this case, Belford was coded as both ‘Government of Devils Lake’ and ‘Citizen-American’. While this is not ideal, the alternative would have been to code Belford as ‘Government of Devils Lake’ and ignore the characterization of him by the *DLJ* as a local citizen, something deemed less desirable than the double coding. Here, the close reading of each article was seen as a major benefit as the researcher became very familiar with all characters, and given the organizational capacities of the NVIVO© software could easily double check these codes.

In regards to coding arguments, the codes were based on a careful reading of either the quotes provided by the characters to the press, or the argumentation in the characters name made by the media. While a difference between these two uses of sources (direct quote versus paraphrasing) was recognized as important, it was not differentiated in the coding process because the focus of this thesis is on the presentation and creation of discourse, and not an investigation into the reliability of textual elements and a given version of the event. Conversely, the difference between paraphrased and direct quotes could be seen as less important given that this differentiation does not affect either their presence or their role within the wider discourse as determined by the newspaper as long as the discourse is attributed to the correct character. The coding list for arguments evolved as the analysis was conducted, and because codes were being created in an *ad hoc* fashion in the same manner the characters were, it led to an increasingly large number of codes, due mostly to uncertainty of whether codes would eventually gain enough numbers to stand alone as a category, or whether they would be combined with other similar categories. When the analysis was complete arguments deemed too similar to merit their own code were combined in order to manage the large number of codes. Arguments were coded into

three broad categories; ‘for’, ‘against’ and ‘neutral/conditional’, further, each broad category had numerous codes such as: ‘for-hazard relief to DL’, ‘for-engineering can avoid risk’, ‘against-environmental risk’, ‘against-legal argument’, ‘neutral/conditional-scientific uncertainty’, ‘neutral/conditional-technological requirements’ and so forth.

Throughout this process, text was coded at the individual word scale for characters, and often at the sentence scale for arguments. In the unlikely event that a sentence contained multiple arguments from multiple characters, it was coded in separate parts, because of how the NVIVO© software runs its numeric queries it was essential to ensure that codes did not overlap unless intended. This would be more crucial in the framing analysis, but was also important to assure that characters did not receive argument codes not belonging to them, and for the added potential to run queries regarding the presence of characters or arguments and certain frames. When using a digital coding method, such as is available in NVIVO 10©, the level at which one codes text (e.g. word, sentence, paragraph or document) is essential in understanding the potential for later analysis. Though there is limited discussion of this within textual analysis research, Hart and Daughton’s (2004) and Elo and Kyngas’ (2007) discussions of textual components have influenced this aspect of the method used here. Coding done at the individual word level increases the specificity of the analysis but requires far more time. While more difficult and time consuming, it was deemed appropriate for character and argument analysis as well as frame analysis. As will be indicated later, this was in contrast to how narratives and brands were coded. A list of all characters and arguments from both newspapers is presented here in Tables 3.1 and 3.2.

**Table 3.1 - List of Characters and Arguments in the Devils Lake Journal**

<b>Devils Lake Journal</b>	
<b>Characters</b>	<b>Arguments</b>
American State Government	Against – Alternatives
Army Corps of Engineers	Against - Cost of Construction
Business – Canadian	Against - Cost-Benefit
Business - Devils Lake	Against – Environmental
Business - North Dakota	Against - Flooding Hazard Upstream
Canadian Provincial Government	Against - Lack of Transparency
Canadians – Unclear	Against - Land Ownership
Citizen – American	Against – Legal
Citizen – Canadian	Against – Ineffective
Devils Lake Basin Joint Water Resource Board	Against - Other-Unclear
Environmentalist – Unclear	Against – Political
Environmentalist – Canadian	Against - Tech Requirements
Environmentalist – USA	Against – Unnecessary
FEMA	For – Economic
First Nations Interest	For - Filter Unnecessary
FOE Canada	For - Hazard Relief to DL
Government of Canada	For – Legal
Government of Canadian Town-City	For – Natural
Government of Devils Lake	For - No WQ-IS Risk
Government of Manitoba	For - Other-Unclear
Government of Minnesota	For – Political
Government of North Dakota	For - Tech Solution
Government of United States	Neutral – Alternatives
Governments of Downstream ND Cities	Neutral - Cost-Benefit
International Joint Commission	Neutral – Environmental
Judicial - County (ND)	Neutral – Legal
Judicial – Federal	Neutral - Other-Unclear
Judicial - North Dakota	Neutral – Political
National Wildlife Foundation	Neutral - Research Required
ND State Health Department	Neutral - Tech Requirements
North Dakota Federal Representative	Neutral - Effectiveness
North Dakota Federal Senators	
North Dakota Gubernatorial Opposition	
North Dakota State Senator	
North Dakota State Water Commission	
People to Save the Sheyenne	
Practitioner – American	
Practitioner – Canadian	
Red River Basin Commission	
Sierra Club	



**Table 3.2 - List of Characters and Arguments in the Winnipeg Free Press**

<b>Winnipeg Free Press</b>	
<b>Characters</b>	<b>Arguments</b>
Army Corps of Engineers	Against – Alternatives
Business Interest – Canada	Against - Cost of Construction
Business Interest – USA	Against – Economic
Citizen(s) – Canada	Against – Environmental
Citizen(s) – Unclear	Against - Hazard Upstream
Citizen(s) – USA	Against – Legal
Environmentalist – Canada	Against - Other-Unclear
Environmentalist – Unclear	Against – Political
Environmentalist – USA	Against - Social-Cultural
First Nations	Against - Tech Requirements
Government - American State (Not ND)	Against - Unnecessary-Low Water
Government – Canada	Against - Lack of Transparency
Government - Canadian Federal Opposition	For – Economic
Government - Devils Lake	For - Hazard Relief To DL
Government - Local – Canada	For – Legal
Government – Manitoba	For – Natural
Government - Manitoban Provincial Opposition	For - No WQ-IS Risk
Government - North Dakota	For - Other or Unclear
Government - Unclear – Canada	For – Political
Government - Unclear – USA	For - Tech Solution
Government - United States of America	Neutral - Legal Uncertainty
International Joint Commission	Neutral – Alternatives
Judicial - American State Level	Neutral – Economic
Judicial - Federal American	Neutral – Effectiveness
North Dakota State Water Commission	Neutral – Environmental
Other or Unclear	Neutral - Hazard-Both Sides
People to Save the Sheyenne	Neutral - Other or Unclear
Practitioner – Canada	Neutral – Political
Practitioner – Unclear	Neutral - Tech Requirements
Practitioner – USA	

### 3.8 Narrative Analysis

For the narrative analysis, articles were read in their entirety several times after which narratives (often at least 3 or 4) were coded. The narrative codes were often sentences such as “political cooperation needed to solve flooding”. Since narratives take place as an overall structure of a text they were coded at the ‘source level’, that is, the entire article was coded for

narrative. However, this does not mean that only one narrative was coded per article. While there may be contrasting arguments about the multiplicity of narratives, it is argued here that multiple narratives, or stories, can be present in a single text. A list of narratives found in both newspapers is presented in Table 3.3.

**Table 3.3 - List of Narratives found in the Devils Lake Journal and Winnipeg Free Press.**

<b>Devils Lake Journal</b>	<b>Winnipeg Free Press</b>
Aboriginal Issues Being Ignored	Aboriginal Issues Being Ignored
Alternatives to the Outlet Need to be Explored Further	Alternatives to the Outlet Need to be Explored
American Actions Interfere on Canadian Sovereignty	American Actions Interfere on Canadian Sovereignty
American Federal Government Not Doing Enough	American Federal Government Not Doing Enough
American Federal Government Pledges Action on Issue	American Interests Should be Respected
American Federal Support is Conditional	Basin Overflow is Natural Process
Army Corps of Engineers Considers Options	Canada/Manitoba is Sympathetic to Flooding Problem
Army Corps of Engineers Looked to For Solution	Canada-U.S. Special Friendship
Canada Refuses to Negotiate	Canadian Actions Interfere on American Sovereignty
Canada/Manitoba is Sympathetic to Flooding Problem	Canadian Federal Government Not Doing Enough
Canada-U.S Special Friendship	Canadian Government Pledges Action on Issue
Canadian Federal Government not doing Enough	Canadians vs. Americans (Generalization)
Canadian Government Pledges Action on Issue	Citizens Take Action
Canadian Interests Should Be Respected	Devils Lake Community Faces Hardship
Canadian Official Visits DL	Environment & Sovereignty Needs to Be Reexamined
Canadian Officials Voice Concerns	Environmental Risk is Negligible
Canadian Opponents are Misinformed	Federal or State Outlet Faces Setback
Canadian Politicians Are Playing Opposition Politics	Group Claims Cultural Identification with Water
Citizens Take Action	Historically Based Dispute Continues
Cost-Benefit Analysis Needed	Intensity of Dispute Decreases
Devils Lake Community Faces Hardship	Intensity of Dispute Increases
Devils Lake Government is Optimistic About Solution	Internal Political Dispute
Downstream American Interests Fight Back	Legal Process Unfolds
East-End Outlet Moves Forward	Manitoban Government Not Doing Enough
Environmental Bureaucracy Hindering Flood Solutions	Manitoban Politicians Fight Back
Environmental Risk is Negligible	Manitobans vs., North Dakotans (Generalization)
Environmentalism Interference is a Problem	Media Coverage is Unsatisfactory
Environmentalists Oppose Outlet Plan	Natural Overflow is a Potential Concern
Federal or State Outlet Faces Setback	North Dakota Not Doing Enough
Federal Outlet Plan Moves Forward	North Dakota Working to Avoid Downstream Risks
Group Claims Cultural Identification with Water	Opposing Interests Cooperate to Negotiate Flood Solution
Historical Dispute Continues (Garrison)	Outlet (Potentially) Dangerous to American Environment
IJC Should not get Involved	Outlet is (Potential) Threat to Canadian Environment
Internal Political Dispute Takes Place	Outlet is Best Management Option
Intensity of Dispute Decreases	Outlet is One of Many Management Problems
Intensity of Dispute Increases	Outlet Plan Moves Forward
Lack of Progress on Outlet Creates Frustration in Region	Outlet requires Better Filter
Legal Process Unfolds	Political Alliance Building Effort
Local Business Supports Outlet	Politicians Negotiate Across Border
Manitoba Government not Doing Enough	Research Suggests Outlet Ineffective
Manitoba Politicians Fight Back	Role for IJC is Important
Manitobans vs. North Dakotans (Generalization)	Scientific Neutrality will Determine Outcome
Media Coverage is Unsatisfactory	Technological Approach to Solve Flooding
Natural Overflow is Potential Concern	
Non-Technological Solution to Flooding Discussed	
North Dakota Interests Debate Where to Put Outlet	

North Dakota Working to Avoid Downstream Risks
North Dakotan Government Pledges Action on Outlet
North Dakotan Officials Discuss Flooding Solution
Opposing Interests Cooperate to Negotiate Flood Solution
Outlet is (Potential) Threat to American Environment
Outlet is (Potential) Threat to Canadian Environment
Outlet is Best Planning Option
Outlet is Economic Cost/Funding Issue
Outlet is one of Many Management Problems
Outlet Needed at East End
Outlet Opponents Appeal to Third Party
Outlet Proponents Investigate Claims Against
Outlet Proponents Meet With American Opponents
Outlet Proponents Meet With First Nations
Outlet Proponents Reject Misinformation
Outlet Requires Better Filter
Political Alliance Building Effort
Political Cooperation Needed to Solve Flooding Problem
Politicians Negotiate Across Border
Public Consultation Should/Take(s) Place
Research Suggests Lack of Threat
Research Suggests Outlet Ineffective
Role For IJC Is Important
Scientific Neutrality will Determine Outcome
Solution to Flooding Called For Immediately
State May have to Undertake Outlet Project
State Outlet Moves Forward
Tech Approach to Water Quality Problems
Technological Approach to Solve Flooding
Third Outlet is Discussed/Pledged
Water Management Takes Place/Is Important

### 3.9 Framing Analysis

As mentioned previously, the framing analysis used two kinds of framing to analyze both the *WFP* and *DLJ*. Discussions of framing are present in Fisher (1997), Capella and James (1997), Carvalho (2000, 2007), and Papacharissi and Oliveira (2008). Of these, Carvahlo (2000, 2007) and Capella and James (1997) have been the most influential on this current thesis. However, while Carvalho (2000) provides much information on what framing is, how it operates and why it is important, she offers less on the applied method for identifying and analyzing it. Conversely, Papacharissi and Oliveiera (2008), Capella and Jamieson (1997) provide three criteria for finding and classifying frames which this thesis took into consideration. First, they should have “identifiable conceptual and linguistic characteristics”; therefore they should be seen

as the ways in which authors use language to transmit their perceptions to the existing understanding of their audiences. Second, according to Capella and Jamieson (1997), frames should be “commonly observed in journalistic practice”. Third, they should be reliably distinguishable from other frames. Also, as discussed earlier, Hart and Daughton’s (2004) explanation of emotive language as key to identifying frames was central in identifying the framing within the text along with the above mentioned criteria.

Unfortunately, little CDA literature makes mention of the scale at which framing should be coded. Unclear within textual analysis literature is whether frames are created by single words, within sentences and paragraphs or in entire stories. It is probably the case that all of these aspects of language can play a part in the framing process (for further discussion of the grammatical components of text analysis see Fisher 1997, Elo and Kyngas 2007 and Bogren 2010). For this thesis, it was determined that framing (as it related to Fountaine and McGregor’s (2002) description, Capella and Jamieson’s (1997) criteria, and Hart and Daughton’s discussion of emotions) would be analyzed at the word and sentence level (this would allow for the separate coding of frames within a paragraph and provide an enhanced level of detail. Words such as ‘frustrated’, ‘surprised’ or ‘fear’ were seen as common means by which information was framed by the criteria discussed above.

Branding or ‘architectural framing’ (the means by which authors use language to elicit a given conceptualization of a topic as discussed by Hansen & Machin, 2009), was coded at the paragraph level. This would allow for more analysis of the interaction between the two kinds of frames as many uses of framing took place within certain brands. For example, in the *WFP*, the frame of ‘confrontation or dispute’ was commonly used within the broader brand of ‘bilateral dispute’ and the frame of ‘urgency or fear’ was commonly found within the brand of ‘environmental issue’. This interaction between frames and brands, and the insights it provides was the reason the thesis chose to adopt both approaches. Frames were identified as key identifying categorical terms such as ‘environmental’ and related concepts, ‘legal’ and related

concepts or ‘hazard’ and related concepts. Frames and brands, as with the rest of the data, were coded as they arose and not into existing sets, as a result, again, large numbers were found and later combined if it was felt that the uniqueness of the code was questionable, such as in the case of the codes ‘unexpectedness’ and ‘surprise’. A list of frames and brands found in the analysis of both papers is presented in Table 3.4.

**Table 3.4 - List of Frames and Brands found in the Devils Lake Journal and Winnipeg Free Press**

<b>Frames</b>	<b>Brands</b>
Blame or Deflection	Continuation of Garrison
Commonality Amongst Opponents	Cultural Identity Issue
Concern or Attention	Diplomatic Process or Dispute
Conditionality or Compromise	Domestic Political Dispute
Confidence or Certainty	Economic Cost Issue
Confrontation or Defense	Engineering Issue or Problem
Cooperation with Allies	Environmental Risk Issue
Cooperation with Opponent	Legal Issue or Dispute
Critical or Insulting	Natural Hazards Issue
Denial or Rejection	Natural Process
Despair or Sympathy	Public Relations Battle
Differentiation or Othering	Public-Citizens Dispute
Disappointment or Failure	Scientific Issue or Dispute
Distrust of Opponents	Transparency Issue
Distrust of Own Side	Water Management Issue
Frustration or Impatience	
Inequality or Marginalization	
Inevitability or Eventuality	
Intensity or Passion	
Miscommunication or Incompetence	
Opportunism or Benefits	
Optimism or Hope	
Patience or Reason	
Pessimism or Worry	
Reassurance or Relief	
Secrecy or Dishonesty	
Uncertainty or Ambiguity	
Uncooperativeness or Stubbornness	
Understanding or Open-Minded	
Unexpectedness or Surprise	
Urgency or Fear	

### 3.10 Limitations

In regards to what CDA allows researchers to be able to conclude, discussion is most often directed towards questions of authorial intent. Philo (2007) specifically suggests that

discourse analysis on its own is limited in its ability to interpret media practices, and that interviews or some other form of direct interaction with the producers of news is needed. Furisch (2009, 238) refutes Philo's claims and argues that: "*[t]he narrative character of media content, its potential as a site of ideological negotiation and its impact as mediated reality necessitates interpretation in its own right*". Further, while Philo's criticisms of media analysis are noted and seen as important they are not seen as confounding factors in the need to analyze the presentation of an event by discursive powerhouses such as policy makers and the news media towards each other and the public.

The suggestion that textual analysis of news media is limited by its lack of understanding of the production of said texts is not of concern to this thesis and many other projects which analyze the discourse of a given event. The reason for this is that there remains an unlimited potential for understanding exactly what production and consumption are and where they take place. This thesis takes the same position as van Dijk's (2006, 127) who refutes 'intentionality' as a limitation of discourse analysis by saying: "many tenants in interaction analysis exclude intentions from their objects of research...what counts are (foreseeable) social consequences, and not (good or bad) intentions". Van Dijk (2006) points also out that across disciplines and epistemologies, researchers are often forced to ignore intentionality, either because of the structure versus agency dichotomy or sometimes because it simply doesn't matter. In regards to the structure versus agency problem, this thesis would point towards a quote from Edward Herman (2000, 105) in defending the 'propaganda model'; "intent is an unmeasurable red herring".

## 4 Chapter 4 – Analysis and Discussion

The purpose of this chapter is to discuss the findings of the discourse analysis and provide insight towards the fundamental research problem regarding the role of news media in the Devils Lake dispute. In total there are nine key findings: three related to political scale, three related to management scale, and one each related to science and politics, regional history, and economic valuation in natural resource management. The goal of this chapter is to respond to the main research problem and place these findings within the broader realm of the pertinent geographic literature discussed in Chapter 2. The first section will discuss the findings related to the geographical and discursive scale of the dispute which come largely from character analysis of the newspapers.

### 4.1 Character Analysis and Scale

Character analysis found that sub-national characters (provinces and states) were the most common characters in both newspapers. As seen in Table 4.1, in both newspapers the lead actors for and against the outlet were North Dakota and Manitoba respectively. The most common neutral characters found in the analysis are also presented in Table 4.1. The numbers in parenthesis represent the total count for the respective character within the newspaper and have been included to give the reader a perspective of relativity (e.g. the relative dominance of the Government of Manitoba as a character against the outlet in the *WFP*). Table 4.1 and related findings will be discussed in more depth throughout the discussion of scale.

**Table 4.1 - The five most common characters by position in each newspaper**

<i>WFP</i>		
<b>For</b>	<b>Against</b>	<b>Neutral</b>
Government of North Dakota (214)	Government of Manitoba (332)	Government of Canada (88)
Government of Devils lake (68)	Government of Canada (147)	Government of Manitoba (51)
U.S. Government (65)	American Environmentalist (81)	U.S. Government (36)
NDSWC (56)	U.S. Government (48)	Army Corps (24)
American State (Not ND) (30)	Local Manitoban Government (46)	Government of North Dakota (21)
<i>DLJ</i>		
<b>For</b>	<b>Against</b>	<b>Neutral</b>
Government of North Dakota (159)	Government of Manitoba (199)	Army Corps (63)
NDSWC (120)	People to Save the Sheyenne (103)	U.S. Government (21)
Government of Devils Lake (82)	North Dakotan Citizen (68)	Government of Manitoba (18)
ND Federal Senators (40)	Government of Minnesota (57)	Government of Canada (13)
North Dakotan Citizens (28)	American Environmentalist (32)	NDSWC (13)

Table 4.2 is presented in order to indicate the most common arguments related to the outlet presented in both newspapers. As can be seen, in both newspapers the main arguments against the outlet are environmental, as in both the WFP and the DLJ it was present over 100 times more than the next argument against the outlet. Also noteworthy for later discussion is how ‘other-unclear’ was the top ranked argument in favour of the outlet, later it will be indicated how this is thought to be related to the marginalizing of flooding narratives that took place as the dispute carried on. Finally, as will also be discussed later, the general presentation of the dispute was that of a confrontation; it is proposed that a result of this then is the minority presentation of neutral positions on the outlet in Table 4.2.



**Table 4.2 - The five most common arguments by position in both newspapers**

<i>WFP</i>		
<b>For</b>	<b>Against</b>	<b>Neutral</b>
Other-Unclear (218)	Environmental (371)	Environmental (87)
Hazard Relief (203)	Legal (267)	Legal (86)
No Risk (106)	Other-Unclear (222)	Political (79)
Technological Solution (47)	Political (170)	Other-Unclear (56)
Political (47)	Technological Requirements (52)	Hazard to Both Sides (20)
<i>DLJ</i>		
<b>For</b>	<b>Against</b>	<b>Neutral</b>
Other-Unclear (184)	Environmental (246)	Research required (86)
Hazard Relief (177)	Legal (149)	Other-Unclear (35)
No Risk (54)	Political (85)	Economics (30)
Economic (50)	Other-Unclear (63)	Political (25)
Technological Solution (49)	Economics (45)	Technological Requirements (23)

Tables 4.3 and 4.4 combine Tables 4.1 and 4.2 for the WFP and DLJ respectively to indicate the general position of characters in each newspaper. Tables 4.3 and 4.4 illustrate how the arguments for the five most common characters in each newspaper were divided by percentage amongst the positions for, against or neutral towards the outlet. Highlighted in blue (WFP) and red (DLJ) are each character's most common used argument in either the: for, against or neutral categories. As can be seen, there is a similarity between the version of the story presented in these last two tables and the version of the dispute given in Chapter 1 as explained via existing literature. It seems clear that the main opposition to the outlet was reported to be the Manitoba Government for environmental reasons related to the aforementioned concerns over invasive species and water quality changes in Lake Winnipeg (though it will be discussed later how this environmental narrative was in many ways an economic narrative), and the main proponent of the outlet was reported to be the Government of North Dakota for hazard relief

reasons (though the flooding itself would become less of a focus of media coverage as the dispute carried on).

Tables 4.3 and 4.4 also indicate the more moderate positions of both federal governments. In both newspapers, the Canadian and American federal governments rank high on the list of characters making neutral arguments, and in both newspapers they did so from legal and political positions. This presentation of the federal governments as neutral will be shown to be central in findings related to the political scale of the dispute as well as its general confrontational discourse. These tables will be referenced throughout the rest of this chapter when needed.

**Table 4.3 - Characters and argument combinations in the DLJ by percentage for each of the five most common characters.**

					For - Economic	For - Filter Unnecessary	For - Hazard Relief to DL	For - Legal	For - Natural	For - No WQ-IS Risk	For - Other-Unclear	For - Political	For - Technological Solution	For - Totals
1 - Government of North Dakota					3	7	33	1	3	14	25	8	6	100
2 - North Dakota State Water Commission					3	3	36	2	0	8	33	3	14	100
3 - Government of Devils Lake					9	2	45	1	0	2	30	4	6	100
4 - North Dakota Federal Senators					15	0	28	0	0	5	33	20	0	100
5 - Citizen – American					29	0	32	0	7	0	32	0	0	100
	Against - Alternatives	Against - Cost of Construction	Against - Cost-Benefit	Against - Environmental	Against - Flooding Hazard Upstream	Against - Lack of Transparency	Against - Land Ownership	Against - Legal	Against - Ineffective	Against - Other-Unclear	Against - Political	Against - Tech Requirements	Against - Unnecessary	Against - Totals
1 - Government of Manitoba	0	0	8	39	0	3	0	23	1	7	20	1	0	100
2 - People to Save the Sheyenne	6	0	6	29	8	4	7	22	6	10	1	0	2	100
3 - Citizen - North Dakota/American	3	3	10	26	9	1	13	19	4	9	1	0	0	100
4 - Government of Minnesota	0	0	4	40	2	2	0	14	0	11	28	0	0	100
5 - Environmentalist – USA	0	6	6	47	0	0	0	28	0	6	6	0	0	100
	Neutral - Alternatives	Neutral - Cost-Benefit	Neutral - Environmental	Neutral - Legal	Neutral - Other-Unclear	Neutral - Political	Neutral - Research Required	Neutral - Tech Requirements	Neutral - Effectiveness	Neutral - Totals				
1 - Army Corps of Engineers	3	22	0	3	13	3	51	5	0	100				
2 - Government of United States	0	14	10	19	0	33	10	10	5	100				
3 - Government of Manitoba	6	0	11	6	6	6	28	39	0	100				
4 - Government of Canada	0	0	23	8	15	31	15	8	0	100				

5 - North Dakota State Water Commission	0	38	8	0	0	8	46	0	0	100
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**Table 4.4 - Characters and argument combinations in the WFP by percentage for each of the five most common characters.**

	For - Economic	For - Hazard Relief To DL	For - Legal	For - Natural	For - No WQ-IS Risk	For - Other or Unclear	For - Political	For - Tech Solution	For - Total
1 - Government - North Dakota	1	29	4	1	19	31	6	9	100
2 - Government - Devils Lake	3	32	3	0	13	41	4	3	100
3 - Government - United States of America	0	18	11	2	8	23	31	8	100
4 - North Dakota State Water Commission	2	23	4	2	18	43	2	7	100
5 - Government - American State (Not ND)	3	37	0	0	7	43	0	10	100

	Against - Alternatives	Against - Cost of Construction	Against - Economic	Against - Environmental	Against - Hazard Upstream	Against - Legal	Against - Other-Unclear	Against - Political	Against - Social-Cultural	Against - Tech Requirements	Against - Unnecessary-Low Water	Against - Lack of Transparency	Against - Total
1 - Government – Manitoba	0	0	3	38	1	20	20	13	0	5	0	0	100
2 - Government – Canada	0	0	0	24	1	24	17	29	1	5	0	0	100
3 - Environmentalist - USA	1	0	0	48	0	22	11	4	0	14	0	0	100
4 - Government - United States of America	2	4	0	35	0	17	8	21	2	2	2	6	100
5 - Government - Local - Canada	0	0	4	28	0	15	24	28	0	0	0	0	100

	Neutral - Legal Uncertainty	Neutral - Alternatives	Neutral - Economic	Neutral - Effectiveness	Neutral - Environmental	Neutral - Hazard-Both Sides	Neutral - Other or Unclear	Neutral - Political	Neutral - Tech Requirements	Neutral - Total
1 - Government – Canada	40	0	0	0	11	1	7	38	3	100
2 - Government – Manitoba	37	0	0	0	27	4	14	16	2	100
3 - Government - United States of America	19	0	0	0	14	3	28	33	3	100
4 - Army Corps of Engineers	4	21	0	0	46	0	29	0	0	100

5 - Government - North Dakota	19	0	0	0	29	0	10	38	5	100
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Finally, because the discourse of a text is created through the combination of many forms of storytelling, the main findings of the character analysis are aided by supplementary findings from both the narrative and framing analysis. Nonetheless, it is believed that the presentation of characters and their arguments played the largest role in the discursive creation of the scales of the dispute.

#### 4.1.1 Political Scale Finding 1 – Dominance of Subnational Governments

As mentioned, existing literature on Devils Lake, specifically work by Springer (2007), Paris (2008) and Whorely (2008), focuses on the relationship between subnational governments and their federal counterparts. The character analysis here found that sub-national governments were predominantly referred to in the media by a large margin. This is evidenced by both the high presence of the ‘Government of Manitoba’ and ‘Government of North Dakota’ characters as well as their role as the characters through which the primary arguments ‘for’ or ‘against’ the outlet were most often presented (Table 4.1, 4.3 and 4.4). For example, the argument that the outlet would have negative effects on the environment was, in both newspapers, the most common argument against the outlet and was the main argument the Government of Manitoba made in either newspaper, whereas the Canadian Government’s arguments were split between environment, legal and political concerns. In the appendices it is also visible that the ‘against-environment’ argument was most commonly attributed to the Government of Manitoba (43% of the time), while the next nearest characters to make this argument, Government of Canada and American environmentalists, were quite far behind (8% each).

While the dispute was presented to the public by the news media as one largely between Manitoba and North Dakota, what was interesting was the partnering of federal level

governments with each of these dominant characters. In both newspapers, the respective federal governments were presented as powerful allies who were the target of sub-national courting. In the *DLJ*, this was especially prominent in regards to funding for the outlet (e.g. Associated Press, 2001, April 10). Also interesting was the manner in which both newspapers presented the narrative that Manitoba and North Dakota needed their respective federal governments to take action in support of them. This was presented as necessary to influence not only their rival sub-national government but also to reach into either Ottawa or Washington politics (e.g. Samyn, 1997, March 20; Associated Press, 2005, July 1). As a result, the federal governments of both countries were most often presented in the media as neutral agencies carefully weighing the options of the dispute. This insight is not only clear from the character analysis numbers in Table 4.1 but also through the combining of these findings with those of the narrative analysis. This combination of characters and narrative found that presentation of the dominant political narrative of ‘alliance building effort’ commonly overlapped with the presence of the federal governments. This narrative of alliance building then was most commonly the story of Manitoba or North Dakota attracting support from their federal governments.

In regards to existing research, this finding is specifically interesting to much of the work on Devils Lake, because, as mentioned, a large portion of it focuses on the relationship between federal and sub-national governments in the dispute. The finding creates harmony between the version of the dispute presented in the media and the research of Springer (2007) and Signorelli (2010) as both authors identified that the subnational governments were the most active. The authors also identified that there was an inherent problem in the dispute in that local interests relied on the ability of Washington and Ottawa to provide for, or help avoid, participation of the IJC (Springer 2007; Paris 2008; Signorelli 2010). Thus, it would make sense for both sub-nationals to be courting either Ottawa or Washington.

This finding of sub-national dominance also allows for discussion of the claim by Paris (2008) that the onus to solve the dispute was largely the Federal Government's. Paris (2008, 14)

suggests that the Canadian Federal Government did not fully participate in the dispute until 2005, a time which newspaper analysis shows was after much of the most heated public debate on the issue (though this thesis would suggest Canadian Federal involvement began in 2002). Paris (2008) and Springer (2007) both suggest that Canadian federal involvement needed to not only come sooner but also, as Paris (2009, 17) puts it, work to ‘moderate Manitoba’s position’ and avoid a lengthy dispute. Via the newspaper analysis it does not appear as if Manitoba diplomatic efforts and public stances placed a large emphasis on the IJC or federal arbitration until a later stage of the dispute. Therefore, this thesis agrees with the authors that the Canadian Federal Government’s involvement needed to come before characters and arguments became immersed in the narratives that would eventually drive the dispute. As shown below, the analysis found that the news media discourses in the dispute provided potential problems for federal involvement.

By the time the Canadian and American federal governments became more active in the dispute in the early 2000s, the issue was nearly a decade old. By this time, the issue was being framed along national lines and from a rather confrontational view, with highly rhetorical editorials appearing in newspapers at the national level (e.g. Byers, 2005). Had the Canadian or U.S. government interjected to promote what Paris calls a ‘concerted advocacy campaign’ to moderate local positions and attempt to solve the dispute with the broader Canada-U.S. relationship discussed in Chapter 2 in mind, it would have risked the possibility of not only local resentment, but also the perception that one federal government was caving to the other (a 2010 study by the Canada-U.S. institute found that 41% of Canadians were under the impression that the United States had a major effect on Canadian environmental policy, Anderson and Stephenson, 2010, 14). Table 4.5 indicates that this resentment may have occurred to some extent in the *WFP* as the rise in the Canadian Federal Government as a character in the dispute coincided with the rise in the “Canadian Government not doing enough” narrative. Table 4.5 shows how upon the entrance of the Canadian Federal Government into the public face of the

dispute in the early 2000s, the WFP developed more narratives critical of the Federal Government.

**Table 4.5 - The rise in narratives critical of the Canadian Federal Government over time in the WFP**

	1995-2002	2003-2008
Government of Canada References	41	222
Canadian Federal Government Not Doing Enough Narrative	0	48

The reason it is suggested that there may have been difficulties facing the Federal Government's involvement is simply that the optics of the dispute, that is its 'public face' as Springer (2007) calls it, were already well defined and based on over a decade of simplifying, highly rhetorical discourse regarding the dichotomy between Manitoban and North Dakotan interests. This thesis argues that it would have been entirely uninviting for any federal public official to involve themselves in the situation in any significant manner divergent from the predominant discourse of conflict and differentiation taking place in the local news media. This exact instance was displayed by the political opposition and media scrutiny a Canadian Federal Cabinet Minister faced after visiting Devils Lake to see the effects of the flood. In several *WFP* articles after the visit, opposition politicians used the media to depict the federal official as trying to "undermine Manitoba's efforts" (e.g. Rabson, 2007, July 5). An article nearly 8 weeks later continued to portray the federal official in a negative manner with the headline "Toews gets knuckles rapped" in regards to criticism the Canadian Federal Government was facing from Manitoba officials (Rabson, 2007, August 24)

While it is understandable that the Federal Governments of both sides need to keep the broader bi-national relationship in mind when pursuing involvement in local environmental disputes, this thesis would add that in the case of Devils Lake it could have been a large risk to the public perception of either federal government to enter into the dispute's public face in an attempt to moderate the divisive discourse taking place. It was also found that the sub-national attitudes which dominated the media coverage worked to minimize the broader Canada-U.S.



relationship as well as to ferment aggressive local attitudes. Had the dispute been constructed from the beginning with the federal governments as the prominent characters, the media, and public discourse surrounding the dispute may have been more moderate in line with the federal positions.

This evidence supports suggestions by both Springer (2007) and Paris (2008) that the broader cooperation experienced at the federal level between Canada and the United States can break down in the event of local disputes. In this case, the sense of cooperation or compromise which may sometimes be present at the federal level had little chance of gaining traction in the dispute by the mid 2000s when both federal governments began involving themselves in Devils Lake. It is suggested here then that a large reason the broader Canada-U.S. relationship can break down at the local level is the news media's interest in covering local interests as well as rhetorically combative issues (Vincent 2000, Davis 2003). This, however, is not to suggest that the newspapers should have disregarded local characters and narratives. The point of this finding is to show that the news media plays a role in eliminating the often more moderate federal views regarding Canadian and American relations. This implies that in transboundary water disputes, officials and water managers need to be keenly aware of the differences between local tensions and the wider relationship between two nations. It is suggested here then that the news media is as good a place as any to identify these tensions and note their differences from relations at the national level. As will be discussed in the third finding, high level dispute resolution mechanisms, such as the IJC, may need to pay particular attention to local attitudes or risk long-term resentment and discursive omission from policy disputes.

#### 4.1.2 Political Scale Finding 2 – Simplification of Characters in WFP

It was found that the *WFP* coverage of the dispute omitted a large portion of the internal North Dakotan opposition to the plan. This is evidenced by the lesser number of characters in the

*WFP* and the grouping of characters together into broader categories such as ‘North Dakota officials’. Conversely, the *DLJ* in the process of covering the local aspects of the plan’s creation (e.g. local meetings, public information sessions) worked to form a more detailed list of characters involved in the dispute, that when compared to policy documents from the Army Corps and NDSWC paint a more accurate picture of the plan’s actual formulation process than that of the *WFP*’s character list. That is to say, that because there was substantial local opposition or uncertainty towards the outlet, even within Ramsey County, covered by the *DLJ*, that the *DLJ* and planning documents read very similar in terms of issues and actors addressed. Conversely, the somewhat more simplistic ‘Manitoba versus North Dakota’ dichotomy presented commonly in the *WFP* is quite different from the outlet’s planning documents, because, as will be shown later, these documents focused mostly on local state matters.

The main evidence for this is that in arguments in favour of the outlet the characters in the *DLJ* were relatively well distributed amongst the three specific proponents also identified in Corps and NDSWC policy documents, that is the Government of North Dakota (primarily the office of the Governor), the NDSWC, and the Government of Devils Lake (see Table 4.1). In contrast, a more umbrella understanding of the ‘Government of North Dakota’ dominated *WFP* presentations of arguments in favour of the outlet, while distinctions for the NDSWC and Devils Lake Government were much fewer. The next closest character in favour of the outlet presented in the *WFP* was the Government of Devils Lake at nearly a fifth of as many mentions as the broader North Dakota Government character (See Table 4.1). This was largely the product of vague character titles such as ‘North Dakota officials’ or ‘the North Dakota Government’ being attributed to characters within organizations which are separate from the North Dakota Government as a whole or had distinct goals from other their fellow state level agencies and thus deserved clarification (e.g. many North Dakota State Representatives were opposed to the outlet, as were numerous community governments in North Dakota).

Therefore, between the two newspapers there was an apparent difference in the identity of the opponents to the outlet. For *WFP* readers, this may have acted to enforce the dispute as one being drawn along national and sub-national lines, and omitted that some of the earliest opposition the outlet plan faced came from local interests such as Valley City officials (e.g. Associated Press, 2000, March 21), regional branches of various environmental groups (e.g. Weixel, 1999, May 10), and the People to Save the Sheyenne citizens group (e.g. Wetzel, 2004, March 21); all North Dakota based interests. There are multiple roles this difference in presentation of the outlet's opponents may have had. First, for readers of the *WFP*, there was a central 'Manitoba versus North Dakota' narrative of the event that in actuality was a later development in the plan's formulation and media discourse in Devils Lake and not necessarily addressed in the planning documents themselves due to the narrow political borders of water management within them. This creates a clear gulf amid the narrative understandings of the outlet between the *WFP* readers and the outlet's proponents. Second, the differing geo-spatial understanding of the event's characters between newspapers, and therefore regions, may have worked to limit cooperation and coordination of interests across the border; this point is discussed further below.

As Callaghan and Schnell (2001, 184) found, news media acts to allow interests groups the means to promote their legitimization by acting as the 'conduit for the dissemination of other players' frames'. As a result of the media as conduit, the interests of one group can be received by other like minded individuals and be promoted or given momentum, this is especially important when these like minds are separated by geography but not interests, and thus the media can act to eliminate the role of space in fostering collaboration. Given that the early period of the dispute took place with the internet in its infancy (especially compared to its capacity to form networks today), the news media was crucial for allowing or omitting interests in the dispute to find like minded collaborators and gain discursive and political power.

In regards to the main research question, early *WFP* coverage of the outlet (1995-2002) showed very little mention of local North Dakota opposition to the plan. Therefore, Manitoba interests who may have been opposed to the outlet early on in the dispute were potentially unaware of the efforts in North Dakota to stop or alter the outlet by the characters mentioned previously. It is then suggested that the less detailed political level at which the *WFP* covered the outlet dispute and its partial homogenization of North Dakotan interest as universally in favour of the outlet may have worked to eliminate the potential for local Manitoban and North Dakotan communities to find common interests. More media presentation of the role of smaller municipal governments opposed to the outlet such as Valley City, Grand Forks and even Nelson County in the earliest phases of the outlet planning process could have altered the public understanding of the dispute away from one with simple nationalistic overtones and confrontational rhetoric; which will be indicated later to have played a major role in fostering the dispute in the first place.

#### 4.1.3 Political Scale Finding 3 – Presence of Transboundary Scale Silenced

It was found that the transboundary role of the IJC and the wider political scale of dispute mechanisms were handled differently in the two newspapers as well as compared to the planning documents for the outlet. The *WFP* did discuss the IJC, often due to politicians making statements that the dispute needed to be referenced to the IJC (Samyn, 2005, March 13). However, as discussed earlier, a majority of this IJC promotion took place after 2004 (though, few articles before then did discuss the need for the IJC to become involved, mostly at the urging of the then Canadian Foreign Affairs Minister; see Samyn, 1999, November 23). Before this period, the IJC remained a limited point of discussion for the federal governments, such as the 2002 offer from the U.S. Government to reference the Corps federal version of the outlet to the IJC discussed in the academic literature (Springer, 2007). Nonetheless, in the latter half of the dispute the IJC became a very common point of discussion in the *WFP* (e.g. Samyn 2005, April

7; Samyn and Rabson 2005, June 21). However, unfortunately for pro-IJC Canadian interests, Whorely (2008, 630) notes that by 2005 when Manitoban and Canadian pressure to involve the IJC was more present in the news media, the positive relationship between the President Bush Administration and the North Dakota Government added obstacles to fostering the high level political cooperation needed to involved the IJC.

In contrast, the IJC was practically non-existent in *DLJ* coverage of the dispute, appearing scarcely in 17 years of coverage analyzed for this thesis. Existing work on Devils Lake and the related Garrison dispute may provide insights as to the reasons for this lack of IJC mention in the *DLJ*. Whorley (2008, 617) notes both that “[Garrison] has cast a long and persistent shadow”, and “the defeat of [Garrison] has contributed to a weak transboundary relationship in the region due, in part, to diminished support for the International Joint Commission and the Boundary Waters Treaty”, similar resentment was also noted by Springer (2007). It is therefore possible that a resentment of the IJC as a result of the previous decision on the Garrison dispute played a role in the omission of the transboundary scale of the dispute and the discussion of resolution mechanisms on the *DLJ*.

It appears that the lack of IJC mention in the *DLJ* enforces Whorley’s (2008) suggestion that a discourse of resentment towards the IJC existed, or exists, in North Dakota as a result of history. The *DLJ*, by actively presenting an IJC-less narrative was out of step with both *WFP* coverage and academic work produced during the dispute which unanimously mentions the commission (Rosenberg 2000; Knox 2004; Flanders 2006; Hollis 2007; Kempf 2007; Springer 2007; Paris 2007; Whorley 2008; Signorelli 2010). The effect of this on the dispute’s path might be evident in reviewing the NDSWC permit applications for the outlet. The permit applications are thorough documents and appear to have been written after an extensive amount of public consultation. Notably, the topics of discussion in the comment sections of the outlet permits coincide with media discourses in the *DLJ* in that the questions and issues raised were also regular topics of *DLJ* coverage. This suggests that many involved in the public meetings obtained

much, or at least some, of their information on the outlet from the local newspaper. Perhaps related then, there are no comments about the IJC as a dispute mechanism in the NDSWC permit applications. The sole significant reference to the commission in any sense in the NDSWC permit applications is in the comment section of the 2003 applications, and is in regards to the standards established by the BWT, 1909 and not the use of the IJC as a dispute mechanism. Therefore, both forms of texts originating in the upstream area of the dispute (North Dakota) omit the narrative of IJC involvement present in downstream news media and academic discussions.

In their newspaper and policy analysis of the 1987 Montreal Protocol on ozone, Howland et al. (2006, 218-23) indicated that the lack of regular presence or high rhetorical content in the news media removes an actor from a position of power in policy disputes, or indicates an existing lack of perceived power by other negotiating parties. As will be discussed again in the second section of this chapter, the ability for an actor to deliver narratives is central to ‘winning’ a policy dispute (Roe, 1989). In this case, it seems significant then that despite the presence of the IJC as the central character in academic literature regarding the dispute, and its presence in the news media downstream of the outlet, the IJC and its supporters were not given a voice to create their own arguments or narrative about the dispute in the *DLJ*. However, whether there is a causal connection between this lack of IJC discussion in the *DLJ* and the lack of IJC discussion in the outlet planning documents or the unwillingness for outlet proponents to submit the project for IJC referral would likely require further research.

In regards to the main research problem, this finding indicates that the news media discourse, specifically the difference in discourse between *DLJ* and *WFP* in regards to the IJC could have played a role in the lack of willingness for North Dakota to involve the IJC by withholding the narrative of IJC as an important character from the public discussion. This thesis agrees with the assertions that there was a discursive connection between Devils Lake and Garrison. However, worth pointing out is the lack of Garrison narratives in the *DLJ* as compared to the *WFP* and the potential that this difference reflects the idea that there is continued

resentment about Garrison within some aspect of the North Dakota community. What this may mean for the Devils Lake dispute is that not only were Knox (2004), Springer (2007) and Whorley (2008) correct that there is a tacit connection between past and present regional conflicts when they involve many of the same ideas, resources and people, but that it is further possible that understanding the comparative history between regions in conflict with one another is necessary in order to better understand environmental disputes.

#### 4.1.4 Management Scale Finding 1 – Governmentality

Up until this point, the analysis has produced findings related to the discursive creation of political scale in the Devils Lake dispute; discussing sub-national dominance, character simplification and transboundary omissions. This thesis now turns to modes of discourse employed in the dispute, by the media and policy, which deserve a broadening of the gaze of analysis to include questions regarding the role and understanding of government in natural resource management and disputes.

Many geographers have explored philosopher Michael Foucault's ideas on power and discourse, especially for their interpretation of spatial and institutional perceptions (see Crampton and Eldon, 2007 for a collection of these essays). One idea in particular that is of interest to geographers is Foucault's (1978, 9) idea of 'governmentality' which he defines himself as "the practices which are put to work to govern men [sic], that is to enable a certain manner of conducting them, government as the conduct of conduct, how to conduct the conduct of men". Dean (1994, 156) points out that Foucault's governmentality can be understood in several ways, one of which is a form of 'governmental self formation' where "assorted agencies, authorities, organizations and groups seek to shape and incite the self-formation of the comportments, habits capacities and desires of particular categories of individuals towards particular ends". It is no surprise then that this notion of governmentality became of interest to geographers; as Huxley

(2007, 185) explains, eventually “[g]eographic studies [increasingly] drew on this framework...examining the role of space in disciplining, fostering, managing and monitoring the conducts of individuals and the qualities of populations. Both Dean (1994) and Huxley’s (2007) interpretation of governmentalities lend to how it will be used in this thesis to discuss the next three findings.

When analyzing the discourse of the two newspapers, it is possible to re-interpret the dispute as one about the legitimating of certain forms of control over both the natural world and citizens in given constructed jurisdictions. In the *WFP*, and within comments made by Canadian and Manitoba officials, the outlet was a question of the responsibility of nations and governments to other nations and governments, rather than of some individuals to others. Of course modern water management is, and should be, under the mandate of an organized public government. This thesis, however, suggests that a discourse which fails to question to connections among governance structure, citizens and the natural world is simply reflective of a broader mentality, or means of practice, in which space, territory and responsibility is currently understood within the confinements of a certain version of public government and arbitrary political borders. Indeed, it is suggested that the governmentality identified here worked to promote the discursive role of national or territorial borders and omit the realities of natural human-environment relations which take place separately from these arbitrary lines. This relates to Foucault’s notion of governmentality, or government as the ‘conduct of conduct’, as it seems clear through the findings that the conduct and parameters of the all the governments involved worked to influence the management of water with the notions of borders as drivers rather than obstacles, and as inescapable discursive realities.

Bakker and Norman (2005) noted the logistical barriers to cooperation provided by borders, such as the inability for organizations to fundraise across borders and the differences in laws and regulations between jurisdictions. The authors also noted that the drivers of cooperation were mostly ‘informal governance mechanisms’ such as personal relationships and regular face-



to-face meetings, though they do point out that government financial resources can be central in facilitating some of these drivers. With Bakker and Norman's more pragmatic insights in mind however, it will be concluded that the main way governmentality is suggested to have operated in news media coverage of the Devils Lake dispute was by creating a clear 'us' and 'them' for all involved parties to refer to.

In regards to the presence of characters and arguments in Tables 4.1 and 4.2, one might believe there is reasonable mix between governmental characters (e.g. states, countries, agencies and departments) and non-governmental characters (e.g. environmental groups and citizens,) and that this critique is thus unwarranted. However, in this instance it becomes clear why a content analysis would not have been sufficient. In understanding the placement of characters into the wider discourse of both newspapers, it becomes clear that as a whole the issue of Devils Lake was conducted entirely through the lens of established borders and relatively high-level government agencies. Only a few of the narratives found actually challenge the notion or legitimacy of the given borders and agencies in charge of conducting the Devils Lake dispute (as can be seen in the appendices, they are in the vast minority). For the main research question of this thesis, it means that this discourse played the role of reinforcing the notion of water management within the established borders of the region, made rare mentions of other conceptions of water management, and entirely omitted the challenge to sovereignty which natural resource management regularly provides (Caldwell 1993).

As Huxley (2005, 187) discusses, "governmentality includes the exercise of discipline over bodies". It is "the ways in which assorted agencies, authorities, organizations and groups seek to shape and incite the self-formation of the compartments, habits, capacities and desires of particular categories of individuals towards particular ends" (Dean 1994, 156; Foucault 1990, Huxley 2005). Governmentality is thus commonly written about in geography as a battle over 'what and who should be governed and by whom' (Dean, 1998). For natural resource management, governmentality not only follows its regular goal of the subjugation of individuals

(Foucault, 1990), it also works to place the natural environment under the purview, and even ownership of governmental mechanisms. The problem then is that when these resources or spaces of power, known as government jurisdictions, overlap, there is inherent conflict of interest that would not be present if governance were not based entirely on jurisdiction and the self-differentiation discourse of one citizenry from another which can surround it.

This thesis then suggests that the existence of governmentality in the news media presentation of the dispute worked to foster what Newman and Paasi (1998, 195-198) call 'notions of us and the other', which are reliant on the discursive and narrative effect of boundaries or borders on conflicts. Without the governmentality that was present, it is possible that the definitions of 'us' and 'the Other' in the Devils Lake dispute would have been left to other definitions or simply avoided all together. For Newman and Paasi (1998, 201), "it is particularly important to deconstruct these text narratives within conflict situations, especially in terms of understanding who creates these texts and for what purpose". For this thesis the 'author' of these texts is identified as the news media and, through access to the news media, the officials of Manitoba and North Dakota as well. The reason why they might create a governmental discourse based on 'us' and 'the other' may be linked to Svendsen et al.'s (2005) suggestion that decisions in water management need to be understood via political economy.

While the dispute could be narrated as a dispute between people in different locations with differing but legitimate concerns, it was, in the case of the two local newspapers created as a dispute between institutions, largely silencing the role of individuals and citizens in the dispute and focusing on their presumed representatives' values. It is possible that this discourse of governmentality not only marginalized the participation of citizens, or citizen's groups, but guided their understanding of the event as one of political dispute. An alternative discourse on either side could have created a dilemma rather than a dispute, that is how does 'group A' solve their problem without affecting 'group B'; conversely the issue became framed as 'how does either group get what they want?' The value in promoting this conflict of institutions perhaps lies

with the assumptions of jurisdiction which underlay territorial sovereignty; the more the dispute was created as one between governments, the less each side would be expected within modern discourse to show any responsibility to individuals outside of their given jurisdiction, and therefore be justified in their promotion of opposition without concern for alternative solution; as well as accrue the democratic benefits of ‘defending’ a local jurisdiction. Here again, we see a conflict between sovereignty and the natural environment which will be discussed several more times.

The main point of this finding is to show that a governmentality approach can indicate that the spaces discussed in the news media were allocated to given groups of power understood within certain jurisdictions (Manitoba or North Dakota); as a result the public can only expect rational operation of these groups within their spaces of power. Since the event crossed these spaces of power the conflict was unavoidable unless one agent ceded power to the other. As pointed out, had an alternative discourse been created around the same space with different notions of power and responsibility, divergent from modern understandings of government and sovereignty, then the event may have never been a dispute at all, but simply a dilemma which needed fixing. The next finding further indicates the existence and effect of this governmental focus.

#### 4.1.5 Management Scale Finding 2 – Management Based on Natural Borders

In the character analysis, it was found that there were some groups present which did, in name at least, represent natural borders as a means of water management and thus challenge the role jurisdictional boundaries being super imposed onto natural resource management, and the aforementioned governmentality discourse. These include the Devils Lake Joint Water Resource Board (JWRB), commonly present in the *DLJ* from 1997-2002 and the International Red River

Board (IRRB) a sub-committee of the IJC mentioned in both newspapers sparingly and coded under the IJC label (see Appendix A).

Documents published by both these agencies explicitly state an aim to manage at the water basin level. For example, in the 2002 Devils Lake Basin Water Management Plan (1), it is stated clearly that the JWRB, in cooperation with the NDSWC believes that “the key to resolving this debate over water management in the Devils Lake Basin is planning at the watershed level”. However, while the IRRB and JWRB were present as watershed level mechanisms for management, they were only minor characters, and narratives in both newspapers ignored that they represented a challenge to the idea that water management can be conducted successfully or efficiently using political borders as jurisdictions. Evidence of this is that the narrative of ‘environment and sovereignty need to be examined’ was actually coded in the *WFP* 18 times (0 in the *DLJ*). However 15 of those were found in opinion pieces sent in by readers (see Appendix B). This means that the *WFP* saw fit to allow the idea to be presented but not to follow it to any significant ends. The five mentions of this sovereignty challenging narrative are minimal compared to the dominance of the sovereignty enforcing narrative ‘outlet is threat to Canadian environment’ mentioned in 260 news articles and helped readers identify the effect of the dispute within a certain definition of territory by promoting the competing interests of elected officials.

As mentioned in Chapter 2, the idea of integrated water resource management (IWRM) has focused on the natural units of water management that is the basins, catchments and aquifers (Matondo, 2002). In applying the notion of IWRM to interbasin transfers, Gupta and Zaag (2006, 37) question whether ‘the local institutional capacity to manage water resources [at the basin level, such as in IWRM] and the competing claims of water users, [can] be up-scaled to deal with the complex problems Interbasin transfers entail?’ (37). While the Interbasin transfers Gupta and Zaag (2006, 37) discuss are different in nature and scale from the dispute in Devils Lake, what is the same is the idea of management of water as it crosses political borders, and the barriers that these borders provide to basin level management. The authors provide an answer that “whereas

from a technological perspective an interbasin transfer scheme may be feasible, it may be more problematic to equip the institutions with the required institutional qualities and capacities to reconcile the competing interests that the transfer will evoke”. It is here that the media’s use of a given discourse is determined to have played a role in the dispute.

The fertilization of nationalist conceptions of space and resources by the media is seen not to have helped the trajectory of the Devils Lake dispute towards resolution nor a more integrated approach to reworking the outlet plan. The framing of the issue around nationalist borders allowed the dispute to become far more than about the scientific uncertainties facing the basin and wider watershed. It allowed the dispute to continue on well beyond a reasonable point when those concerns were already addressed and focused the dispute over institutional legitimacy rather than flooding or environmental protection. For example, major questions became; was the outlet legal (Kuxhaus, 1999, November 25)? Was North Dakota acting unilaterally (Kuxhaus, 2001)? January 22)? Were Ottawa or Washington doing enough to solve the dispute (Rabson, 2007, June 30)? What these questions did was to focus the dispute on how Canada and the U.S. or Manitoba and North Dakota deal with the fact that the Red River basin crosses their borders. While a subtle difference, this thesis suggests that a far more productive discourse, and one not found in the media, could have been; “how does the Red River Basin deal with spanning across the Canada-U.S./Manitoba-North Dakota border?” It is clear that this alternative approach was also not present in the planning of the outlet either.

Reading the outlet permit applications from the NDSWC, it is clear that there is some discussion of basin level management at the Devils Lake level. However, there is no discussion of the plans effects on the wider Red River Basin or its direct connection to Lake Winnipeg. The outlet plan focuses mostly on Devils Lake and the Sheyenne River, with limited mention of the Red River. The ‘effluent limitations and monitoring requirements’ as well the ‘antidegradation’ sections of the permits (NDSWC, 2003, 3-10) state that “the permitted activity is consistent with state antidegradation policy”. However, the state antidegradation standards as set by the EPA

focus entirely on waters within a state's jurisdiction and do not mention transboundary effects of water uses (Water-antidegradation: North Dakota, 2012). Further, through reading the permit applications it is not clear to what the notion of 'downstream' refers, and parameters for sampling the potential effects of the outlet in the permit application only list American locations and stop at the North Dakota border community of Pembina (2003, 9). So, while the planning documents for the outlet that was eventually built were sound within the existing framework of United States federal and state level regulations, the plan still failed to avoid downstream opposition, indicate a lack of threat to the wider watershed with which it was in, and coordinate with all who could have potentially been affected by the outlet. This indicates that the existing framework then must be flawed if promoting socially cooperative and ecologically sound (i.e. integrated) water management is the goal.

This outlet plan which further legitimated national borders as means of managing natural resources was thus coupled with a media discourse also focused on political jurisdictions as primary. This allowed the dispute to be perceived of as a question of how two governments deal with the interests of people within a shared environment, rather than how do the people in a given area (Devils Lake and Red River basin) deal with their environment. The problem is that when natural resources are left to be managed at the behest of governments, the limitations of jurisdictional sovereignty and representative democracy become very clear (Blomquist and Schlager 2005). For one, history and unrelated aspects of the wider sub-national or national relationships begin to play a role (such as Garrison, see Samyn 1995, October 10; the Alberta beef ban see Rabson 2004, April 10; and wider diplomatic relations (see Samyn 2005, May 13; or discussions in Knox 2004 and Springer 2007).

The question then becomes what is more beneficial; the institutional capacity of the sub-national governments and national governments helping to facilitate transboundary water management issues knowing that external affairs may play a role in the outcome (such as limiting the potential scientific fact-finding role the IJC could have played long before 2005)? Or,

alternatively to have the issues of water users dealt with locally at the basin wide level, with the capacity to ignore the broader political relationships which take place external to the immediate environment? This thesis does not propose an answer to these questions but it is believed that the manner in which the media enforced water management at the political scale rather than environmental had an effect on the dispute via the silencing of actors such as the JWRB and the IRRB and the legitimating of a natural borders approach to water management and the prospect for water dispute avoidance this can hold (Gupta and Zaag, 2006).

#### 4.1.6 Management Scale Finding 3 – Coverage of the Political Dispute

As established, within this governmental understanding of the space which the dispute took place, the main characters in both the *WFP* and *DLJ* were the subnational governments of Manitoba and North Dakota respectively. However, it was found that the respective newspapers of these two sides created differing narratives for each. The *WFP* via its own writing as well as the selection of quotes of Manitoba officials (which is seen as a cooperative discursive process between politicians and journalists, Herman, 2000) constructed the narrative that Manitoba, specifically the NDP provincial government under Gary Doer was champion to the cause of protecting Lake Winnipeg and the Manitoba economy (e.g. Kuxhaus 1999, November 24; Gorham 2004, April 30). This was accomplished in several ways, namely the high use of confrontational and defensive framing such as “the battle isn’t over...as Doer takes on threat from Devils Lake” (Samyn, 1999, November 23) and “we will take whatever steps necessary to protect Manitoba’s interest” (a quote delivered by Manitoba Water Stewardship Minister to the *WFP*, Rabson, 2004, December 21). Words to describe the event which were common in the *WFP* include ‘fight’ (Samyn, 1995, October 11), ‘battle’ (Samyn, 1999, October 9), ‘war’ (Rabson, 2005, February 11), ‘crusade’ (Samyn, 2005, April 9), ‘combat’ (Canadian Press, 1999, October 27), and ‘conflict’ (Nairne, 2000, May 26).

Coincidentally, it was found that the general presentation of the North Dakota Government's position in the *DLJ* was that of defense, and perhaps even victimization. The outlet proponents in the *DLJ* were regularly seen as being at the mercy of decisions out of their hands, such as construction plans and costs from the Corps and funding decisions in Washington (Weixel 2000, March 13; Weixel 2003, February 28). As a result, the outlet proponents were commonly presented as protagonists in the narrative of 'technological approach to solve flooding' against a variety of rotating conflict narratives and characters such as 'outlet is economic/funding issue', 'downstream American interests fight back', and 'outlet is potential threat to Canadian environment'. Finally, the main character of the North Dakota Government was also constructed as regularly rejecting or denying claims against the outlet and having to feverishly pursue the end goals against a barrage of obstacles (e.g. Kram 1998, January 23; Associated Press 2001, January 22; 2004, October 10). This was achieved through the presentation of the State Government as central in a wider *DLJ* discourse dominated by frames of 'confrontation or defense', 'denial or rejection', 'concern or attention' and 'urgency or fear'. Specifically, 'denial or rejection' was twice as common in the *DLJ* as it was in the *WFP* (the wider discourses of each newspaper as a result of framing will be discussed in the third section of this chapter).

The character analysis also shows that 'other or unclear' arguments in favour of the outlet actually outnumbered any other pro-outlet argument in both newspapers. The reason for this was that, in both newspapers, as the dispute carried on, characters were presented without explanation of their motives, making clear that they were opposed to the outlet, but not explaining why. This worked to slowly silence the driving reason for the outlet and its dispute, omitting the worsening conditions within Devils Lake. In both newspapers, the frame of 'urgency' was most commonly attached to the environmental claims of outlet opponents and not the flooding in Devils Lake (see Appendix C).

Within these findings is again a relationship to the question of political scale in the dispute. As discussed in the literature review in Chapter 2, Brown and Purcell (2005) and Norman



and Bakker (2009) indicate how the social construction of scale is both ‘material as well as political’, and that it has both ‘material and discursive effects’. The discursive effects of the narrative that Manitoba was ‘fighting’ and North Dakota was on the defensive acted to silence important realities of the Devils Lake issue, namely the flooding and environmental risk. The dispute became largely political through the confrontation and defensive framing around the main characters and the omission of flooding issues. The discursive omission of the main driver of the dispute; the physical, or material, reality of water flooding people’s homes and livelihoods in Devils Lake seem to lead to a lack of urgency present in the narratives surrounding the flooding compared to the political ‘battle’. Here it is important to separate the media narratives, away from the potential intentions of officials on both sides. The conclusion that the news media largely lost focus of the natural hazards aspect of the dispute, as well as the outlet plan itself, does not entail a conclusion that officials, especially in Devils Lake, did as well.

Graham Haughton’s (1998) discourse analysis of the Yorkshire drought of 1995-1996 and Karen Bakker’s subsequent comments on the article are reviewed here for discussion on the difference between a discourse of dispute over an event and the event itself. Haughton (1998, 421) characterizes the crisis (or dispute) over the Yorkshire drought as a discursive creation autonomous from the drought itself. With this, he is suggesting that the dispute over any environmental reality is only existent as long as the discourse is being constructed by somebody (the media in Haughton’s case). What Bakker (1999, 369) concludes then from Haughton’s work is that the crises was not ‘a crises of drought’ but instead a ‘crises of governance or legitimation’ and the failures of the private water paradigm which had been enacted several years earlier. Haughton (1998), like many other researchers, points to the role of local media in shaping and directing public opinion. Bakker (1999, 369-370) points out that despite Haughton’s claims that there were significant structural changes in water management as a result of the drought and its construction, the discourse of the drought remained within the existing structure and acted mostly to legitimize it.

This thesis adopts a similar position, that in regards to the Devils Lake dispute and its media presentation, the issue was mostly constructed as a dispute of government relations, not a dispute of flooding and environmental risk. This is because the primary characters and arguments focused on in the news media were not Devils Lake citizens emotionally affected and losing their homes, or Lake Winnipeg businesses concerned with environmental quality, but instead the public officials in charge of mitigating the conflict between these two interests. In line with the goal of this thesis, these findings can be pointed out to have played a role in the dispute by quieting the incentive to solve the flooding problem in Devils Lake by making more salient the needs of the respective governments involved to convince their opponents to comply with their interests. As a result of a discourse that separated the political dispute from the actual event, no pressure existed to point out that existing institutional mechanisms were failing both to help protect the people of Devils Lake as well as manage the water of the Red River Basin and wider Lake Winnipeg watershed in a more integrated and cooperative sense. This logic is consistent with Bakker's (1999) suggestion that the discourse over the Yorkshire drought had no effect on the existing structure, despite obvious failures within it. This is because when the discourse takes place within the existing system, it can discuss the debate which results from a failure without addressing the failure itself.

Also, this media discourse appears to have had a role in the perceived length of the dispute, or the perceived importance of the issue for delivery to the public. As indicated in Chapter 1, the dispute received less and less media attention as the Manitoba and North Dakota governments began to agree that the outlet was the best solution. However, this apparent ending of the dispute was long after the science had already indicated that the dispute was inappropriately combative and long (see Chapter 2). The presence of sub-national governments as the main characters fostered the dispute to continue until roughly 2009 when the Manitoba Government appeared to no longer have political incentive to oppose the outlet plan (discussed later). Further, the end of the dispute between Manitoba and North Dakota in the media has by no

means resulted in the end of flooding problems in Devils Lake. This idea means that the presence of an environmental dispute in the media may be reflective of the privileging of certain characters and not environmental change itself or other aspects of the event such as new scientific information, public interests or anything else.

## 4.2 Narrative Analysis, Science, and Politics

This section will focus on the findings of the narrative analysis employed in this thesis. As mentioned in Chapter 3, narrative analysis is often used to highlight the preferred account of an issue presented by given interests. Based on existing work on the role of narratives in the policy process, specifically that of Roe (1989), this section presents discussion on how news media discourse may have had an effect on the Devils Lake dispute. Before reviewing the main finding, a quick overall presentation of the narratives found will be given through discussion of Table 4.6, which indicates there were notable differences in the promotion of narratives between the two newspapers. For the sake of presentation, narratives were grouped into categories similar to the brands identified in the framing analysis (see Appendix B for a full list of narratives found in the analysis).

**Table 4.6 - List of most common narratives divided by brand**

<b>Brand</b>	<b><i>DLJ</i></b>	<b><i>WFP</i></b>
Cultural	Historical Dispute Continues (36)	Historical Dispute Continues (178)
Economic	Outlet is Cost/Funding Issue (237)	None
Legal-Institutional	Legal Process Unfolds (97)	Role for IJC is Important (168)
Political	Political Alliance Building Effort (366)	Politicians Negotiate Across Border (273)
Environmental	Outlet is Threat to Canadian Environment (140)	Outlet is Threat to Canadian Environment (293)
Management and Planning	Water Management takes Place/Is Important (270)	Outlet Plan Moves Forward (203)
Hazards	Devils Lake Community Faces Hardship (276)	Devils Lake Community Faces Hardship (168)
Science and Technology	Technological Approach to Solve Flooding (568)	Scientific Neutrality will Determine Outcome (243)

With regards to the cultural brand, the two newspapers both focused on the historical nature of the dispute. However, the *WFP* was almost five times as likely to present the narrative of the Devils Lake dispute as a continuation of Garrison (this will be further discussed in the next section in the framing analysis). The difference in use of economic references will also be further discussed in the next section on framing and branding.

In regards to political narratives, the more internalized discussion of politics in the *DLJ* and the cross-border focus of the *WFP* have already been addressed in the previous section. As mentioned, the reason for this was that the *DLJ* focused more of its coverage on internal North Dakota efforts either in favour of or against the outlet. Much of this took place early in the dispute (1995-2002) before Canadian or Manitoba involvement became prevalent.

The analysis showed that narratives dealing with the environment were similar in content and distribution between the two newspapers. However, there was an interesting difference in the presentation of management and planning narratives. The *DLJ* focused on many of the public and official meetings that took place in order to plan the outlet, these included open town hall style presentations, meetings between state and federal engineers and local politicians, and meetings amongst management planners and practitioners. Conversely, the *WFP* presentation of the dispute omitted a large portion of this water management aspect of the outlet (as discussed in the findings of political scale) and in regards to water management narratives focused more vaguely on the progression of the plan. This progression was found to be repeated in order to promote the outlet as a centre of dispute. The 'outlet moves forward' narrative was most commonly coupled with the frames 'confrontation or defense', 'distrust of opponents' and 'urgency or fear'. It appears that the idea that North Dakota was 'moving forward' with the outlet was central in the *WFP* promoting the confrontational nature of the dispute found in their discourse. In comparison, the same narrative of 'outlet moves forward' in the *DLJ* was commonly paired with 'concern or attention', 'reassurance or relief', 'uncertainty or ambiguity' and 'urgency or fear'. It would

appear then that the progression of the outlet worked in different ways in the two discourses of the newspapers.

The presentation of hazards narratives was relatively the same in the two newspapers. However, it should be pointed out here, that it is believed by the researcher that for a dispute fundamentally caused by a hazard, the presence of narratives regarding the flooding in Devils Lake were relatively low compared to political and economic narratives. This relative silencing of the hazards aspect of the dispute has already been mentioned in management scale finding #3, but it also is seen to play a role in the main finding of the narrative analysis discussed below as well as the later discussion of economic valuation within the event.

#### 4.2.1 Narrative Analysis Finding 1 –‘Mirrored Inconsistency’

It was discovered in narrative analysis that the dispute over the Devils Lake outlet may have been much shorter had the federally planned outlet been accepted by North Dakota in 2003. As discussed in the literature review, the Corps’ plan used the best available science and technology to remove or limit downstream harm and came with the support of the U.S. federal government. While the Corps’ plan was not without some level of uncertainty, it was much clearer on the outcomes and effects of the outlet plan. This is important because Roe (1989) points out that the more uncertainty in given policy approaches the more likelihood for anti-narratives to create a dispute. By rejecting the Corps plan, the State of North Dakota was promoting a narrative in the media which disagreed with the scientific assessment of water quality risks downstream by the Corps; particularly the need for an effective, but expensive, filtration system (Signorelli, 2010, 185). North Dakota was thus creating a narrative of the outlet plan more open to opposition because it carried with it more uncertainty (Roe, 1989).

Narratives promoted by Manitoba in response to the NDSWC also seemed to ignore certain available scientific assessments, specifically those available in Lietch and Tenemac (2001)

and Peters (2002), as well as the 2005 biota assessment by the CEQ. These two positions are combined to create what thesis calls a ‘mirrored inconsistency’ in which each side’s position on the scientific evaluations of the outlet plan are opposite of one another. The mirrored inconsistency plays out as follows; North Dakota officials ignored the small chance of natural overflow and increased flooding calculated in the early stages of the dispute while Manitoba officials pointed to it as the key reason the outlet was unnecessarily dangerous. Conversely, Manitoba ignored scientific evaluations that Devils Lake provided little risk to downstream water quality while North Dakota officials pointed to these evaluations as key evidence that the outlet was environmentally sound. To date, this scenario in which the two party’s inconsistency with scientific evaluations mirrored each other has not been discussed in regards to the Devils Lake dispute.

Roe’s (1989, 251-253) study on narrative and the policy process is insightful in considering this scenario. Roe (1989) suggests that narrative analysis can play a role by “focusing on the differential risk perceptions reflected [in] stories”, and further that a narrative approach recognizes that the proposed solutions in policy disputes are often “stories about what might happen rather than predictions about what would probably happen”. It is suggested here that the ‘predictions about what would probably happen’, or the effort to predict outcomes, especially in environmental issues, is generally seen to be the role of scientific practitioners. In the Devils Lake case, these were provided by the probability of natural overflow or downstream water quality changes discussed in the literature review. Conversely, the creation of the ‘stories about what might happen’ is generally the role of political officials, interest groups, and sometimes the news media itself. The Devils Lake dispute was found in narrative analysis to be dominated by two different narrative creations in the news media about ‘what might happen’, one from Manitoba and one from North Dakota. Both stories were loosely-connected to scientific information and used it where needed to develop a given narrative of risk; for North Dakota it was more flooding, for Manitoba it was damage to Lake Winnipeg.

Roe (1989, 263) identifies the promotion of risk and omission of uncertainty as central to the asymmetry of narratives in a policy dispute, stating in reference to his own case study that “the nature and severity of these hazards, along with the probabilities of their occurrence, were at the core of the differences between the [stories]”. Roe (1989, 264) goes on to explain that policy issues are easiest to solve when there are no asymmetries in the presentation of the event, or when evidence emerges which forces the stories to converge in some fashion. In this sense, Roe’s theory can easily describe the Devils Lake dispute. According to Roe’s approach, the case is that of two conflicting stories of what the effects of the outlet might be. Roe’s approach could also explain that the dispute ended when the story of risk associated with the anti-outlet position was (for various reasons) no longer promoted.

However, as Roe (1989) points out, there is nothing here to provide the policy analyst with the means to claim understanding of what causes asymmetry in narratives. Roe (1989, 266) does not point to causation, rather he employs a post-mortem approach to policy analysis which aims to understand future decision making. Roe (1989, 266) also suggests that the understanding of narrative analysis does not necessarily aim to answer what exactly creates asymmetry in argumentation, but instead to question how the narratives provided empower certain interests and outcomes. This thesis then presents the Devils Lake dispute through the lens of Roe’s (1989) framework and argues that the dispute over the outlet was the result of the promotion of alternative narratives in regards to the risk of the outlet’s operation. This thesis would also suggest that it is possible to identify the causes of asymmetry, but this is an admittedly difficult task. This thesis takes Svendsen et al.’s (2005, 8) arguments on the political economy of water management as indication that identification of Roe’s narrative asymmetries is at least somewhat possible through the “identi[fication] of the beneficiaries and the increased power or financial gain that accrues to different actors as a result of the decision taken”. The findings of narrative analysis are believed to present some of these beneficiaries as manifest in the news media’s discourse and its potential role to politically incentivize.

Roe (1989, 267) points out that his framework allows for a clear narrative itself of the dispute, a third descriptive narrative which simply describes the interaction of the competing policy narratives. However, the creation of a narrative about the Devils Lake dispute, even if novel from existing literature, does not help answer this thesis' main research problem. Given that the identification of discourses has been presented, pertinent for answering the main research problem regarding their effect on the path and intensity of the dispute relate to identifying the potential beneficiaries of the competing narratives and how did the news media's relaying (or production) of these narratives affect the dispute? The answer is believed to lie in the difference between the news media discourse, and the evaluation and understanding of risk present in the outlet planning documents from both the U.S. Army Corps and the NDSWC. The most specific manner this thesis suggests the media played a role was to promote the narratives of the public officials over the science based uncertainty present in the planning documents. Roe (1989) points out that the creation of narratives is done by officials to help them grapple with the "problem of ascertaining risk in the midst of uncertainty and complexity". Roe (1989, 252-253) suggests then is that in the midst of uncertainty, elected officials will often filter an event into a narrative construct thought to be clear and beneficial to their interests; a sentiment also echoed by Allan (1999). This thesis points out that when faced with reporting the proposal for an outlet from Devils Lake, the media reported the simple yet conflicting narratives of the elected officials rather than the more uncertain but compromising narratives offered by scientific evaluations in documents such as the U.S. Army Corps 2003 EIS or NDSWC permit applications.

This reiterates points made earlier (management finding #3) that the news media discourse of the Devils Lake dispute was just that: coverage of the dispute rather than coverage of the outlet plan. The difference is that had it been coverage of the plan, it could have omitted the narrativization of the event into confrontational and dichotomous views centering on national borders, political interests and other externalities. This thesis then claims that the approach the news media took was to inflate the conflicting narratives of the disputes in a manner that was also



beneficial for the elected officials on each side because of the political incentive involved and the lack of downside. The question remains then on why these competing narratives were so vehemently promoted by the officials on each side and whether this political incentive between the media and politicians can be shown to exist.

First, it must be clarified how Manitoba promoted a lack of natural overflow, and North Dakota a lack of environmental risk. The latter is most obvious and was the most common narrative attached to proponents of the outlet (this was clearly noted in a February 15 2000 letter to the editor written by North Dakota state engineer from the NDSWC). Manitoba's position was an anti-narrative; one in response to the outlet proponent's suggestions that the plan was required and necessary because Devils Lake would eventually overflow naturally anyways. The natural overflow argument was promoted regularly in the *DLJ* and by North Dakota officials and is clearly a driving force behind both the Army Corps' plan (S-5) and the NDSWC plan (1). Conversely, Manitoba provincial officials maintained until as late as 2009 that there was a minute chance of overflow and that this did not justify the need for an outlet (Agnes-Welch, 2009, June 7). It is also worth mentioning that the phrase 'natural overflow' commonly found in the *DLJ* and outlet planning documents as clear justification for the outlet is only mentioned twice in the *WFP* between 1995 and 2011 and both times it was within letters to the editors. Manitoba officials omitted the phrase in their relations with the press instead using the argument that the outlet was simply 'unnecessary' or 'too risky'.

The newspapers in the region then followed a common approach of the modern news media to attract readers with clear and effective narratives dichotomously created to allow readers to position themselves within (Herman and Chomsky 1988, Vincent 2000). For Manitoba officials, the dispute narratives co-created in the media provided perfect political gamesmanship. In the midst of the dispute, Premier Gary Doer and other government officials involved were immersed in media narratives regarding the protection of Manitoba and Canada's environment (Agnes-Welch, 2009, June 7), standing up to American interests (Rabson, 2005, June 16),

pressuring a growingly unpopular Canadian Federal Government to take action against the U.S. (Martin, 2005, July 25), and protection of Manitoba economic interests (Rabson, 2005, August 9). In the *WFP* specifically, very few of the dispute narratives were critical of either the Progressive Conservative or New Democratic Party provincial governments in power in Manitoba during the dispute. The confrontational and dichotomous discourse appeared to always favour the local politicians against the foreign ones; indicating that the geographical imaginations of ‘us’ and ‘the Other’ discussed by Newman and Paasi (1998) are pertinent in local news media regardless of ideological changes in government. Whether this was done by the *WFP* in favour of local politicians or simply in order to promote a sellable story is not relevant to this thesis, it indicates that a large amount of public discourse which was favourable to the Manitoba approach to oppose the outlet was provided by the media. Manitoba’s efforts to promote asymmetrical narratives via the calculation of risk in a much different manner than the opposing side were either aided actively by cooperation with the new media, akin to the Herman and Chomsky’s (1988) approach to news media production, or positively reinforced through the news media’s reflection of public sentiment which presented the anti-outlet position favorably, as in Schmid et al.’s, (2007, 188) approach to the news media production. Unfortunately, while this argument is suggested to clearly indicate Svendsen’s (2005) ‘beneficiaries’ of the discourse around the public discourse, regardless of the relationship between the findings of this thesis and academic literature, further research is warranted in providing more substantial evidence of the mechanisms through which news media production affected policy approaches on either side.

Finally, either side’s position on the outlet largely avoided being framed in the media as uncompassionate towards those it might affect. This may be because of the nationalized understanding of space and place of the news media presented in earlier findings, and perhaps because of the ‘othering’ potential of political borders on social relations (Newman and Paasi’s, 1998). Specifically, the fact that the flooding was taking place in a different socially constructed jurisdiction allowed for Manitoba interests to not only refute the outlet plans, but to do so with a

simple anti-narrative devoid of obligation to actually help solve the flooding problem taking place within their own river basin. In this sense news media did not provide democratic incentive to approach the issue with concern for ‘the other’.

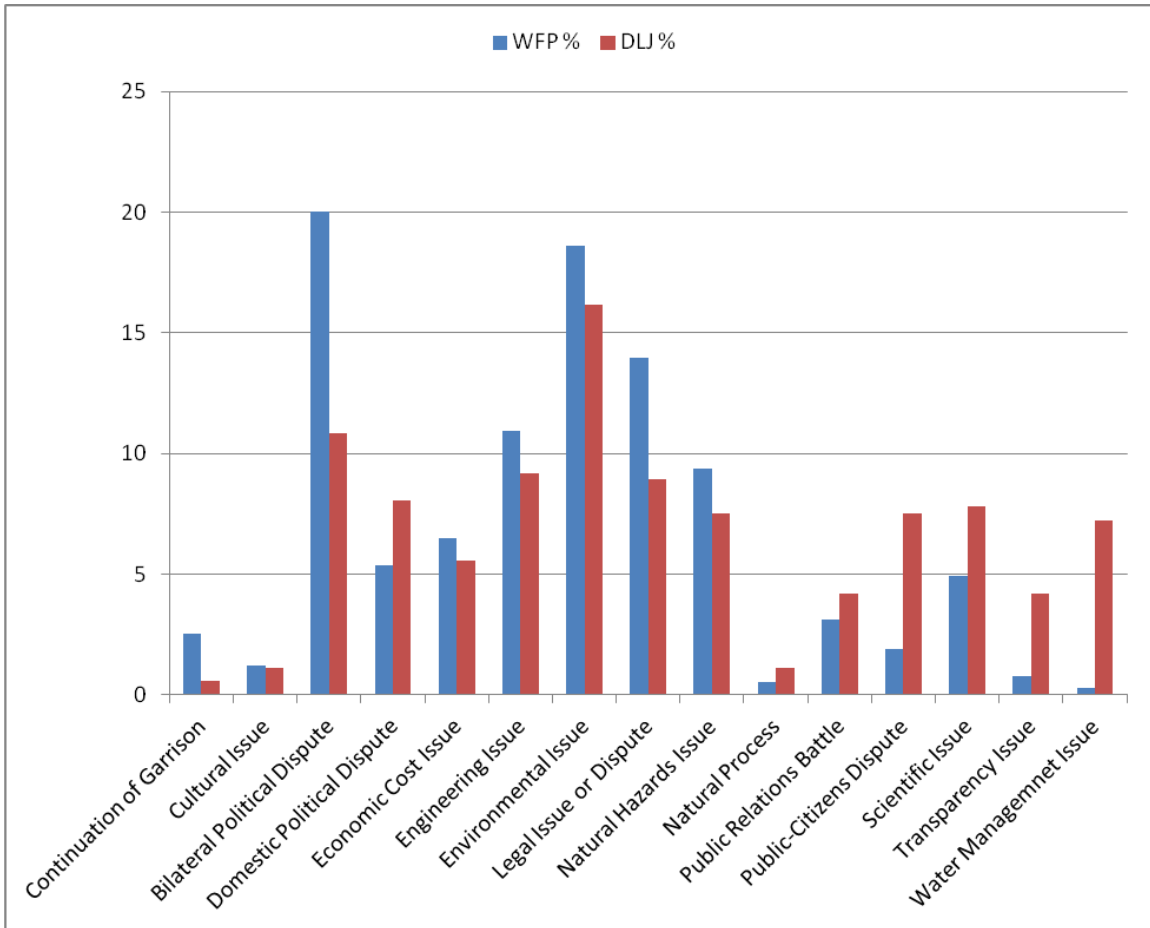
In answering the main research question then, the media is seen to have provided discourses that may have affected the dispute in numerous ways by amplifying the political incentive for Manitoba to create anti-narrative to the outlet through the selection of simplified combative narratives taken from the sources of political officials rather than the work of policy and scientific practitioners at the NDSWC or U.S. Army Corps. Further the media acted by omitting narratives based on natural borders or human compassion, and enforced those based on jurisdictional borders. Signorelli (2010) argues that the dispute would have been less problematic had the two parties involved (Canada and the United States in the author’s case) acted with the United Nations Convention for the Protection of Human Rights and Fundamental Freedoms in mind rather than narrow electoral borders. According to Signorelli (2010), the Convention is “built on the community of interests approach which sees the entire water basin as a whole that belongs to all riparian states and requires positive action and a generalized responsibility” (211). This thesis then adds to Signorelli’s interpretation of the dispute to suggest that the political incentive not to engage an issue like Devils Lake with a community of interests approach is likely powerful due to the media’s role in making the issue attention worthy in the first place via confrontational discourse and differentiation frames based on political boundaries.

Therefore, not only is it problematic for water management that, resources are often managed with political borders as limitations, and without the broader and more holistic approaches of something like IWRM. But also, in regards to resource conflict, it appears the case that the news media also operates within a discursive reality that prioritizes communities based on existing socio-political borders separated from the natural environment. It is argued that this scale of coverage present in media created an othering discourse able to overpower notions of co-habitation and compassion which might otherwise be felt by individuals living in the same

perceived community. Spatial understandings of the plan to outlet water from Devils Lake into the Red River could just as easily have been created by media or other powerful individuals as an issue internal to the community of the Red River Basin (which Devils Lake is within); driving empowered individuals to recognize interests apart from which sides of the national border they were on. However, given the spatial discourses dominating the media and modern political economy, in future disputes empowered individuals in the region can be expected to take the same approach as in Devils Lake; where media narratives controlled by geo-political spatial understandings actually undermine cooperation and unfortunately promote combative narratives from empowered individuals who become democratically incentivized by this geo-political discourse of differentiation.

### 4.3 Framing Analysis, Regional History and Economic Valuation

This section discusses the findings of the framing analysis conducted on the two newspapers in this study. After the findings are summarized, two particular frames regarding historical reference and economic valuation are reviewed for their effect on the dispute. The summarized findings of the framing and analysis are presented in Figures 4.1 and 4.2 and Tables 4.7, 4.8, 4.9, and 4.10.

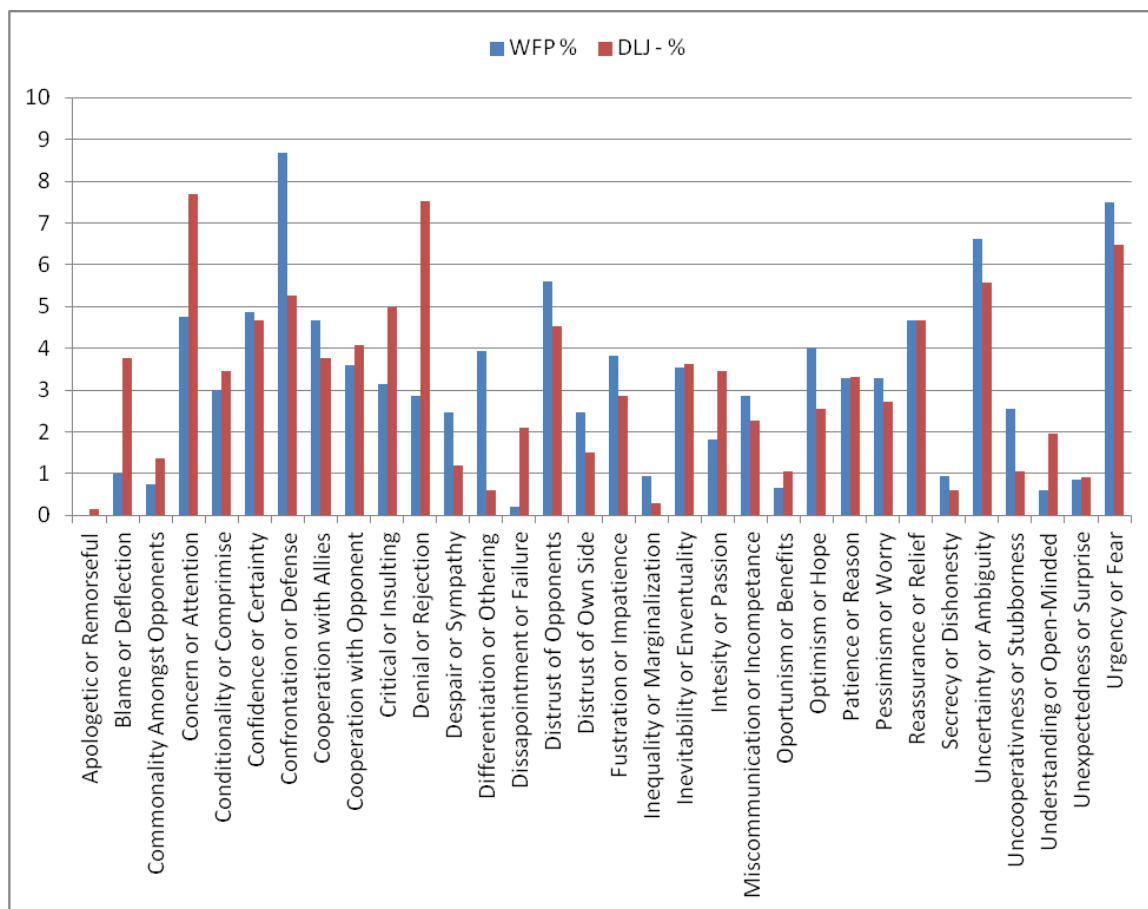


**Figure 4.1 - Comparison of brands found in the DLJ and WFP as a percentage of total brands in each paper**

Figure 4.1 indicates that the dispute was largely branded as environmental and bilateral political. However, discussion of the second finding in this section will indicate how this environmental branding did not necessarily reflect an approach to the issue based in environmental science and took place only within a given perception of ‘environmental protection’ as determined mostly by economic valuation. Figure 4.1 also indicates some clear differences in presentation between the two newspapers. As mentioned before, the *DLJ* more commonly presented the story of Devils Lake from the perspective of a ‘citizens dispute’. This reinforces previous discussions of how the media often covered the dispute rather than the outlet; however framing analysis indicates that, as mentioned before, while the *WFP* was almost entirely

focused on the political dispute, the *DLJ* more accurately split coverage between the political dispute and the actual outlet plan. Finally, Figure 4.1 also shows that hazards branding lagged behind political, environmental, engineering and legal brands in both newspapers; reiterating earlier points about the salience of the political problem over the flooding problem.

Figure 4.2 presents the use of frames in the two newspapers as compared to one another. As referenced throughout this chapter, the framing of the issue into terms of ‘confrontation or defense’ (especially in a political light) was central to *WFP* coverage. The prominence of ‘denial or rejection’ in the *DLJ* will play a role in discussion of this section’s first finding, but is also worth mentioning as a clear point of difference from the *WFP*. Another observation worth mentioning from Figure 4.2 is the presence, or lack thereof, of more positive frames such as ‘understanding or open-mindedness’, ‘optimism or hope’, and ‘cooperation with opponents’. What is interesting here is to look at which narratives were most commonly present in relation to each newspaper’s rare use of more positive frames.



**Figure 4.2 - Comparison of frames found in the DLJ and WFP as a percentage of total brands in each paper**

In the *DLJ*, ‘optimism or hope’ was most present when narratives of ‘technological approach to solving problem’ and ‘water management takes place’ were present. Conversely, in the *WFP* ‘optimism or hope’ was present most often with narratives of ‘alliance building effort’ and ‘politicians negotiate across border’. It appears then that the *DLJ* was more likely to cover the outlet plan as oppose to the political dispute over it and that these instances were actually surrounded by positive frames. Whereas it seems clear that of the two news papers analyzed, *WFP* coverage focused more on the political and confrontational nature of the dispute over the outlet rather than the outlet itself. In some ways this is not surprising. The *WFP* represented a region that would be affected by the outlet and can be seen as simply covering local officials’ efforts to stop that effect from happening. While this was not necessarily the ‘wrong’ manner to

cover the outlet story, it did work to the *WFP*'s overall discourse of dispute. Furthermore, as is common in media coverage of the 'debate' over climate change, the coverage of the dispute rather than the outlet, or event, created a leap in logic for readers and eliminated the chance for a thoughtful discussion on the topic of the event itself rather than the actions of its proponents (Carvalho 2007; Boykoff 2008).

Tables 4.7, 4.8, 4.9, and 4.10 are presented here to indicate the differences in combinations of frames and brands by each paper. Tables 4.7 and 4.8 were constructed in the following manner. First, combinations for each newspaper were identified by cross referencing paragraphs in NVIVO© to find paragraphs with both a frame and a brand. The numbers in the table represent the percentage which a given frame coincided with a given brand. Thus the column coinciding with a brand indicates how that brand was divided amongst frames. This table is then a representation of frame-brand combination and not total use of either frames or brands. Tables 4.7 and 4.8 are helpful in identifying the most common combinations of framing and branding in each newspaper (full tables available in Appendix C). In order to indicate the general difference, the combinations of each paper are also summarized in Table 4.9.

**Table 4.7 - Framing and branding combinations in numerical terms for the DLJ; the top 5 combinations are highlighted in red.**

	Continuation of Garrison	Cultural Issue	Bilateral Political Dispute	Domestic Political Dispute	Economic Cost Issue	Engineering Issue	Environmental Issue	Legal Issue	Hazards Issue	Natural Process	Public Relations Battle	Public/Citizen Dispute	Scientific Issue	Transparency Issue	Water Management Issue
Concern or Attention	0.05	0.00	1.01	0.83	0.28	0.51	1.38	0.87	0.60	0.09	0.41	0.60	0.64	0.41	0.51
Denial or Rejection	0.00	0.00	1.20	0.46	0.32	0.64	1.52	0.60	0.60	0.14	0.28	0.41	0.64	0.55	0.55
Urgency or Fear	0.14	0.00	0.97	0.64	0.23	0.23	1.24	0.55	0.60	0.05	0.46	0.32	0.37	0.09	0.28



**Table 4.8 - Framing and branding combinations in numerical terms for the WFP, the top 5 combinations are highlighted in blue (see Appendix C for full table)**

	Continuation of Garrison	Cultural Issue	Bilateral Political Dispute	Domestic Political Dispute	Economic Cost Issue	Engineering Issue	Environmental Issue	Legal Issue	Hazards Issue	Natural Process	Public Relations Battle	Public/Citizen Dispute	Scientific Issue	Transparency Issue	Water Management Issue
Confrontation or Defense	0.14	0.21	1.86	0.62	0.21	0.48	1.33	0.96	0.39	0.02	0.37	0.25	0.27	0.07	0.00
Cooperation with Allies	0.05	0.07	1.51	0.73	0.21	0.25	0.69	0.50	0.34	0.00	0.18	0.18	0.18	0.00	0.00
Confrontation or Defense	0.14	0.21	1.86	0.62	0.21	0.48	1.33	0.96	0.39	0.02	0.37	0.25	0.27	0.07	0.00
Urgency or Fear	0.16	0.14	1.24	0.46	0.30	0.44	1.67	0.73	0.71	0.00	0.37	0.11	0.55	0.16	0.00

**Table 4.9 - Summary of the five most common framing and branding combinations for each newspaper (see Appendix C for full table)**

	<i>WFP</i>	<i>DLJ</i>
1	Bilateral political dispute framed around confrontation or defense	Environmental issue framed around denial or rejection
2	Environmental issue framed around urgency or fear	Environmental issue framed around concern or attention
3	Bilateral political dispute framed around distrust of opponents	Environmental issue framed around urgency or fear
4	Bilateral political dispute framed around cooperation with allies	Bilateral political dispute framed around denial or rejection
5	Environmental issue framed around confrontation or defense	Bilateral political dispute framed around concern or attention

Table 4.9 reveals that the general combative discourse of the *WFP* in regards to the issue seems to clearly be in contrast from the more defensive discourse found in the *DLJ*. This is evidenced by the difference in total framing use in which the *WFP*'s use of 'differentiation or othering' framing is most distinctive from the *DLJ*, and where the *DLJ*'s use of 'denial or rejection' framing sets it apart from the *WFP* discourse. In terms of branding the *DLJ* focused much more on the issue as one of water management, compared to the *WFP*. Table 4.10 then is a

combination of Tables 4.7 and 4.8 and was created by subtracting the *DLJ* numbers from the *WFP* ones. As a result it is possible to see the largest differences in framing and branding combinations as they played a role in the overall discourse of the dispute in each newspaper. Since *DLJ* was subtracted from the *WFP*, negative numbers represent instances where the *DLJ* used a given frame/brand combination more than the *WFP*, where as positive numbers indicate more usage of the combination in the *WFP*.

**Table 4.10 - The deviation of each framing and branding combination between newspapers (see Appendix C for full table)**

	Bilateral Political Dispute	Environmental Issue	Public/Citizen Dispute	Water Management Issue
Concern or Attention	-0.23	-0.26	-0.55	-0.51
Confrontation or Defense	1.07	0.41	-0.25	-0.37
Denial or Rejection	-0.53	-0.83	-0.37	-0.55
Distrust of Opponents	1.07	0.36	0.04	-0.14
Uncertainty or Ambiguity	0.75	0.48	-0.18	-0.48

As Table 4.10 indicates, all of the major differences in the *WFP* from the *DLJ* take place within the *WFP*'s dominant 'bilateral political dispute' brand and are paired with mostly negative and combative frames. The *DLJ*'s difference from the *WFP* is split between three brands but two of the three top differences are within the 'denial or rejection' frame which was not only central in *DLJ* discourse, but not particularly present in the *WFP*. In summary, the findings of the framing and branding analysis appear to solidify what has been suggested throughout this chapter that the general combative discourse of the *WFP* and the general defensive discourse of the *DLJ* are not only interestingly opposed to one another, but also formative in most of the previous findings presented as well as the final two discussed next. The next finding indicates how framing related

to the already discussed regional history of the dispute played a role in the combative discourse of the *WFP*.

#### 4.3.1 Framing Analysis Finding # 1 – Historical Branding

In terms of gross numbers, the presence of the ‘continuation of Garrison’ brand was not necessarily prominent in either paper for the 17 years analyzed. Though comparatively, it was much larger in the *WFP* and was the leading cultural narrative found in that newspaper. Discussion of this narrative however becomes more necessary when framing analysis indicated that the *WFP* employed more combative discourse than the *DLJ*. Insight from existing academic work on Devils Lake suggested that the *WFP*’s combative approach may have been related to the presence of Garrison discourses.

When the narrative and framing codes were cross referenced to indicate within which narratives certain frames occurred most often it was found that the ‘historical dispute continues’ narrative in the *WFP* was most likely to carry the frame of ‘confrontation or defense’ (as with almost all narratives), but also the less common overall ‘distrust of opponents’ and ‘confidence or certainty’. While the Garrison narratives and branding played a role in the formulation of the *WFP*’s overall combative discourse, this was found not necessarily to be the case for the *DLJ*. The same narrative-framing cross reference shows that the historical narrative in the *DLJ* was most common with the frames ‘urgency or fear’, ‘uncertainty or ambiguity’, and ‘disappointment or failure’. The last two are specifically telling in that reference to Garrison for the Devils Lake readership was related to a sense of uncertainty about the outcome; whereas in the *WFP* Garrison was commonly paired with the framing of certainty as shown before. The reason for this is likely that in the *DLJ* the Garrison references would usually imply the role of third party interests in the dispute and the potential for the outlet project to be handled beyond the control of its proponents. Conversely, in the *WFP*, Garrison references were commonly surrounded by claims of certainty

by Manitoba officials that the Devils Lake plan would not go through and that they would be able to stop it as they did Garrison; this was particularly predominant in the early stage of the dispute (1995-1999).

Feldman et al. (2009, 126, referenced in Lejano and Leong, 2012) label the process through which historical narrative is used to influence the reception of an issue by the public and officials to take actions as 're-sourcing'; where previous cooperative or divisive interactions between communities act to 'mobilize pent-up anger' or promote 're-engagement'. For several authors writing on the dispute, this 're-sourcing' was evident. As indicated in Chapter 2, Knox (2004), Springer (2007), Hollis (2008), and Whorely (2008) all suggested that the discourse surrounding Devils Lake gained its form at least in some part from the previous Garrison Diversion dispute. However, none of the authors indicated that there may be a difference in the historical discourse between regions.

The reason for the difference may be related to discussions in the third finding of this chapter and the resentment towards the IJC possibly present in North Dakota. Further, Worster (1986) suggests that the American Midwest was facing an identity crisis and a sense of resentment in regards to the end of reclamation projects and the end of environmental domination as an explicit goal of society. For the region surrounding North Dakota, it is pointed to that the challenges faced by Garrison played a role in forming that sentiment. Thus, it appears that a somewhat negative experience with large water projects for local interests, or perceived failures was enhanced by the *DLJ* in the surrounding of negative frames and uncertainty around historical narratives of the Devils Lake dispute. However, since this has been indicated in an earlier finding, the focus here is on the role of historical framing and the promotion of the conflict, specifically in the WFP.

As Hollis (2008) points out, the Manitoba response to the outlet was related to fears that the project would be a rekindling of Garrison and lead to larger inter-basin transfers. It appears then that there was use of Feldman et al.'s (2009) 're-sourcing' in the WFP in order to re-

establish the ‘distrust’ and ‘differentiation’ which was also present in the Garrison dispute (e.g. Associated Press 1981, May 8; Canadian Press 1981, October 15; Associated Press 1986, January 6). It is possible to suggest then that had this historical narrative not been present and amplified to both sides of the dispute via local news media in regards to both the framing of the issue, and the aforementioned construction of scale, that the dispute would have went forward very differently, perhaps with less othering, hostility and distrust from Manitoban interests and more openness to the IJC and independent scientific evaluations amongst North Dakota interests.

### 4.3.2 Framing Analysis Finding # 2 – Economic Framing

The final finding revolves around the regular framing and branding of the issue in economic terms. As Figure 4.1 shows, the dispute as an economic or cost issue was relatively similar between the two newspapers and represented just over 5% of total brands in each newspaper. Compared to branding of the dispute as an environmental issue, it was only about a third as common. However, through analysis of the framing of the economic brand as well as an understanding of the character arguments and narratives, it was found that this economic valuation played a role in both sides’ arguments, took place within a limited conception of values, and worked to limited environmental or hazards impacts of the flooding or outlet despite the high textual appearance of these words.

Analysis of framing and branding shows that in paragraphs with economic discourse in the *DLJ*, the most common frames within the same paragraph were that of ‘denial or rejection’ and ‘uncertainty or ambiguity’. The denial and rejection was due to economic valuation being presented in relation to North Dakota officials and NDSWC planners as they regularly argued that the outlet plan was indeed economically viable and cost-effective despite the criticism of opponents (see for e.g. Liestriz et al. 2002; Associated Press 2002, May 9; Weixel 2003, April 10). Similarly the ‘uncertainty’ frame came from the potential for the outlet to not be approved

for funding by either the federal or state legislative branches. Conversely, the most common frame in the *WFP* in paragraphs with economic discourse was ‘inevitability or eventuality’; generally this was in reference to the narrative that the outlet’s operation would eventually have a given effect on the Lake Winnipeg ecosystem and thus the Manitoban economy (e.g. Kuxhaus 2000, September 11; Rabson 2005, March 1). Clearly, there was a difference in the use of the economic frame; however, further analysis shows that both sides pursued ‘valuation’ in both environmental and hazards views as well.

It was found that a common manner both environmental and flooding issues were expressed in the newspapers was through financial terms and that the *WFP* was most likely to omit hazards frames in non-economic terms. Generally news articles in the *WFP* (especially later in the dispute) would reiterate the reasons for the dispute in a paragraph towards the end of the article. A typical summary would read “[h]owever, the water is salty and contains organisms that are foreign to the Red River watershed. Manitoba claims that water could eventually destroy the fishery on Lake Winnipeg” (Kuxhaus, 1999, October 26). Similarly the reason for the outlet would be commonly summarized as follows “Devils Lake, which has no natural outlet, has been rising steadily for more than a decade, causing more than \$500 million in damage and repair bills to the state and U.S. Federal Government” (Rabson, 2005, June 14). The focus here then was on the material effects of both the flooding and the pollution. Left out in this discourse was much discussion was an integrated sense of importance about Lake Winnipeg beyond economic uses and the immaterial effects of the outlet and its impact on residences beyond infrastructure rebuilding. The *WFP* instead promoted the discourse that the dispute was about the economic cost of the flooding versus the potential economic cost of damage to Lake Winnipeg. Though, it should be pointed out that it was also somewhat common in the *DLJ* to present the flooding as a financial burden above anything else as well.

A similar economic discourse was also found in the outlet’s planning documents. A significant aspect of the North Dakota proposal to federal powers to support an outlet was made

from an economic stance; this was reported in the *DLJ* during the initial phase of the outlet in which North Dakota could be seen as courting the Federal U.S. Government (e.g. Weixel 1997, January 14; 1998, February 13). Despite the fact that the U.S. Congress did not require the outlet plan to be economically efficient, a large portion of the 2003 EIS by the Corps is dedicated to an in-depth analysis of the outlets economic effects, and the entire report is centered around a cost-benefit approach (see Army Corps of Engineers Final Integrated Planning Report and Environmental Impact Statement Volume 1:3 or Volume 2: Appendix B). However, all of the valuation that takes place in the Corps EIS is of physical infrastructure. A list of 24 features that are prone to damage or changes in value as a result of the flood or outlet are listed (B-3), all of which are infrastructure (communities and cities, state facilities, rural areas, rail lines and roads). Similarly, the NDSWC (2003, 1) applications for outlet construction by the State of North Dakota take a similar approach but focus much less on economics, as only a small section of the permit's accompanying water quality report discusses the outlet's cost-benefit impact. It is unclear if the figures referred to throughout the state plan are directly lifted from the Corps' study, but it appears as if they are (see comments section of 2003 NDSWC Permit Application, 8). What this signifies is that just like in the dispute in the media, the outlet, from the planning stage was approached with an anthropocentric and limited cost-benefit perception, and that both media and policy took a similar material infrastructure based approach to the effects of the flood and the dispute.

As pointed to in Chapter 2, there are limitations to ascribing value to the natural world only via economic principles. Within all of the texts analyzed for this thesis, very few narratives arose which approached the valuation of ecosystems beyond this relatively simplistic utilitarian anthropocentric view. That is to say that by far the dominant system of valuation in the Devils Lake dispute as manifest by policy and the news media was based within a limited view of why the natural environment or communities need to be protected. Before the implications of this are discussed, two divergences from this position should be pointed out. The presentation of

arguments in the *DLJ* from the Spirit Lake First Nation against the outlet were often within narratives of a relationship to the local ecosystem and an understanding of the rise of Devils Lake as a sacred act (Aman, 1998, February 4). Similarly some arguments out of the *WFP* in regards to protecting Lake Winnipeg referenced the value of having a healthy lake to be left for future generations and can be seen to be relatively separated from concerns for the fishery, property values, or recreational uses (Egan, 2004, April 30). Regardless, these narratives which were coded as cultural or environmental in the narrative analysis were few and lacked significance in the media against the larger wider discourse of evaluation which took place (see Appendix B). They were also not mentioned in the outlet planning documents.

Environmental philosopher Mark Sagoff (2011) has proposed that the valuation of the natural world takes place within two ways of understanding the world. The first is what Sagoff (2011, 497-499) calls 'market based' in which local stakeholders, such as market actors, interest groups and property owners identify ecosystems within the framework of local institutions and where value is identified in a dispersed and fragmented collective manner for site and case-specific reasons. Conversely, Sagoff (2011, 499) also identifies 'science based' valuing of the natural world in which information is centralized, collaborative and consensus-based for general application across times and places. Sagoff (2011) concludes that these two systems of valuation are 'conceptually distant' and their incompatibility defeats the purpose of economic attempts to value nature in an integrated manner; especially in conflicts. For many, this notion of 'integrated' management or valuation is the idea that both human and natural processes are taken into account in practice (Dimitrov 2002; Wallace et al. 2003; Genskow and Born 2006; Medema et al. 2008; Sagoff 2011). Integration is central in the already discussed IWRM and it is suggested again that both the media discourse and the actual planning of the outlet could have benefited from a more diverse conceptualization of water management away from simple cost-benefits calculation of material costs and towards the approach offered by IWRM.



In a sense, IWRM attempts to do what Sagoff (2011) says is impossible, that is to combine the idea the scientific understanding of ecosystems with local stakeholder values, whether they are scientific, cultural or otherwise. Whether this is possible or not is beyond the scope of this thesis, what is clear is that progress has been made in moving away from water management based entirely on singular anthropocentric values that are found in the Corps EIS, the NDSWC plan, and news media on both sides. As Desjardins (2006) points out, economics based cost-benefit scenarios not only fail to take account of a more integrated sense of the natural environment, but also do so with a false sense of neutrality. For discursive effects then, the idea that values represented as dollar figures are indisputable creates a powerful narrative which it was found in both newspapers to have been made salient.

In terms of answering the fundamental research question then, it is put forward that omission can be one of the more powerful forms of discourse creation (Entman 1993) and it is suggested here that the omission of the flooding hazard's more diverse non-economic effects, as well as the perhaps cumbersome ethical discussion of ecosystem disruption which also could have taken place, affected the dispute by removing these discussions from public forums. As Entman (1993, 54) argues "receivers' responses are clearly affected if they perceive and process information about one interpretation and possess little or incommensurable data about alternatives. This is why "exclusion of interpretations by frames is as significant to outcomes as inclusion" (Entman, 1993, 54). This omission made it almost impossible then for alternative frames and more integrated values to gain the momentum needed to reach the elite individuals in charge of the dispute in any significant manner.

## 5 Chapter 5 – Conclusion

The chapter summarizes and adds final points of discussion to the nine findings presented in this chapter. The findings will be discussed in regards to future research potential and meaningful effect on knowledge of the Devils Lake dispute and wider geographic issues. Most importantly, it is discussed how the findings of discourse analysis of the news media regarding the Devils Lake outlet has provided answers for the fundamental research problem. However the chapter first discusses the affect of these findings on existing IWRM literature and points to the potential for improvement in the understanding of the role of discourse in the implementation of more holistic approaches to water management.

### 5.1 Lessons for IWRM

While some of the findings have already been linked to IWRM, it is suggested here that the broader discussion of discourse in water management found in thesis relates to existing discussions on the potential to reformulate water management around the principles of IWRM. Earlier, this thesis pointed out that both newspaper discourse and the outlet planning documents represented a narrow conception of water management not inline with broader IWRM principles. Blomquist and Schlager (2005, 101) call this existing paradigm the “polycentric organizational [form] composed of subwatershed communities of interest”. The authors go on to point out how a ‘boundary mismatch’ contributes to the political problems faced by implementing IWRM. Blomquist and Schlager (2005, 113) conclude that “[t]he polycentric arrangements found in so many locations, and criticized as fragmented and unscientific, can also be viewed as means by which affected communities assert and contest claims for inclusion, articulate and protect

their values and interests during decisions about the watershed, and invest those decision-making arrangements with mechanisms for accountability and change”. Their conclusion is aimed at suggesting that the political interests to control power will take place even within a watershed scale management paradigm; essentially pointing out that politics is not the problem facing IWRM, but instead that the natural rise of conflicts due to the presence of multiple interests and users is to blame.

This thesis addresses this conflict of interests pointed out by Blomquist and Schlager (2005) and moves to add to an existing suggestion by Saravanan (2009) that there is a fundamental divide in the underlying political philosophy behind the cooperative assumptions of IWRM and the existing “polycentric” paradigm. Blomquist and Schlager (2005, 113) argue that “choices about the scope [what this thesis calls scale] of management, who participates and how, and how collective decisions are revised and challenged cannot be avoided by creating a single watershed authority with broad powers to comprehensively address watershed problems”. This thesis agrees that an ‘authority’, or institution, would not likely change the discourses of a region to accept the more inclusive stakeholder values of IWRM. However, as is the focus of this thesis, it is the discourse, that perhaps needs to change before an institution is implemented, or that institutional creation needs to occur hand-in-hand with the promotion of broader values into the political and public sphere.

This thesis suggests that an integrated approach to the outlet plan would probably have not worked for planning the outlet in Devils Lake even if promoted by either the NDSWC or Army Corps; the reason for this is that as shown by the findings related to regional history and political scale; a region is not a *tabula rasa* for water management

decisions but an existing discursive and geo-spatial set of structures. What this thesis will go on to argue is that the political-philosophical discourses underlining IWRM or any other progressive approach to natural resources need to not only exist but, perhaps, be predominant in a region before they can create what Allan (1999) call 'political and institutionally feasibility'. However, this is an obvious challenge, as this discourse analysis has shown, there are cases where modern powers of discourse creation operate to promote the more competitive and institutionally focused discourses of Blomquist and Schlager's (2005) 'poly-centric approach'.

In their discussion of IWRM, Saravanan et al. (2009, 76) point out that fundamentally IWRM is based on the need for what philosopher Jurgen Habermas calls 'communicative rationality' and "a place based nexus where multiple actors in a hydrological unit can consensually and communicatively make decisions". As a result, the authors suggest that IWRM is criticized because it presents a polarized discourse to that of traditional understandings of water management which are inherently political and more 'realistic' than the 'theoretical' approaches underlining IWRM. Further Saravanan et al. (2009, 77) write "Habermas believes in the importance of institutional reforms to facilitate communicative actions. This prompts the policy analyst to work on conditions of political interactions and design of institutions, rather than merely the content of policy proposals". Saravanan et al's (2009) work also focuses on the conflict between Foucauldian and Habermasian conceptualizations of power, pointing to other studies where critics of the 'utopian' aspirations of IWRM point out that water management is a contest of negotiating actors striving for power within singular conceptions of state power, it is not, to them, a communicative cooperative process. Finally, according to

Saravanan et al. (2009, 81), these critics call for understandings of how cooperation actually takes place rather than an approach which aims to answer how to integrate. The authors conclude that it is possible to bridge to polarized discourse between the two approaches to IWRM, and thus both the critics and the proponents are, according to Saravanan et al. (2009) making valuable contributions to a pragmatic and sustainable approach to IWRM.

It is believed that this thesis has offered insights into how to bridge the divide Blomquist and Schlager (2005) allude to and Saravanan et al. (2009) explicitly explore. First, it has identified that if IWRM truly does suffer from being polarized in discourse from existing conceptions of water management then this was probably what was exemplified by most of the findings of the news media analysis done here. Notably, diverse, non-governmental actors with various interpretations of value associated to the water resources in and around Devils Lake were, as already mentioned, mostly marginalized. For both critics and proponents of IWRM this is a central facet of the limitations of existing water management. The ‘inherent political nature’ of water management and the centralization of power is potentially the reason for the governmental dominance of newspaper discourse on the issue (Blomquist and Schlager, 2005). Saravanan et al. (2009) can also point out why the outlet plan was flawed from the beginning; due to its narrow conception of responsibility to political jurisdictional borders rather than the wider river basin. As Saravanan et al. (2009, 79) point out, the existing water policy paradigm built around political borders works to fragment the watershed and create overlap and conflict in power structures.

Finally, the aforementioned call from researchers who have studied failures to implement IWRM was to understand how integration takes place (Blomquist and Schlager 2005; Saravanan et al. 2009). This thesis suggest that it has pointed to one manner in which integration definitely does not take place, and that is within the nexus of the news media. While the news media could ideally act as Habermas' 'lifeworld'; a presupposed unproblematic background of convictions for characters to interact within (Saravanan, 2009, 77), presently, it is currently thought to promote high level discourse related to political and economic values of the powerful elite (Herman and Chomsky 1988; Callahan and Schnell 2001, Richardson 2007). In this sense, the news media operates to essentially prove correct, or provide for, a Foucauldian view of 'power/knowledge' where contesting actors and their interests limit the opportunity for the Habermasian view of "power as a property negotiated through the consensus-bringing force of argumentative speech" (Saravanan, 2009, 77). This thesis does not wish to engage in the argument that Habermas is wrong, but instead to suggest that at the moment the news media, and very likely the policy process as well, does not operate in a manner in which power is created through "open, discursive style of governance among actors", but rather that power is centralized in a few actors before the communication even takes place. Conversely, while his conceptualization of governmentality has been a central component of three of the findings in this analysis and is useful in understanding the discursive effects of spatial understandings, this thesis does not completely agree with Foucault's ontological approach to power and discourse that operates inherently and inaccessibly without structure or agency (Veyne, 1993). Instead this thesis points to the political economy understanding of power based in critical theory that would explain the

findings of this research as the exertion of power within accepted discourse. The news media operates within a structural conceptualization supported by discourses promulgated by those with the most extensive reach of communications; but importantly, this thesis would suggest that this can be accessed and changed over time and that power is not inaccessible. In this sense then this thesis adopts that IWRM's hopes for implementation do lie somewhere between the polarizing discourse of Habermas and Foucault, the findings related to the promotion of certain scales and notions of state-centric authority suggest that Habermas is correct in emphasizing changes to existing institutional structures (Saravanan, 2009, 77), but simply that these changes face prominent discursive obstacles from the news media and other purveyors of public sentiment that grant power to participants before communication even takes place, and does so in an structure of democratically incentivized geo-political differentiation.

What this thesis suggests is that IWRM cannot be implemented into a region, network, or on top of existing power structures without an understanding and concerted effort to moderate or alter major public discourses related to water and politics. Because of the aforementioned communicative cooperative theory underlying IWRM, the discourses of competition and differentiation which have been indicated in this thesis need to be managed within a region for IWRM to be successful. Pragmatically this means fostering a political discourse which re-iterates and emphasizes the relationship between humans and natural resources, and the equality of input of all stakeholders. There is also a necessary role for geography in promoting the potential for basin-level management; this requires a re-imagining of the space that is a watershed into a community, a rhetorical shift that adds a sense of self-identification with a water basin as well as other

supplementary identities such as political, cultural and social ones. Those with the interest of promoting IWRM need to begin an effort to make this rhetorical and discursive shift by promoting to policy makers that not only is IWRM something that needs to be fostered in policy documents, but also in press releases and statements to the media. Otherwise a general public discourse, as seen in this dispute, which continues to identify power and community as both based on state-centric competitive utilitarian ideals of water management will make it very difficult to manage at the basin level. This is contrasted with the hopes of a discourse of water management similar to the hopes of IWRM that in the case of Devils Lake could have acted quickly to help those affected by the flooding while maintaining a sense of balance in regards to downstream concerns.

## 5.2 Devils Lake – A New Narrative

This thesis proposes to have shown not only the differences and relationships between news media in different regions, but also has suggested numerous ways in which it can be said the discourse of these texts as they were produced affected the path of the dispute, specifically in regards to its length, or the length of time it took for upstream and downstream interests to cooperate. The general narrative of the dispute which this thesis provides is presented below. Further it will be explained how this new narrative answers the main research problem regarding the discourse around media on the outlet dispute and what can be learned about it.

The Devils Lake dispute was a both a discursive and real event that took place for the most part between 1995 and 2011. In this period, the realities of a changing



environment in Devils Lake, and the problems which flooding provides, drove local interests to pursue a solution which was perceived as a threat to downstream interests. Eventually the most discursively powerful downstream interests which opposed the plan changed their position, and today the plan is operating with the hopes of lessening the effects of the flooding on the people of Devils Lake and surrounding communities. Analysis of two newspaper's coverage of this event led to multiple significant findings which together create a narrative of a public dispute disproportionately heated and rhetorical, unnecessarily long and framed around issues divergent from the original conflict of interests as well as the scientific and wider understandings of the plan. Uncertainty in planning, specifically water management, does not need to lead to conflict, but this thesis, through the analysis of news media and policy has indicated nine ways in which discourses converged to turn uncertainty about a plan into conflict over a plan.

This thesis suggests that that news media discourse was conflictive, specifically based on the dichotomies allowed by nation-state jurisdictions and that this discourse of conflict was created at a scale which fragmented the watershed into discursive political structures inconsistent with those which the natural environment is physically contained. Further, this thesis suggests that discourses around the political translation of scientific uncertainty, as well as discourse of historical resentment and economic valuation combined in the news media to foster the dispute and is argued to have been a contributing factor to the length and intensity of the dispute. The elements identified in these findings are potential areas of concern for those interested in the harmonious management of resources between cultures, nations or other perceived structures of power. The following section will summarize and clarify these findings.

### 5.3 Summary of Findings

- 1) Dominance of sub-national governments in news media coverage and lack of more moderate federal positions.

This conclusion took place within a group of findings related to how the newspapers and policy documents created the dispute at a level which favoured the rhetorical positions of the sub-national governments involved. The finding provides evidence for suggestions made in previous Devils Lake related research that indeed the broader bi-lateral relationship between Canada and the United States, which is seen by most as a relatively cooperative and healthy one, can break down at the local level as a result of tension and conflict (Springer 2007; Hollis 2008). Further, this finding suggests that one caveat for this breakdown of relations is the presence of the local news media. Though other factors may also play a role, such as the separate interests of sub-national and local governments from those of their federal counterpart; it is maintained nonetheless that the local press is crucial in the fostering of conflictive local attitudes in disputes. Finally, this finding contributed to the overall goal of this thesis to understand the news media discourse around the dispute by indicating that tense local attitudes not only omit more moderate federal approaches, they may also discourage their involvement through the potential for negative presentation in the press and resentment from local populations as was seen in the *WFP*.

- 2) Simplification of Outlet Proponents in *WFP* compared to *DLJ*

The second of three findings in the first category of political scale creation in the dispute, this finding indicates a difference between the *WFP* and *DLJ* that is thought to

have played an important role in the dispute. This finding provided evidence that the *WFP* pursued the dispute not only in a more combative and confrontational manner, but also along national and sub-national lines (a construction which reappears in many subsequent findings). The simplifications of characters worked to reinforce the dispute as one between the institutions of Manitoba and North Dakota, rather than the more muddled reality of small, medium and large organizations on both sides of the border being involved to some extent. This finding builds on evidence that the news media plays an important role in allowing interests to become legitimized and grow (Callaghan and Schnell, 2001). For geographers, the potential for the news media to essentially remove the limitation of space and foster cooperation on environmental issues is without a doubt something of concern. However, it was indicated here that the newspapers in this instance did not erase the distance that may have separated common interests in the dispute, but actually reinforced it by promoting the issue as one in which interests fell on certain sides of the border (the presence and effect of borders reappears in further findings). As a result, it is argued that this discourse within the newspapers removed the print media as a channel for cross border collaboration of interests for or against the outlet plan.

3) Marginalizing of the IJC as a character and narrative in the *DLJ* and outlet planning documents

The final finding in the first group related to political scale was the omission of transboundary mechanisms, namely the IJC, in one of the newspapers, as well as the relationship of this difference to the outlet's planning documents. Existing academic work, much of which was written during the dispute, focuses largely on the potential role of the IJC in the Devils Lake dispute (Knox 2004; Signorelli 2010). This narrative that

the IJC could be helpful in solving the dispute was also present in the later stages of *WFP* coverage. The fact that both the *DLJ* and the outlet planning documents from the NDSWC omit the IJC as major character may be telling of a regional discourse related to the IJC and potential resentment towards it based on historical events. The similarity found between news media narratives and those in the NDSWC is further evidence of this, the IJC happened to be the instance where this was most noteworthy due to the obvious emphasis of the commission in the *WFP* and academic literature. For researchers concerned with the relationship between local policies and news media discourse, this may be a valuable finding in understanding the potential for a given policy direction, or policy actor, to be positively accepted in a given region or dispute (Howland et al., 2006). As will be argued below, it seems apparent that political goals, whether they be broad ranging policies or specific project plans need to ‘fit’ where they are going in order to be successful. For an organization such as the IJC, the sense of resentment suggested to have been indicated here means that the discourse surrounding the Commission as a cooperative bi-lateral organization were in significant contrast with existing public sentiment.

Combined, these first three findings indicate that the scale of the dispute was similar between the two newspapers in regards to sub-national dominance, but that there were notable differences in the presentation of opponents to the plan as well as regarding the potential role of the IJC. These findings also touch upon themes found in further discussions below, such as the confrontational and defensive approaches of the *WFP* and *DLJ* respectively, the salience of national borders and governmental approaches in both newspapers, and the role of regional history in local discourses regarding the dispute.

#### 4) Governmental approach to dispute

This conclusion was the first in the second set of findings which related to how the dispute was created by the newspapers, and in policy, around a broader structure of power related to government institutions and practices. Notably, this first finding used Foucault's (1978) approach to space and power to identify a general 'governmentality' to the issue which is suggested to have created the 'us' and 'them' required for the conflict to take place (Newman and Paasi, 1998). As mentioned, this differentiation, because it took place at the governmental level, fostered a narrative that the dispute was between individuals who found themselves within certain boundaries, boundaries which are preconceived and argued to be not only separate from the event itself, but also problematic for water management. This finding added to the main research question by indicating the means by which the news media discourse was reinforcing the structures in place and that can be seen to have failed to produce cooperative water management in the region. The plan was flawed from inception because it did not foresee or include downstream interests, it did not do so because it did not need to; accordingly the plan was formulated by an 'us' in North Dakota who did not need to concern themselves with the 'them' of Manitoba. These distinctions were clear and fostered in news media discourse without much criticism.

#### 5) Basin-level management present in involved organizations but silenced in news media and policy

The second of three findings related to the creation of scale at the management level indicated that in both newspapers more integrated senses of human-environment interactions were silenced in favour of the existing structure built around national

borders. As it was indicated in existing research, a discourse which takes place within a given construct does not necessarily question that construct (Bakker, 1999). Despite the fact that groups such as the JWRB and the IRRB are designed to promote a better understanding of these challenges, the existing structure of water management across political borders was not questioned. Further, a discourse of ‘community’ based on natural relationships, such as being within the same watershed, was also not created in the news media and planning.

For water management researchers this finding, and the case of Devils Lake, may indicate that questions need to be asked about the potential for true basin-level management within, rather than above, the notions of sovereignty and political borders. Namely, it needs to be questioned just how likely it is that existing power structures will cede force to organizations based on borders which span multiple jurisdictions. Secondly, how does the relationship between political sovereignty and the responsibility of government to a certain people in a certain region play into the role of carelessness towards the environment outside of said region, especially in regards to the democratic incentives of elected officials. Finally, water managers and geographers alike need to ask how it will be possible for people to re-imagine their social and natural spaces to include jurisdictions or communities based on watershed management. More integrated approaches to water and resource management, such as those discussed by the Global Water Partnership (2000) face a serious problem if a discourse of community based on natural environmental relations cannot be successfully promoted to both the powerful elite as well as the general population. These new imaginations do not need to replace the existing plethora of identities people already carry, such as national, cultural, and

political ones, but only to supplement them and find a way to co-exist next to political jurisdictional identities rather than within them.

6) Focus on coverage on the political dispute, not the event

The final finding related to the management scale of the dispute deals with how this established governmental and politically spatially defined discourse also worked to make most salient the actions and efforts of individuals within powerful institutions rather than individual citizens or other groups, as well as neither the flood event or outlet plan's scientific evaluations. As with the previous finding, there were important criticisms omitted as a result of a discourse based within the existing structure rather than separate from it. Just as the notion of basin-level management was silenced due to governmental structure, so too were the effects of the flooding in Devils Lake and the potential for changes to Lake Winnipeg. It is suggested that this removed any sense of urgency to address these issues and instead placed the urgency (especially in the *WFP*) on ending the political dispute rather than stopping the flood. The omission of flood effect narratives, and the criticism that could have been labelled against either side for the consequences of their opposition to one another is considered a major omission of the newspapers included in this analysis. Since these consequences of the event were left separate from the political dispute, as Haughton (1998) and Bakker (1999) indicate the structural changes required to avert future failures were not present in public understanding of the issue.

Combined, these findings show how the dispute constructed around discourses of governmental differentiation, political borders and political dispute worked to alter the form of the Devils Lake event. It is believed that there is significant evidence in both

existing literature and this thesis regarding the relationship between news media discourse and policy directions to suggest that all six of the existing findings have had an effect on the formation and outcome of the dispute and what VanNijnatten calls the ‘discursive and material’ creations of scale.

7) The presence of a ‘mirrored inconsistency’ towards scientific information

Because of the ability of the news media to shape political discourse, and the potential relationship of this to the democratic process, this finding, more than any other, is believed to be at the core of why the Devils Lake dispute occurred. Based on existing understandings of the news media, the policy process, and the relation between these two (Herman and Chomsky 1988; Herman 2000), it is suggested that the promotion of the political interpretations of risk in the Devils Lake dispute over the much different scientific evaluations of risk not only allowed for clear asymmetry in narratives on the outlet, but also incentivized the issue for politicians on both sides to oppose each other (Allan 1999; Svendsen et al. 2005). This finding adds to existing research on the narrative structure of policy debates and the creation of asymmetry by adding the dimension that news media is the primary way, certainly in this dispute, that opposing interests promote their narratives (Roe, 1989). News media, and the democratic process, may also provide answers for the reasons for asymmetrical narratives in the policy process as it suggested here that in this instance both sides were empowered by the spatial understating of the dispute in the media which saw them as ‘fighting’ for a given area and therefore its residents. The prospect of re-election and broader political power coupled with the sense of differentiation and othering pushed onto the public appears, in this case, to have been enough to maintain this incentive for conflict. Finally, the interpretation, or filtration of



scientific uncertainties into narratives of uncompromising truth is potentially one of the greatest challenges facing modern environmental management and prospects of cooperation, the tendency for news media to broadcast these filtrations requires further research in regards to its material effects on resource management.

8) Different use of historical branding in *WFP* and *DLJ*

This finding was identified for its relationship not only to existing research on Devils Lake, but for the prospect it holds in promoting healthy dispute resolution mechanisms for all facets of environmental management. While the *WFP* used historical branding to promote frames of certainty and confrontation, the *DLJ* not only used the brand less, but when it was present it was used to transfer a sense of fear, uncertainty and disappointment. The findings of historical branding in the *WFP* is suggested here to be related to Feldman et al.'s (2009) understanding of 'resourcing' in which powerful interests use existing relationships and events to foster support of a new cause. It is certainly clear that in the earliest phases of the dispute Manitoba officials opposed to the outlet, as well as the *WFP*, emphasized a relationship to the previous Garrison dispute. Because of how branding works, this created an existing position for *WFP* readers to place themselves into regarding to the outlet. The *DLJ*'s lesser usage of the historical brand and connection of it to more pessimistic frames may be further evidence of discussions in existing work on the outlet dispute and the Manitoba-North Dakota relationship which identifies a potential sense of resentment in North Dakota regarding both Garrison and the IJC. As a result it is suggested again that further research on transboundary dispute mechanisms in water management need to pursue historical

evaluation of discourses related to these mechanism in order to better understand the prospects for productive management.

9) Material valuation in newspaper and planning discourse

As mentioned in previous findings, there appeared to be a lack of an integrated sense of values promoted in the news media discourse of the dispute. These values might include the cultural and emotional effects of flooding in Devils Lake or changes to Winnipeg, but also the evolution of meaning for events taking place in given political jurisdictions outside of one's assumed geographic identity. This is seen to be tied to the aforementioned lack of discussion on the consequences of the dispute. However, while some consequences of the dispute were discussed, they seemed to be within a narrow conception of values related to physical infrastructure and economic costs. While there is nothing wrong with the promotion of these values, their salience undermined the effects of the flood and the difficulty in understanding just what the consequences of numerous outcomes would entail. The juxtaposing of the \$400 million in flood damages to Devils Lake and \$50 million a year fishery in Lake Winnipeg is perhaps meaningless and incompatible compared to any 'true' cost of either case should it even be possible to quantify them. As Desjardins (2006) points out, there are no free markets in operation for natural goods such as a healthy lake or a flood free community, the physical infrastructure represents a fraction of the effect of the outlet plan. In the news media this economic valuation created a false sense of neutrality; in planning it was combined with traditional cost-benefit analysis which proceeded with an extremely narrow perception of both costs and benefits (Sagoff, 2011). This finding then showed how the process of omission in the media can limit issues to certain ways of understanding (Entman, 1993).

In water management this means less discussion of an integrated sense of management and reliance on the potentially false pretences of economic valuation for good management.

## 5.4 Conclusion

Collectively, these nine findings combine to create the new narrative of the Devils Lake dispute which this thesis claims. The findings also culminate to answer the research problem and suggest that combative news media discourse revolving around certain structures and concepts currently prevalent in the region of study acted to intensify and lengthen the dispute beyond what should have been a relatively simple proposal and negotiation process between upstream and downstream interests.

This project has attempted to balance an approach to Devils Lake with existing ideas and concepts in mind along with an approach fresh in interpretation and willing to seek out new understandings of the findings of the research process. As a result, these findings are diverse; they add to existing work on Devils Lake as well as challenge existing ideas about the status of the structures around the dispute. In sum, these findings are the result of a necessary analysis of the public face of this dispute. This thesis argues that next to, or along with, the internal dealings of the officials involved, the public face of any dispute is the most important aspect for analysis from social scientists. In regards to Devils Lake, this ‘public face’ was the manner in which hundreds of thousands of North Americans learned of the dispute, however, these discourses are suggested to be neither entirely separate from internal dealings nor definitively indicative of them. This

thesis choose to address this ‘public-face’ because of a existing gap in literature and the known relationship between news media and the policy process as well as geographic discourse.

The story of the dispute over the Devils Lake outlet is likely one to carry on in discussion of water management between the institutions Canada and the United States which fragment the natural environment. While the event itself is not over, it appears the high level political rhetoric in the news media related to the outlet is a thing of the past. Nonetheless, the dispute that took place should not be seen as inconsequential; it carries with it many lessons for geographers related to water management, spatial understanding, and the role of the news media in the promotion of discourses on human-environmental interactions. Among these lessons, this thesis suggests that there is an identifiable relationship between news media discourse and policy in the Devils Lake dispute, as well as a relationship between the public face of the dispute in the newspapers of the region and the path and outcomes of the event. The mechanisms of media selection and omission, public opinion, political incentive, and the geographical imaginations of political geography all played a role in the creation of the dispute in a certain manner. The findings of this thesis suggest that future research into transboundary dispute resolution mechanisms such as the IJC, notions of scale and value, and the effects of regional history on environmental management are all likely to benefit from thorough news media analysis, especially in conflicts.

In conclusion, this thesis clarifies that uncertainty in policy outcomes does not have to create conflict in policy goals. As it is suggested that news media fostered the capacity and means for interests to challenge one another’s positions without constructive

approaches to solving the problem, understanding of the relationship between public discourse and the political and physical management of the natural environment needs to be a central component of geography. In an age of hyper-criticism in the form of internet blogs, comment sections and forums, and 24-hour news networks, the traditional print news media is undoubtedly losing ground; however, whatever remains the most powerful conveyers of discourse in the coming decades need to be understood. Keeping salient the clear, compromising, integrated, and informed values of good resource management and wider environmental protection may require constant vigilance and awareness of public discourse. As discussed in the Global Water Partnership's (2000, 12) presentation of IWRM, "[b]ringing water issues to the top of political agenda is fundamental to the long term success of sustainable water resources management". However, this thesis would suggest it is not only the goal to bring water issues to the forefront of political agendas (as they were in Devils Lake), but to do so while avoiding the downfalls of problematic discourses such as differentiation and confrontation that can underlay the structures of modern news media and political geography.

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Devils Lake Basin Joint Water Resource Board	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Judicial - County (ND)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Judicial - North Dakota	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Dakota Federal Representative	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Dakota Federal Senators	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Dakota Gubernatorial Opposition	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Dakota State Senator	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Practitioner – Canadian	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12	11	45	246	22	18	27	149	14	63	85	1	3	696

**Table A2 - Full DLJ Character and Argument codes – For**

	For - Economic	For - Filter Unnecessary	For - Hazard Relief to DL	For - Legal	For - Natural	For - No WQ-IS Risk	For - Other-Unclear	For - Political	For – Technological Solution	For - Totals
Government of North Dakota	5	11	53	1	4	23	39	13	10	159
North Dakota State Water Commission	3	3	43	2	0	9	40	3	17	120
Government of Devils Lake	7	2	37	1	0	2	25	3	5	82
North Dakota Federal Senators	6	0	11	0	0	2	13	8	0	40
Citizen – American	8	0	9	0	2	0	9	0	0	28
Army Corps of Engineers	3	0	5	1	0	0	14	2	1	26
Practitioner – American	1	3	4	2	0	6	1	0	2	19
North Dakota Federal Representative	2	0	3	0	0	0	6	5	0	16
ND State Health Department	1	0	0	2	0	3	5	0	4	15
Devils Lake Basin Joint Water Resource Board	1	0	0	0	0	1	10	1	0	13
Government of United States	1	0	3	2	0	0	3	3	0	12
Government of Manitoba	0	2	0	1	0	1	5	0	2	11
Business - Devils Lake	5	0	3	0	0	0	1	0	0	9
Environmentalist – USA	0	0	0	0	4	0	4	0	0	8
Judicial - County (ND)	0	0	0	4	0	1	1	0	1	7
North Dakota State Senator	1	0	1	0	1	1	1	2	0	7
Canadians – Unclear	0	0	0	0	0	0	0	0	5	5
Citizen – Canadian	0	0	1	0	1	1	1	0	0	4
North Dakota Gubernatorial Opposition	0	0	1	0	0	0	2	0	0	3
People to Save the Sheyenne	0	0	0	0	0	0	3	0	0	3
Business - North Dakota	2	0	0	0	0	0	0	0	0	2
First Nations Interest	2	0	0	0	0	0	0	0	0	2
Government of Canada	0	0	0	0	0	0	0	0	2	2
Government of Canadian Town-City	0	0	0	0	0	2	0	0	0	2
Governments of Downstream ND Cities	2	0	0	0	0	0	0	0	0	2
International Joint Commission	0	0	2	0	0	0	0	0	0	2

Sierra Club	0	0	1	0	0	1	0	0	0	2
Business – Canadian	0	0	0	0	0	0	1	0	0	1
Judicial - North Dakota	0	0	0	1	0	0	0	0	0	1
Practitioner – Canadian	0	0	0	0	0	1	0	0	0	1
American State Government	0	0	0	0	0	0	0	0	0	0
Environmentalist – Unclear	0	0	0	0	0	0	0	0	0	0
Environmentalist – Canadian	0	0	0	0	0	0	0	0	0	0
FOE Canada	0	0	0	0	0	0	0	0	0	0
Government of Minnesota	0	0	0	0	0	0	0	0	0	0
National Wildlife Foundation	0	0	0	0	0	0	0	0	0	0
	50	21	177	17	12	54	184	40	49	604

Table A3 - Full DLJ character and argument codes - Neutral

	Neutral - Alternatives	Neutral - Cost-Benefit	Neutral - Environmental	Neutral - Legal	Neutral - Other-Unclear	Neutral - Political	Neutral - Research Required	Neutral - Tech Requirements	Neutral - Effectiveness	Neutral - Totals
Army Corps of Engineers	2	14	0	2	8	2	32	3	0	63
Government of United States	0	3	2	4	0	7	2	2	1	21
Government of Manitoba	1	0	2	1	1	1	5	7	0	18
Government of Canada	0	0	3	1	2	4	2	1	0	13
North Dakota State Water Commission	0	5	1	0	0	1	6	0	0	13
Government of North Dakota	0	0	0	2	0	2	3	5	0	12
Canadians – Unclear	0	0	1	0	4	0	5	1	0	11
Citizen – American	0	2	0	0	2	1	2	1	1	9
Citizen – Canadian	0	1	1	1	3	0	3	0	0	9
First Nations Interest	0	0	1	1	6	0	1	0	0	9
Government of Minnesota	0	0	1	0	2	1	4	1	0	9
Governments of Downstream ND Cities	0	0	2	0	1	1	4	0	0	8
ND State Health Department	0	0	0	2	2	2	0	1	0	7
North Dakota Federal Senators	0	3	0	0	1	1	2	0	0	7
Government of Canadian Town-City	0	0	0	0	0	0	5	0	0	5
Devils Lake Basin Joint Water Resource Board	0	0	1	1	0	1	1	0	0	4
Judicial - North Dakota	0	0	0	3	0	0	0	1	0	4
North Dakota Federal Representative	0	1	0	0	0	1	2	0	0	4
American State Government	0	0	1	0	0	0	2	0	0	3
Government of Devils Lake	0	0	0	0	1	0	1	0	0	2
Judicial - County (ND)	0	0	0	2	0	0	0	0	0	2
Practitioner – American	1	0	0	1	0	0	0	0	0	2
Practitioner – Canadian	0	0	0	0	0	0	2	0	0	2
Business - Devils Lake	0	0	0	0	1	0	0	0	0	1

Business - North Dakota	0	0	0	0	1	0	0	0	0	1
Environmentalist – Canadian	0	0	0	0	0	0	1	0	0	1
Environmentalist – USA	0	1	0	0	0	0	0	0	0	1
North Dakota State Senator	0	0	0	0	0	0	1	0	0	1
Business – Canadian	0	0	0	0	0	0	0	0	0	0
Environmentalist – Unclear	0	0	0	0	0	0	0	0	0	0
FOE Canada	0	0	0	0	0	0	0	0	0	0
International Joint Commission	0	0	0	0	0	0	0	0	0	0
National Wildlife Foundation	0	0	0	0	0	0	0	0	0	0
North Dakota Gubernatorial Opposition	0	0	0	0	0	0	0	0	0	0
People to Save the Sheyenne	0	0	0	0	0	0	0	0	0	0
Sierra Club	0	0	0	0	0	0	0	0	0	0
	4	30	16	21	35	25	86	23	2	242

Table A4 - Full WFP character and argument codes - Against

	Against - Alternatives	Against - Cost of Construction	Against - Economic	Against - Environmental	Against - Hazard Upstream	Against - Legal	Against - Other-Unclear	Against - Political	Against - Social-Cultural	Against - Tech Requirements	Against - Unnecessary-Low Water	Against - Lack of Transparency	Against - Total
Government – Manitoba	1	1	14	202	3	108	104	71	1	24	2	1	532
Government – Canada	0	0	0	36	1	35	25	42	1	7	0	0	147
Environmentalist – USA	1	0	0	39	0	18	9	3	0	11	0	0	81
Government - United States of America	1	2	0	17	0	8	4	10	1	1	1	3	48
Government - Local – Canada	0	0	2	13	0	7	11	13	0	0	0	0	46
Environmentalist – Canada	0	0	1	19	0	18	2	4	0	0	0	0	44
Environmentalist – Unclear	0	0	0	17	0	13	5	2	0	1	0	0	38
Practitioner – Canada	0	0	2	21	0	8	0	5	0	0	2	0	38
Government - American State (Not ND)	0	0	1	11	0	8	11	4	0	0	0	2	37
Citizen(s) – Canada	0	0	3	11	0	3	9	6	0	0	0	0	32
First Nations	0	0	1	3	0	9	2	1	9	0	0	0	25
Government - Manitoban Provincial Opposition	0	0	0	15	0	4	1	0	0	3	0	0	23
Other or Unclear	0	1	0	13	0	2	3	1	0	0	2	0	22
Government - Devils Lake	0	8	1	0	0	3	5	4	0	0	0	0	21
Citizen(s) – USA	0	1	2	7	0	2	7	0	0	0	0	1	20
People to Save the Sheyenne	1	0	0	8	0	6	5	0	0	0	0	0	20
Practitioner – USA	0	0	1	9	0	4	1	0	0	5	0	0	20
International Joint Commission	0	0	1	7	0	6	2	2	0	0	0	0	18
Government - North Dakota	1	5	2	1	1	0	0	0	0	0	1	0	11
Government - Unclear – Canada	0	0	0	5	0	1	5	0	0	0	0	0	11
North Dakota State Water Commission	1	0	0	4	0	1	4	0	0	0	1	0	11



Environmentalist – Unclear	0	0	0	0	0	0	0	0	0
Environmentalist – USA	0	0	0	0	0	0	0	0	0
Government - Canadian Federal Opposition	0	0	0	0	0	0	0	0	0
Government - Unclear – Canada	0	0	0	0	0	0	0	0	0
Judicial - American State Level	0	0	0	0	0	0	0	0	0
People to Save the Sheyenne	0	0	0	0	0	0	0	0	0
Practitioner – Unclear	0	0	0	0	0	0	0	0	0
	10	203	29	9	106	218	47	63	685

**Table A6 - Full WFP character and argument codes - Neutral**

	Natural - Legal Uncertainty	Neutral - Alternatives	Neutral - Economic	Neutral - Effectiveness	Neutral - Environmental	Neutral - Hazard-Both Sides	Neutral - Other or Unclear	Neutral - Political	Neutral - Tech Requirements	Neutral - Total
Government – Canada	35	0	0	0	10	1	6	33	3	88
Government – Manitoba	19	0	0	0	14	2	7	8	1	51
Government - United States of America	7	0	0	0	5	1	10	12	1	36
Army Corps of Engineers	1	5	0	0	11	0	7	0	0	24
Government - North Dakota	4	0	0	0	6	0	2	8	1	21
Citizen(s) – USA	3	0	1	0	2	4	4	3	0	17
International Joint Commission	1	0	0	0	5	2	5	1	0	14
Practitioner – Canada	1	0	0	0	7	2	2	0	0	12
Practitioner – USA	2	0	0	1	8	0	1	0	0	12
Government - Local – Canada	2	0	0	0	3	2	1	3	0	11
Government - Devils Lake	1	0	0	0	2	3	1	2	0	9
Citizen(s) – Canada	3	0	0	0	0	0	1	3	0	7
First Nations	3	0	0	0	0	0	3	1	0	7
Citizen(s) – Unclear	3	0	0	0	0	0	0	3	0	6
Practitioner – Unclear	0	0	0	0	5	0	1	0	0	6
Other or Unclear	0	0	0	0	1	1	3	0	0	5
Business Interest – USA	0	0	0	0	2	2	0	0	0	4
Environmentalist – Unclear	0	0	0	0	2	0	0	0	0	2
Environmentalist – USA	1	0	0	0	0	0	0	1	0	2
Government - American State (Not ND)	0	0	0	0	1	0	0	1	0	2
People to Save the Sheyenne	0	0	0	0	1	0	1	0	0	2
Environmentalist – Canada	0	0	0	0	1	0	0	0	0	1
Government - Unclear – USA	0	0	0	0	0	0	1	0	0	1
North Dakota State Water Commission	0	0	0	0	1	0	0	0	0	1



Business Interest – Canada	0	0	0	0	0	0	0	0	0	0
Government - Canadian Federal Opposition	0	0	0	0	0	0	0	0	0	0
Government - Manitoban Provincial Opposition	0	0	0	0	0	0	0	0	0	0
Government - Unclear – Canada	0	0	0	0	0	0	0	0	0	0
Judicial - American State Level	0	0	0	0	0	0	0	0	0	0
Judicial - Federal American	0	0	0	0	0	0	0	0	0	0
	86	5	1	1	87	20	56	79	6	341

## Appendix B – Narrative Codes

**Table B1 - Full DLJ narrative codes**

Theme	Narrative	News Only	All Articles	Opinion	Opinion %
Cultural	Historical Dispute Continues (Garrison)	22	36	14	39
	Group Claims Cultural Identification with Water	18	34	16	47
	Aboriginal Issues Being Ignored	14	30	16	53
	Media Coverage is Unsatisfactory	10	24	14	58
	Canada-U.S Special Friendship	6	12	6	50
	American Actions Interfere on Canadian Sovereignty	4	12	8	67
	Manitobans vs. North Dakotans (Generalization)	2	10	8	80
Economic	Outlet is Economic Cost/Funding Issue	201	237	36	15
	Cost-Benefit Analysis Needed	89	125	36	29
	Local Business Supports Outlet	4	4	0	0
Legal-Institutional	Legal Process Unfolds	89	97	8	8
	Role For IJC Is Important	62	70	8	11
	Outlet Opponents Appeal to Third Party	26	26	0	0
	IJC Should not get Involved	2	2	0	0
Political	Political Alliance Building Effort	337	366	29	8
	Internal Political Dispute Takes Place	222	244	22	9
	Citizens Take Action	159	175	16	9
	Intensity of Dispute Increases	138	171	33	19
	Political Cooperation Needed to Solve Flooding Problem	137	187	50	27
	Politicians Negotiate Across Border	131	133	2	2
	North Dakotan Government Pledges Action on Outlet	130	134	4	3
	Canadian Officials Voice Concerns	129	140	11	8
	Manitoba Politicians Fight Back	112	112	0	0
	Downstream American Interests Fight Back	62	79	17	22
	American Federal Government Not Doing Enough	54	78	24	31
	American Federal Support is Conditional	54	62	8	13
	Outlet Proponents Meet With American Opponents	49	58	9	16
	American Federal Government Pledges Action on Issue	45	45	0	0
	Outlet Proponents Meet With First Nations	43	45	2	4
	Intensity of Dispute Decreases	31	36	5	14
	Canadian Opponents are Misinformed	22	33	11	33
	Canadian Official Visits DL	16	20	4	20
	Canadian Interests Should Be Respected	12	18	6	33
	Canada Refuses to Negotiate	10	18	8	44

	Manitoba Government not Doing Enough	8	12	4	33
	Canadian Federal Government not doing Enough	8	10	2	20
	Canadian Government Pledges Action on Issue	6	6	0	0
	Canadian Politicians Are Playing Opposition Politics	4	4	0	0
Environmental	Outlet is (Potential) Threat to Canadian Environment	128	140	12	9
	North Dakota Working to Avoid Downstream Risks	101	123	22	18
	Outlet is (Potential) Threat to American Environment	99	107	8	7
	Environmental Risk is Negligible	56	86	30	35
	Environmentalist Interference is a Problem	33	61	28	46
	Environmentalists Oppose Outlet Plan	18	18	0	0
Management & Planning	Water Management Takes Place/Is Important	252	270	18	7
	State Outlet Moves Forward	219	265	46	17
	Public Consultation Should/Take(s) Place	199	237	38	16
	Federal Outlet Plan Moves Forward	177	177	0	0
	Outlet is Best Planning Option	159	175	16	9
	Federal or State Outlet Faces Setback	132	142	10	7
	Army Corps of Engineers Considers Options	132	132	0	0
	Army Corps of Engineers Looked to For Solution	116	126	10	8
	Lack of Progress on Outlet Creates Frustration in Region	111	118	7	6
	Devils Lake Government is Optimistic About Solution	98	100	2	2
	Outlet Proponents Reject Misinformation	60	81	21	26
	Outlet Needed at East End	57	68	11	16
	Environmental Bureaucracy Hindering Flood Solutions	53	66	13	20
	State May have to Undertake Outlet Project	52	66	14	21
	Alternatives to the Outlet Need to be Explored Further	44	57	13	23
	Non-Technological Solution to Flooding Discussed	35	50	15	30
	Outlet is one of Many Management Problems	34	41	7	17
	East-End Outlet Moves Forward	33	41	8	20
	North Dakota Interests Debate Where to Put Outlet	25	33	8	24
	Third Outlet is Discussed/Pledged	16	16	0	0
Outlet Proponents Investigate Claims Against	6	6	0	0	
Hazards	Devils Lake Community Faces Hardship	214	276	62	22
	Solution to Flooding Called For Immediately	206	268	62	23
	North Dakotan Officials Discuss Flooding Solution	187	195	8	4
	Natural Overflow is Potential Concern	82	144	62	43
	Opposing Interests Cooperate to Negotiate Flood Solution	51	53	2	4
	Canada/Manitoba is Sympathetic to Flooding Problem	34	36	2	6
Science & Technology	Technological Approach to Solve Flooding	484	568	84	15
	Scientific Neutrality will Determine Outcome	171	215	44	20
	Tech Approach to Water Quality Problems	137	149	12	8
	Outlet Requires Better Filter	53	74	21	28
	Research Suggests Lack of Threat	46	55	9	16
	Research Suggests Outlet Ineffective	42	46	4	9
		6620	7786	1166	

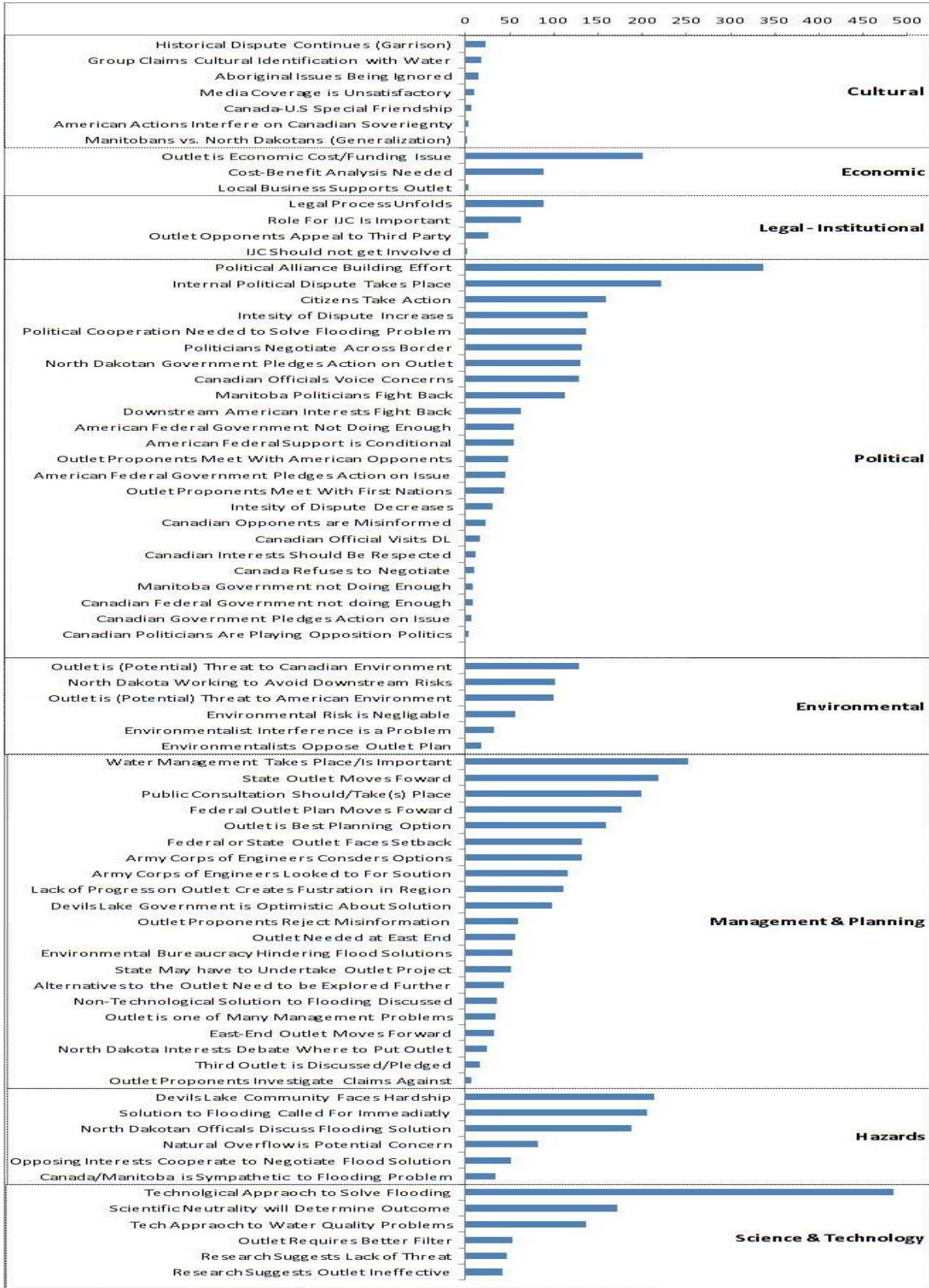


Figure B1 - Full DLJ narrative codes

**Table B2 - Full WFP narrative codes**

Theme	Narrative	News Only	All Articles	Opinion	Opinion %
Cultural	Historically Based Dispute Continues	145	178	33	19
	American Actions Interfere on Canadian Sovereignty	70	118	48	41
	Canada-U.S. Special Friendship	45	98	53	54
	Canadians vs. Americans (Generalization)	38	78	40	51
	Group Claims Cultural Identification with Water	20	35	15	43
	Aboriginal Issues Being Ignored	13	21	8	38
	Canadian Actions Interfere on American Sovereignty	3	5	2	40
	Manitobans vs., North Dakotans (Generalization)	0	3	3	100
	Media Coverage is Unsatisfactory	0	8	8	100
Legal-Institutional	Role for IJC is Important	130	168	38	23
	Legal Process Unfolds	85	93	8	9
Political	Politicians Negotiate Across Border	240	273	33	12
	Political Alliance Building Effort	170	185	15	8
	North Dakota Not Doing Enough	148	188	40	21
	Manitoban Politicians Fight Back	133	148	15	10
	Internal Political Dispute	110	135	25	19
	Intensity of Dispute Increases	108	133	25	19
	Citizens Take Action	63	75	12	16
	Canadian Federal Government Not Doing Enough	58	68	10	15
	American Federal Government Not Doing Enough	50	63	13	21
	Intensity of Dispute Decreases	38	45	7	16
	Canadian Government Pledges Action on Issue	28	28	0	0
	Manitoban Government Not Doing Enough	15	35	20	57
		American Interests Should be Respected	8	18	10
Environmental	Outlet is (Potential) Threat to Canadian Environment	260	293	33	11
	North Dakota Working to Avoid Downstream Risks	73	88	15	17
	Environmental Risk is Negligible	55	58	3	5
	Outlet (Potentially) Dangerous to American Environment	25	28	3	11
	Basin Overflow is Natural Process	8	18	10	56
	Environment & Sovereignty Needs to Be Reexamined	5	18	13	72
Management/Planning	Outlet Plan Moves Forward	185	203	18	9
	Alternatives to the Outlet Need to be Explored	75	120	45	38
	Federal or State Outlet Faces Setback	38	38	0	0
	Outlet is One of Many Management Problems	28	58	30	52
	Outlet is Best Management Option	10	25	15	60
Hazards	Devils Lake Community Faces Hardship	113	168	55	33
	Natural Overflow is a Potential Concern	48	50	2	4
	Opposing Interests Cooperate to Negotiate Flood Solution	45	55	10	18
	Canada/Manitoba is Sympathetic to Flooding Problem	8	8	0	0
Science & Technology	Scientific Neutrality will Determine Outcome	144	243	99	41
	Technological Approach to Solve Flooding	123	140	17	12
	Outlet requires Better Filter	65	65	0	0
	Research Suggests Outlet Ineffective	15	15	0	0
		3041	3890	849	

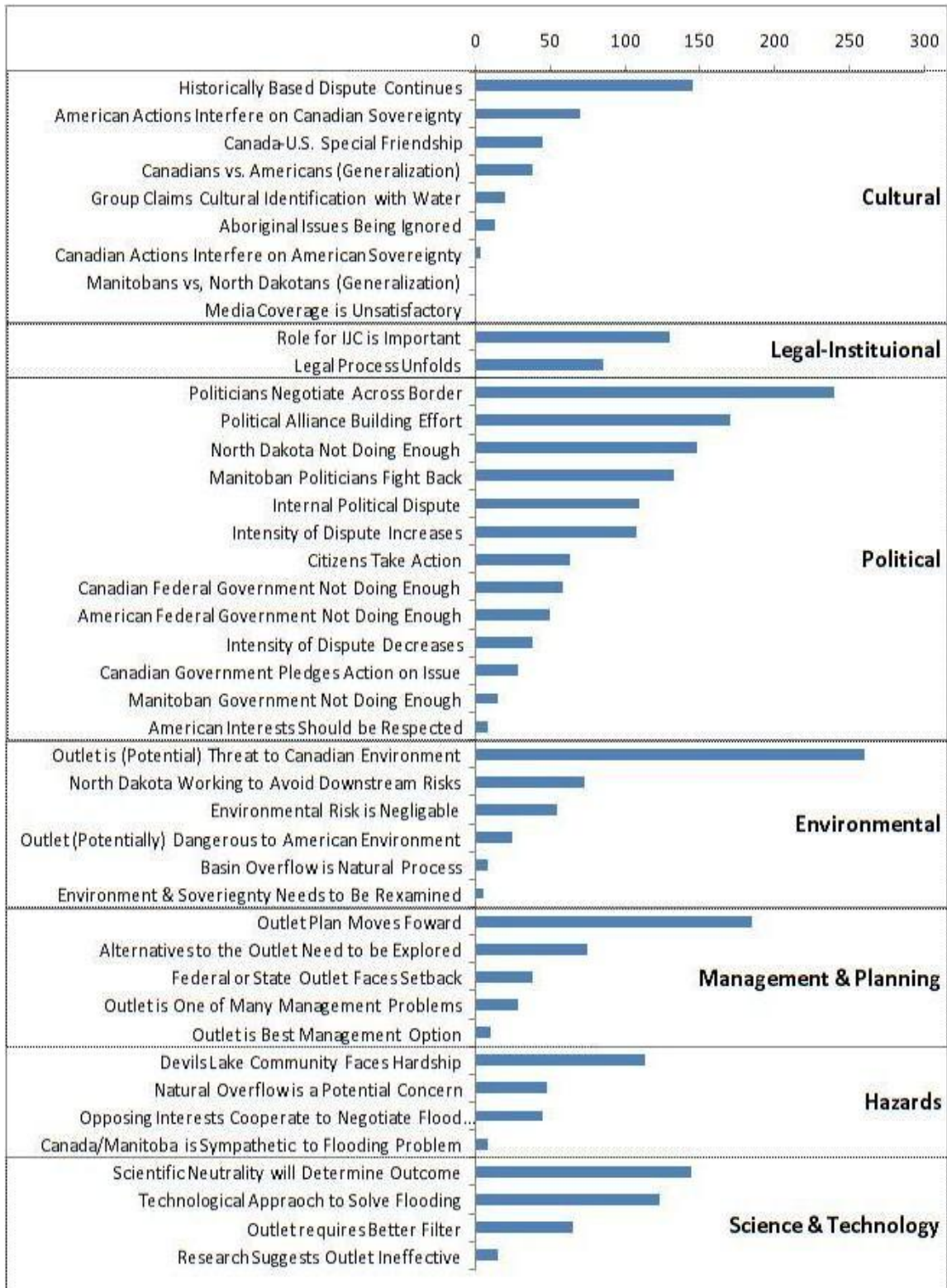


Figure B2 - WFP full narrative codes

## Appendix C – Framing and Branding Codes

Table C1 - Full DLJ framing and branding combination codes

	Continuation of Garrison	Cultural Issue	Bilateral Political Dispute	Domestic Political Dispute	Economic Cost Issue	Engineering Issue	Environmental Issue	Legal Issue	Hazards Issue	Natural Process	Public Relations Battle	Public/Citizen Dispute	Scientific Issue	Transparency Issue	Water Management Issue	Total
Blame or Deflection	0.00	0.00	0.64	0.14	0.23	0.28	0.41	0.18	0.37	0.05	0.23	0.09	0.18	0.14	0.23	3.17
Commonality Amongst Opponents	0.00	0.05	0.18	0.05	0.05	0.14	0.28	0.00	0.14	0.05	0.09	0.09	0.18	0.05	0.23	1.56
Concern or Attention	0.05	0.00	1.01	0.83	0.28	0.51	1.38	0.87	0.60	0.09	0.41	0.60	0.64	0.41	0.51	8.19
Conditionality or Compromise	0.00	0.00	0.60	0.32	0.14	0.46	0.78	0.37	0.37	0.05	0.18	0.18	0.32	0.32	0.23	4.32
Confidence or Certainty	0.00	0.00	0.92	0.23	0.23	0.37	0.74	0.55	0.37	0.00	0.09	0.18	0.46	0.28	0.28	4.69
Confrontation or Defense	0.00	0.00	0.78	0.37	0.09	0.41	0.92	0.83	0.23	0.05	0.37	0.51	0.37	0.18	0.37	5.47
Cooperation with Allies	0.05	0.00	0.60	0.37	0.05	0.09	0.87	0.60	0.18	0.00	0.23	0.51	0.28	0.09	0.18	4.09
Cooperation with Opponent	0.05	0.00	0.92	0.14	0.05	0.32	0.87	0.23	0.46	0.05	0.23	0.37	0.18	0.41	0.28	4.55
Critical or Insulting	0.00	0.00	0.92	0.46	0.05	0.09	0.78	0.64	0.18	0.00	0.46	0.41	0.37	0.28	0.18	4.83
Denial or Rejection	0.00	0.00	1.20	0.46	0.32	0.64	1.52	0.60	0.60	0.14	0.28	0.41	0.64	0.55	0.55	7.91
Despair or Sympathy	0.00	0.00	0.18	0.09	0.05	0.00	0.23	0.05	0.18	0.00	0.00	0.05	0.14	0.09	0.00	1.06
Differentiation or Othering	0.00	0.09	0.09	0.09	0.00	0.05	0.09	0.05	0.05	0.00	0.14	0.09	0.09	0.05	0.05	0.92
Disappointment or Failure	0.18	0.00	0.23	0.23	0.23	0.18	0.32	0.09	0.14	0.00	0.28	0.37	0.09	0.14	0.05	2.39
Distrust of Opponents	0.00	0.00	0.55	0.18	0.05	0.28	0.55	0.28	0.37	0.00	0.28	0.28	0.46	0.41	0.18	3.86
Distrust of Own Side	0.00	0.00	0.09	0.18	0.14	0.14	0.14	0.05	0.14	0.05	0.05	0.14	0.05	0.00	0.14	1.29
Frustration or Impatience	0.00	0.09	0.32	0.23	0.18	0.14	0.37	0.14	0.28	0.00	0.09	0.14	0.14	0.28	0.09	2.48
Inequality or Marginalization	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.18
Inevitability or Eventuality	0.00	0.00	0.37	0.28	0.14	0.18	0.51	0.37	0.18	0.05	0.14	0.05	0.23	0.09	0.18	2.76
Intensity or Passion	0.14	0.05	0.41	0.37	0.14	0.18	0.60	0.37	0.18	0.05	0.32	0.37	0.28	0.14	0.14	3.73
Miscommunication or Incompetence	0.00	0.00	0.32	0.28	0.14	0.18	0.37	0.28	0.14	0.05	0.18	0.14	0.18	0.14	0.14	2.53
Opportunism or Benefits	0.00	0.00	0.00	0.14	0.00	0.05	0.09	0.00	0.09	0.05	0.05	0.14	0.09	0.00	0.14	0.83
Optimism or Hope	0.00	0.00	0.09	0.14	0.05	0.18	0.28	0.05	0.18	0.05	0.05	0.14	0.23	0.14	0.28	1.84

Patience or Reason	0.00	0.00	0.37	0.18	0.05	0.18	0.64	0.18	0.28	0.05	0.14	0.41	0.51	0.23	0.28	3.50
Pessimism or Worry	0.05	0.05	0.51	0.23	0.23	0.09	0.37	0.18	0.28	0.00	0.05	0.05	0.23	0.14	0.37	2.81
Reassurance or Relief	0.00	0.05	0.46	0.37	0.14	0.55	0.83	0.23	0.51	0.14	0.18	0.32	0.55	0.32	0.46	5.11
Secrecy or Dishonesty	0.00	0.00	0.05	0.05	0.09	0.09	0.05	0.00	0.05	0.00	0.05	0.05	0.00	0.05	0.05	0.51
Uncertainty or Ambiguity	0.05	0.00	0.41	0.41	0.32	0.69	0.78	0.41	0.37	0.00	0.00	0.23	0.69	0.32	0.51	5.20
Uncooperativeness or Stubbornness	0.05	0.00	0.28	0.14	0.05	0.05	0.23	0.18	0.00	0.00	0.05	0.05	0.05	0.00	0.05	1.15
Understanding or Open-Minded	0.00	0.00	0.14	0.14	0.05	0.14	0.23	0.00	0.18	0.05	0.23	0.28	0.23	0.23	0.14	2.02
Unexpectedness or Surprise	0.05	0.00	0.05	0.14	0.14	0.18	0.05	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.09	0.87
Urgency or Fear	0.14	0.00	0.97	0.64	0.23	0.23	1.24	0.55	0.60	0.05	0.46	0.32	0.37	0.09	0.28	6.16
Total	0.78	0.41	13.71	7.87	3.82	7.08	16.51	8.46	7.77	1.01	5.34	6.81	8.23	5.57	6.62	100.00

Table C2 - Full WFP framing and branding combination codes

	Continuation of Garrison	Cultural Issue	Bilateral Political Dispute	Domestic Political Dispute	Economic Cost Issue	Engineering Issue	Environmental Issue	Legal Issue	Hazards Issue	Natural Process	Public Relations Battle	Public/Citizen Dispute	Scientific Issue	Transparency Issue	Water Management Issue	Total
Blame or Deflection	0.07	0.07	0.32	0.25	0.09	0.11	0.16	0.14	0.07	0.00	0.16	0.02	0.02	0.02	0.02	1.53
Commonality Amongst Opponents	0.00	0.05	0.18	0.07	0.02	0.00	0.00	0.07	0.11	0.00	0.09	0.11	0.00	0.00	0.00	0.71
Concern or Attention	0.14	0.09	0.78	0.50	0.30	0.57	1.12	0.44	0.39	0.02	0.11	0.05	0.37	0.07	0.00	4.95
Conditionality or Compromise	0.00	0.07	0.66	0.21	0.21	0.25	0.50	0.23	0.14	0.00	0.16	0.11	0.11	0.09	0.00	2.75
Confidence or Certainty	0.14	0.09	1.05	0.25	0.21	0.46	0.80	0.69	0.27	0.00	0.30	0.16	0.21	0.07	0.00	4.70
Confrontation or Defense	0.14	0.21	1.86	0.62	0.21	0.48	1.33	0.96	0.39	0.02	0.37	0.25	0.27	0.07	0.00	7.17
Cooperation with Allies	0.05	0.07	1.51	0.73	0.21	0.25	0.69	0.50	0.34	0.00	0.18	0.18	0.11	0.00	0.00	4.90
Cooperation with Opponent	0.09	0.16	1.03	0.27	0.25	0.34	0.46	0.44	0.34	0.00	0.25	0.18	0.23	0.07	0.02	4.15
Critical or Insulting	0.21	0.25	1.10	0.62	0.09	0.34	0.55	0.30	0.14	0.00	0.37	0.23	0.16	0.05	0.00	4.40

Denial or Rejection	0.21	0.05	0.66	0.18	0.16	0.34	0.69	0.39	0.27	0.00	0.27	0.05	0.03	0.11	0.00	3.69
Despair or Sympathy	0.00	0.02	0.21	0.05	0.18	0.21	0.18	0.11	0.57	0.00	0.09	0.16	0.01	0.02	0.00	1.92
Differentiation or Othering	0.25	0.32	1.15	0.37	0.18	0.18	0.48	0.27	0.23	0.00	0.34	0.32	0.04	0.02	0.00	4.26
Disappointment or Failure	0.00	0.00	0.09	0.00	0.02	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
Confrontation or Defense	0.05	0.30	1.63	0.48	0.25	0.57	0.92	0.55	0.27	0.02	0.48	0.32	0.02	0.11	0.05	6.28
Cooperation with Allies	0.09	0.09	0.66	0.30	0.14	0.25	0.39	0.18	0.18	0.00	0.39	0.07	0.02	0.09	0.02	3.14
Frustration or Impatience	0.05	0.14	1.17	0.53	0.23	0.34	0.60	0.48	0.16	0.00	0.23	0.18	0.02	0.05	0.02	4.40
Inequality or Marginalization	0.00	0.16	0.30	0.23	0.07	0.05	0.16	0.18	0.00	0.00	0.11	0.16	0.00	0.00	0.02	1.44
Inevitability or Eventuality	0.41	0.02	0.41	0.14	0.34	0.46	0.37	0.37	0.32	0.00	0.00	0.02	0.00	0.02	0.02	3.00
Intensity or Passion	0.18	0.18	0.53	0.11	0.09	0.14	0.41	0.18	0.11	0.00	0.14	0.05	0.01	0.02	0.02	2.29
Miscommunication or Incompetence	0.14	0.07	0.69	0.23	0.21	0.34	0.48	0.34	0.11	0.02	0.25	0.11	0.04	0.02	0.00	3.16
Opportunism or Benefits	0.00	0.00	0.05	0.00	0.07	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
Optimism or Hope	0.05	0.02	0.92	0.25	0.16	0.27	0.39	0.39	0.25	0.00	0.16	0.09	0.00	0.05	0.00	3.09
Patience or Reason	0.02	0.21	0.85	0.34	0.21	0.32	0.53	0.44	0.32	0.00	0.34	0.23	0.02	0.05	0.00	4.10
Pessimism or Worry	0.34	0.09	0.64	0.25	0.16	0.23	0.48	0.25	0.11	0.00	0.16	0.02	0.01	0.11	0.00	3.02
Reassurance or Relief	0.02	0.02	0.82	0.27	0.30	0.62	0.64	0.25	0.30	0.02	0.07	0.07	0.03	0.02	0.07	3.87
Secrecy or Dishonesty	0.00	0.00	0.16	0.05	0.02	0.09	0.16	0.09	0.02	0.00	0.05	0.00	0.01	0.11	0.00	0.87
Uncertainty or Ambiguity	0.02	0.05	1.17	0.27	0.30	0.78	1.26	0.48	0.41	0.00	0.07	0.05	0.02	0.07	0.02	5.57
Uncooperativeness or Stubbornness	0.00	0.02	0.64	0.18	0.07	0.14	0.34	0.37	0.16	0.00	0.02	0.00	0.00	0.00	0.00	2.02
Understanding or Open-Minded	0.00	0.00	0.00	0.18	0.00	0.02	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.07	0.39
Unexpectedness or Surprise	0.00	0.00	0.25	0.05	0.02	0.05	0.16	0.16	0.05	0.00	0.00	0.02	0.00	0.00	0.00	0.80
Urgency or Fear	0.16	0.14	1.24	0.46	0.30	0.44	1.67	0.73	0.71	0.00	0.37	0.11	0.05	0.16	0.00	7.03
Total	2.82	2.9	22.7	8.4	5.0	8.6	16.0	10	6.	0.	5.5	3.	5.	1.	0.3	100.



		5	2	5	6	6	1	.05	78	11	7	37	54	53	7	00
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Table C3 - Full DLJ vs. WFP framing and branding combination codes

	Continuation of Garrison	Cultural Issue	Bilateral Political Dispute	Domestic Political Dispute	Economic Cost Issue	Engineering Issue	Environmental Issue	Legal Issue	Hazards Issue	Natural Process	Public Relations Battle	Public/Citizen Dispute	Scientific Issue	Transparency Issue	Water Management Issue	Total
Blame or Deflection	0.07	0.07	-0.32	0.11	0.14	0.16	-0.25	0.05	0.30	0.05	0.07	-0.07	0.16	0.12	-0.21	-1.64
Commonality Amongst Opponents	0.00	0.00	0.00	0.02	0.02	0.14	-0.28	0.07	0.02	0.05	0.00	0.02	0.18	0.05	-0.23	-0.85
Concern or Attention	0.09	0.09	-0.23	0.32	0.02	0.07	-0.26	0.44	0.21	0.07	0.30	-0.55	0.28	0.35	-0.51	-3.24
Conditionality or Compromise	0.00	0.07	0.07	0.12	0.07	0.21	-0.28	0.14	0.23	0.05	0.02	-0.07	0.21	0.23	-0.23	-1.58
Confidence or Certainty	0.14	0.09	0.13	0.02	0.02	0.09	0.07	0.14	0.09	0.00	0.21	-0.02	0.25	0.21	-0.28	0.00
Confrontation or Defense	0.14	0.21	1.07	0.25	0.11	0.07	0.41	0.13	0.16	0.02	0.00	-0.25	0.09	0.12	-0.37	1.70
Cooperation with Allies	0.00	0.07	0.91	0.36	0.16	0.16	-0.19	0.09	0.16	0.00	0.05	-0.32	0.09	0.09	-0.18	0.81
Cooperation with Opponent	0.05	0.16	0.11	0.14	0.21	0.02	0.42	0.21	0.12	0.05	0.02	-0.18	0.05	0.35	-0.25	-0.41
Critical or Insulting	0.21	0.25	0.18	0.16	0.05	0.25	-0.23	0.35	0.05	0.00	0.09	-0.18	0.21	0.23	-0.18	-0.43
Denial or Rejection	0.21	0.05	-0.53	0.28	0.16	0.30	-0.83	0.21	0.32	0.14	0.00	-0.37	0.35	0.44	-0.55	-4.22
Despair or Sympathy	0.00	0.02	0.02	0.05	0.14	0.21	-0.05	0.07	0.39	0.00	0.09	0.11	0.02	0.07	0.00	0.87
Differentiation or Othering	0.25	0.23	1.05	0.27	0.18	0.14	0.39	0.23	0.18	0.00	0.21	0.23	0.05	0.02	-0.05	3.34
Disappointment or Failure	0.18	0.00	-0.14	0.23	0.21	0.18	-0.28	0.09	0.14	0.00	0.28	-0.23	0.07	0.14	-0.05	-2.21
Distrust of Opponents	0.05	0.30	1.07	0.30	0.21	0.30	0.36	0.27	0.09	0.02	0.21	0.04	0.19	0.30	-0.14	2.41
Distrust of Own Side	0.09	0.09	0.57	0.11	0.00	0.11	0.25	0.14	0.05	0.05	0.34	-0.07	0.23	0.09	-0.12	1.85
Frustration or Impatience	0.05	0.05	0.85	0.30	0.05	0.21	0.23	0.34	0.12	0.00	0.14	0.05	0.09	0.23	-0.07	1.91
Inequality or Marginalization	0.00	0.11	0.25	0.23	0.07	0.05	0.16	0.14	0.00	0.00	0.07	0.16	0.00	0.00	0.02	1.26

Inevitability or Eventuality	0.41	0.02	0.04	-0.14	0.21	0.27	-0.14	0.00	0.14	-0.05	-0.14	-0.02	-0.14	-0.07	-0.16	0.24
Intensity or Passion	0.05	0.14	0.11	-0.25	0.05	0.05	-0.19	0.18	0.07	0.05	0.18	0.32	0.16	0.12	-0.12	-1.44
Miscommunication or Incompetence	0.14	0.07	0.37	-0.05	0.07	0.16	0.11	0.07	0.02	0.02	0.07	0.02	0.05	0.12	-0.14	0.63
Opportunism or Benefits	0.00	0.00	0.05	-0.14	0.07	0.05	-0.09	0.07	0.09	0.05	0.05	0.14	0.05	0.00	-0.14	-0.60
Optimism or Hope	0.05	0.02	0.82	0.11	0.11	0.09	0.11	0.34	0.07	0.05	0.11	0.05	0.14	0.09	-0.28	1.25
Patience or Reason	0.02	0.21	0.48	0.16	0.16	0.14	-0.12	0.25	0.04	0.05	0.21	0.18	0.25	0.18	-0.28	0.60
Pessimism or Worry	0.30	0.05	0.14	0.02	0.07	0.14	0.11	0.07	0.16	0.00	0.14	0.02	0.09	0.02	-0.37	0.22
Reassurance or Relief	0.02	0.02	0.36	-0.09	0.16	0.07	-0.19	0.02	0.21	0.12	0.12	0.25	0.19	0.30	-0.39	-1.23
Secrecy or Dishonesty	0.00	0.00	0.11	0.00	0.02	0.00	0.11	0.09	0.02	0.00	0.00	0.05	0.11	0.07	-0.05	0.36
Uncertainty or Ambiguity	0.02	0.05	0.75	-0.14	0.02	0.09	0.48	0.07	0.04	0.00	0.07	0.18	0.07	0.25	-0.48	0.37
Uncooperativeness or Stubbornness	0.05	0.02	0.37	0.05	0.02	0.09	0.11	0.18	0.16	0.00	0.02	0.02	0.00	0.00	-0.05	0.87
Understanding or Open-Minded	0.00	0.00	0.14	-0.05	0.05	0.12	-0.18	0.00	0.18	0.05	0.23	0.28	0.21	0.18	-0.07	-1.63
Unexpectedness or Surprise	0.05	0.00	0.21	-0.09	0.12	0.14	0.11	0.07	0.05	0.00	0.00	0.02	0.05	0.00	-0.09	-0.07
Urgency or Fear	0.02	0.14	0.27	0.19	0.07	0.21	0.43	0.18	0.11	0.05	0.09	0.21	0.18	0.07	-0.28	0.87
Total	2.04	2.54	9.01	0.59	1.24	1.57	-0.50	1.59	0.99	0.90	0.23	3.44	2.69	4.03	-6.26	0.00

## Curriculum Vitae

Daniel J. Bednar

### *Employment History*

- September 2010 – Present: University of Western Ontario: Teaching Assistant – Department of Geography
- April 2009 – October 2009 University of Winnipeg Institute of Urban Studies – Sustainable Churchill Project

### *Education*

- 2004 – Graduated from the Lord Selkirk Regional Comprehensive Secondary School
- 2010 – Graduate from the University of Winnipeg with a Bachelor of Arts in Political Science and Environmental Studies
- Present – Enrolled at the University of Western Ontario, Masters of Arts in Geography/Environment & Sustainability Collaborative Program (Winter 2013 Graduation)

### *Awards and Grants*

- 2007-2010 Government of Manitoba: Grant for Students from Low Income Families
- 2009-2010 Government of Canada: Millennium Scholarship
- 2010-2012 University of Western Ontario Graduate Research Scholarship (\$7000)
- 2011 University of Western Ontario: Social Science Graduate Alumni Award (\$1000)
- 2011 University of Western Ontario Faculty of Social Science: Agnes Cole Dark Fund (\$2500)
- 2011 Nominated for University of Western Ontario Society of Graduate Students Teaching Assistant Award
- 2011 University of Western Ontario Department of Geography: Michael J. Troughton Award (\$1000)

### *Research Interests*

- Canada-U.S. Relations
- Environmental Politics
- Geographies of Discourse
- Geopolitics
- Transboundary Environmental Management
- Water Management

### *Academic Work*

- Field Researcher - Institute of Urban Studies: University of Winnipeg. Sustainable Churchill Interim Report. Presented to the Town of Churchill Local Steering Committee, June 1<sup>st</sup>, 2010.